PUNYASHLOK AHILYADEVI HOLKAR

SOLAPUR UNIVERSITY, SOLAPUR

B. A. –I

(Semester I and II)

ENGLISH (OPTIONAL)

Revised Syllabus (CBCS)

(Introduced from June 2017)

INTRODUCTION TO ENGLISH LITERATURE AND LANGUAGE

PAPER NO. I

(2019-2020)

1) Preamble: Introduction to English Literature and Language paper is introduced to B.A. –I (Optional) students for the 1st and 2nd semester with the aim to introduce students with various literary forms in English literature and language. The poems and short stories prescribed for the syllabus will help them to develop interest in reading English literature written worldwide. Further, language concepts will help them for a better understanding the basics of linguistics.

2) Objective of the Course:

• To acquaint students with literary forms and linguistic terms.

• To initiate students and provide them a firsthand experience of reading and interpreting literary texts.

• To acquaint students with structural and analytical techniques in poetry.

• To acquaint students with analysis of minor literary form i.e. short story.

Semester: I

Introduction to Literature

Poems:

• William Shakespeare: Let me not to the Marriage of True Minds (Sonnet No. 116)

• William Wordsworth: My Heart Leaps up (The Rainbow)

• Emily Dickenson: “Hope” is the thing with Feathers

• Swami Vivekananda: Peace

• Maya Angelou: When I Think of Death

Short Stories:

• O’Henry: The Gift of the Magi

• Katherine Mansfield: A Cup of Tea

• Rabindranath Tagore: Home Coming

• Anton Chekhov: The Bet

General Topic:

• Define Short Story and discuss its elements.

- Define poetry. Discuss the different forms of poetry.

Semester: II

Introduction to English Literature

(One Act Plays and Literary Terms)

1. **One Act Play:**
   a. A Marriage Proposal – Anton Chekov
   b. The Boy Comes Home – A.A.Milne
   c. The Monkey’s Paw – W.M.Jacobs
   d. The Man with a Flower in His Mouth – Luigi Pirandello

2. **General Topics:**

- Define One Act Play and discuss the elements of the One Act Play.

3. **Literary Terms:**
   a. Simile
   b. Metaphor

c. Imagery
d. Personification
e. Contrast
f. Allegory
g. Narrative Technique
h. Symbolism
i. Soliloque
j. Monologue
k. Aside
l. Setting

Reference Books:

1. Masks- One Act Plays by D. S. Maini.
2. Glossary of Literary Terms by M. H. Abrahms

Introduction to Literature

Total Theory Lectures 45

Semester I

Unit 1 Credit 01 No. of Lectures 15

Poems:

• William Shakespeare: Let me not to the Marriage of True Minds (Sonnet No. 116)

• William Wordsworth: My Heart Leaps up (The Rainbow)

• Emily Dickenson: "Hope" is the thing with Feathers

• Swami Vivekananda: Peace

• Maya Angelou: When I Think of Death

Unit 2 Credit 01 No. of Lectures 15

Short Stories:

• O'Henry: The Gift of the Magi

• Katherine Mansfield: A Cup of Tea

• Rabindranath Tagore: Home Coming

• Anton Chekhov: The Bet

Unit 3 Credit 01 No. of Lectures 15

General Topic:

• Define Short Story and discuss its elements.

- Define poetry. Discuss the different forms of poetry.

Semester: II

Introduction to English Literature

(One Act Plays and Literary Terms)

Unit 1 Credit 01 No. of Lectures 15

One Act Play:

a. A Marriage Proposal – Anton Chekov
b. The Boy Comes Home – A. A. Milne
c. The Monkey's Paw – W. M. Jacobs
d. The Man with a Flower in His Mouth – Luigi Pirandello

Unit 3 Credit 01 No. of Lectures 15

General Topics:

- Define One Act Play and discuss the elements of the One Act Play.

Unit 3 Credit 01 No. of Lectures 15

Literary Terms:

a. Simile
b. Metaphor
c. Imagery
d. Personification
e. Contrast
f. Allegory
g. Narrative Technique
h. Symbolism
i. Soliloque
j. Monologue
k. Aside
l. Setting

पुण्यश्लोक अहिल्यादेवी होळकर सोलापूर विद्यापीठ, सोलापूर
Punyashlok Ahilyadevi Holkar Solapur University, Solapur

केगाव, सोलापूर - ४१३ २५५, महाराष्ट्र (भारत)

दुरध्वनी क्र. ०२१७-२७४४७७८ / ११३/११५ (११ लाईन्स), फॅक्स : ०२१७-२३५१३००,

संकेतस्थळ: http://su.digitaluniversity.ac.in ई-मेल:, registrar@sus.ac.in bos@sus.ac.in

पुण्यश्लोक अहिल्यादेवी होळकर सोलापूर विद्यापीठ

।। शिवा संपन्ना ।।

NAAC Accredited-2015

'B' Grade (CGPA 2.62)

अभ्यासमंडळे विभाग

जा.क्र.:पुअहोसोविसो/अमंवि/२०२०/ 8085 दि. - 9 OCT 2020

सुधारित पत्र

प्रति

मा. प्राचार्य/प्राचार्या

सर्व संलग्नित महाविद्यालये

पुण्यश्लोक अहिल्यादेवी होळकर सोलापूर विद्यापीठ, सोलापूर

विषय : B.A. Part-II Optional English (W.e.f. June 2020-21) या अभ्यासक्रमाबाबत.

संदर्भ : विद्यापिठाचे यापूर्वीचे जा.क्र.पुअहोसोविसो/अमंवि/२०२०/७९२९ दि. ०३/१०/२०२० रोजीचे पत्र.

महोदय/महोदया,

उपरोक्त विषयास अनुसरुन आपणास कळविण्यात येते की, यापूर्वीच्या संदर्भीय पत्रात अनावधानाने Optional English ऐवजी Compulsory English आणि B.Com Part-II असे नमूद करण्यात आलेले आहे. सदरचे पत्र रद्द समजण्यात यावे.

सदरहू सुधारित पत्राद्वारे आपणास कळविण्यात येते की, शैक्षणिक वर्ष २०२०-२१ पासून बी.ए. भाग-२ ऐच्छिक इंग्रजी (Optional English) अभ्यासक्रमामधील दुरूस्ती खालील प्रमाणे आहे.

संदर्भीय पत्रान्वये यापूर्वी कळविलेले	सुधारित
B.A. Part-II and B.Com Part-II मधील सत्र-३ च्या (Compulsory English) Indian Writing in English या पेपर मधील Drama Asif Currimbhoy : The Dumb Dancer (A Writers Workshop, 1992) या पाठयक्रमाचे Text Book उपलब्ध होत नसल्याने या पाठयक्रमा ऐवजी Mahesh Dattani : Bravely Fought The Queen या अभ्यासक्रमाचा समावेश करण्यात आला आहे.	शैक्षणिक वर्ष २०२०-२१ पासून सुरू झालेल्या B.A. Part-II मधील सत्र-३ च्या (Optional English) Indian Writing in English या पेपर मधील Drama Asif Currimbhoy : The Dumb Dancer (A Writers Workshop, 1992) या पाठयक्रमाचे Text Book उपलब्ध होत नसल्याने या पाठयक्रमा ऐवजी Mahesh Dattani : Bravely Fought The Queen या अभ्यासक्रमाचा समावेश करण्यात आला आहे.

सदर बदल झालेला सुधारित अभ्यासक्रम प्रस्तुत विद्यापीठाच्या संकेत स्थळावर BOS (Syllabus, Circulars etc.) या मथळ्याखाली अपलोड करण्यात आला आहे. याची कृपया नोंद घेऊन आपल्या महाविद्यालयातील सर्व संबधित अध्यापक वर्ग व विद्यार्थ्यांच्या निदर्शनास आणून दयावे, ही विनंती.

आपला विश्वासू,

(प्र. रा. चोरमले)

सिस्टीम ॲनालिस्ट

अभ्यासमंडळे विभाग

प्रत माहितीस्तव: १) मा. संचालक, शैक्षणिक, संशोधन व विकास विभाग, पुअहोसोविसो.

२) मा. संचालक, परीक्षा व मूल्यमापन मंडळ, पुअहोसोविसो.

३) मा. अधिष्ठाता, मानवविज्ञान विद्याशाखा, पुअहोसोविसो.

४) मा. अध्यक्ष, इंग्रजी अभ्यासमंडळ, पुअहोसोविसो.

पुण्यश्लोक अहिल्यादेवी होळकर सोलापूर विद्यापीठ, सोलापूर
Punyashlok Ahilyadevi Holkar Solapur University, Solapur

केगाव, सोलापूर - ४१३ २५५, महाराष्ट्र (भारत)

दुरध्वनी क्र. ०२१७-२७४४७७८ / ११३/११५ (११ लाईन्स), फॅक्स : ०२१७-२३५१३००,

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पुण्यश्लोक अहिल्यादेवी होळकर सोलापूर विद्यापीठ

।। विद्यया अमृतमश्नुते ।।

NAAC Accredited-2015

'B' Grade (CGPA 2.62)

अभ्यासमंडळे विभाग

जा.क्र.:पुअहोसोविसो/अमंवि/२०२०/ 7929 दि. - 3 OCT 2020

प्रति

मा. प्राचार्य/प्राचार्या,

सर्व संलग्नित महाविद्यालये,

पुण्यश्लोक अहिल्यादेवी होळकर सोलापूर विद्यापीठ, सोलापूर.

विषय : B.A. Part-II and B.Com Part-II Compulsory English (W.e.f. June २०२०-२१) या अभ्यासक्रमाबाबत.

संदर्भ : १) मा. अध्यक्ष, इंग्रजी अभ्यासमंडळ यांचे दि. १८/०९/२०२० रोजीचे ई-मेल.

२) अभ्यासमंडळे विभागाची दि. २१/०९/२०२० रोजीची मान्य टिपणी.

महोदय/महोदया,

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सदर बदल झालेला सुधारित अभ्यासक्रम प्रस्तुत विद्यापीठाच्या संकेत स्थळावर BOS (Syllabus, Circulars etc.) या मथळ्याखाली अपलोड करण्यात आला आहे. याची कृपया नोंद घेऊन आपल्या महाविद्यालयातील सर्व संबधित अध्यापक वर्ग व विद्यार्थ्यांच्या निदर्शनास आणून दयावे, ही विनंती.

आपला विश्वासू,

(प्र. रा. चोरमले)

सिस्टीम ॲनालिस्ट

अभ्यासमंडळे विभाग

प्रत माहितीस्तव: १) मा. संचालक, शैक्षणिक, संशोधन व विकास विभाग, पुअहोसोविसो.

२) मा. संचालक, परीक्षा व मूल्यमापन मंडळ, पुअहोसोविसो.

३) मा. अधिष्ठाता, मानवविज्ञान विद्याशाखा, पुअहोसोविसो.

४) मा. अध्यक्ष, इंग्रजी अभ्यासमंडळ, पुअहोसोविसो.

PUNYASHLOK AHILYADEVI HOLKAR SOLAPUR UNIVERSITY, SOLAPUR

पुण्यश्लोक अहिल्यादेवी होळकर
सोलापूर विद्यापीठ
।। विद्यया संपन्नता ।।

NAAC Accredited-2015
'B' Grade (CGPA 2.62)

Name of the Faculty : Faculty of Humanities

Name of the Course:

B.A. and B. Com. II Compulsory English

(Revised Syllabus)

With effect from June-2020-21, 21-22, 22-23

1) Preamble:

English being a global language has acquired importance for success in academic and professional areas. The syllabus prescribed for the present paper introduces to the students soft skills and communication skills, grammar, prose and poetry. They are prescribed and designed with student centric and practical approach.

2) Objectives of the Course:

- To comprehend the language skills.
- Use some simple language expressions in day to day life.
- To develop the vocabulary of the students.
- To improve the communicative skills of the students.

3) Course Outcome

At the end of the course the students will

- Acquire language skills required for day to day and specific purpose.
- Be able to interpret and illustrate concepts of Communication, Prose and Poetry.
- Be able to analyze and interpret the text prescribed.
- Develop certain life skills and strengthen strategies to develop vocabulary.

Title of the Course / Paper

(English Compulsory)

[Credits: 4]

Unit no: 1 Prose (Credit: 01) **(15)**

Unit no: 2 Poetry

(Credit for Unit 2 and 3: 01)

Unit no: 3 Grammar **(15)**

Unit no. 4 Communication Skills (Credit for Unit 4: 02) **(30)**

Reference Books:

Equivalent Subject for Old Syllabus

Sr. No.	Name of the Old Paper	Name of the New Paper
1)	Compulsory English	Compulsory English

PUNYASHLOK AHILYADEVI HOLKAR SOLAPUR UNIVERSITY, SOLAPUR

Question Paper pattern

B. A. –II (Semester III and IV)

ENGLISH (Compulsory) Revised Syllabus (CBCS)

(Introduced from June 2020)

Que.1 Rewrite the following by choosing the correct alternative. (08)

(Poems, prose and grammar))

Que.2 Write the answers in short. (Any Four out Six) (12)

(Prose& Poetry)

Que.3 Broad question (any one) (10)

(Communication Skills)

Que. 4 Broad question General topics (10)

(Communication skill)

PUNYASHLOK AHILYADEVI HOLKAR SOLAPUR UNIVERSITY, SOLAPUR

B.A. - II (Semester III)

English Optional

Revised Syllabus (CBCS)

(Introduced from June 2020)

BRITISH LITERATURE

Paper No. III

2020-21, 21-22 and 22-23

1) **Preamble:** British literature is widely read and interpreted worldwide. It is necessary to introduce to the students different British literary forms and literary traditions.

2) **Objectives of the Course:**

•To introduce to the students British Literature and writers.

• To initiate process of literary and critical interpretation of the texts.

• To acquaint students with drama and types of poetry

• To acquaint students with historical background and literary characteristics of the texts.

• To make the students familiar with various cross-cutting issue**s.**

3) **Course Outcome:** At the end of the course the students will be

- Familiar with a few British writers
- Familiar with some of the dramas and dramatists
- Able to understand the features of the text

SEMESTER: III

Drama: **Credits : 2**

• Oliver Goldsmith: She Stoops to Conquer

Poems: **Credit : 1**

1. To His Coy Mistress - Andrew Marvell
2. Soldier - Rupert Brooke
3. No Second Troy - William Butler Yeats
4. Under the Greenwood Tree - William Shakespeare
5. Dover Beach - Matthew Arnold
6. Ode on a Grecian Urn - John Keats

General Topic: **Credit 0.5**

• Characteristic features of Comedy of Manners

Literary Terms: **Credit 0.5**

• Canon of Literature

• Flat and Round Characters

• Biography and Autobiography

• Confidant

• Novel and Novella

• Heroic Couplet.

• Paradox

• Pastoral

• Poetic Justice

• Poetic Diction

List of References:

• David Daiches. A Critical History of English Literature - Volume 1 and 2 (Combo Pack. Supernova Publishers

• Ford Boris: The Pelican Guide to English Literature

• She Stoops to Conquer, New Mermaids edition

• Martinez, Nancy C. Guide to British Poetry Explication. Boston, MA: G.K. Hall, 1991-1995.

• David Scott Kastan, ed., The Oxford Encyclopedia of British Literature. Oxford University Press 2005.

PUNYASHLOK AHILYADEVI HOLKAR SOLAPUR UNIVERSITY, SOLAPUR

B.A. (English) Part II

British Literature

Pattern of Question Paper For Sem III Paper III

Total Marks: 40

Q. 1 Rewrite the following sentences choosing the correct alternative: - (08 Marks)

(Poetry/ Drama)

Q. 2 Answer any Four out of Six in two/three sentences: - (12 Marks)

(Literary Terms, Survey Topic)

Q. 3 Broad Answer type questions with internal option. (10 Marks)

(Poems)

Q.4 Answer any one of the following: - (10 Marks)

(Drama)

PUNYASHLOK AHILYADEVI HOLKAR SOLAPUR UNIVERSITY, SOLAPUR.

B. A. –II (Semester IV)

ENGLISH (OPTIONAL)

Revised Syllabus (CBCS)

(To be introduced from June 2020)

INTRODUCTION TO LANGUAGE

PAPER NO. V

(2020-21, 2021-22, 2022-23)

1) Preamble: The paper 'Introduction to Language' is introduced to B.A. –II (Optional) students for Semester IV with the aim to introduce English language. The aim of the paper is to familiarize students with the nature of human language and animal communication systems. The paper will also acquaint students with speech and writing which are two forms of language. The paper has two more chapters on phonology and morphology. These topics introduce the students with the basic concepts of language study and linguistics.

2) Objectives of the Course:

1. To acquaint students with the nature of human language.

2. To acquaint students with animal communication system.

3. To familiarize students with difference between human language and animal communication system.

4. To acquaint students with characteristics of two forms of language namely speech and writing

5. To introduce students to the basic concepts in phonology.

6. To introduce students to the basic concepts in morphology.

7. To acquaint students with morphological processes in English.

3) Course outcome

1. Student will know the nature of human language and animal communication system.

2. Students will know the characteristics of speech and writing.

3. Students will be able to do Phonemic transcription of words in English.

4. Students will be able to pronounce the word correctly with accent/ stress.

5. Students will be able to identify word formation process of a word.

6. They will be able to coin new words.

1. **Human Language and Animal Communication System.**

   1.1 Definitions of Language.
   1.2 Characteristic features of human Language.
   1.3 Animal Communication System.
   1.4 Difference between Human Language and Animal Communication System.

2. **Phonetics and Phonology**

   2.1 Phonetics and Phonology

   2.2 Types of Phonetics- Articulatory, Auditory and Acoustic.

   2.3 Articulatory Phonetics

   2.4 Initiation, Phonation and Articulation.

   2.5 Air Stream Mechanism/Speech mechanism

   2.6 Organs of Speech

   2.7 Phonemes

   2.8 Consonants

   2.9 Vowels

   2.10 Description of Speech Sounds(Three Term Labels)

   2.11 Word Stress/accent

   2.12 Phonemic Transcription.

   2.13 Weak Forms

   2.14 Intonation.

3. **Morphology**

   3.1 Definition of morphology

   3.2 Types of Morphemes- free and Bound morphemes.

   3.3 Affixes and its Types—Prefixes and Suffixes

   3.4 Morphological/ Word Formation processes in English—Major and Minor

   3.5 Labelled Morphological analysis.

List of Reference Books:

1. Bansal, R. K., & Harrison J.B. (2006).Spoken English. Hyderabad: Orient Longman.
2. Balasubramanian, T. (2008). A Textbook of English Phonetics for Indian Students. Chennai: Macmillan.
3. Hockett, C. (1960). A Course in Modern Linguistics. London: Macmillan.
4. Jones, D. (1992).The Pronunciation of English. Cambridge: Cambridge University Press.
5. O' Connor, J.D. (1997). Better English Pronunciation. New Delhi: UBS. Roach, P. (1990).
6. English Phonetics and Phonology: A Practical Course. Cambridge: Cambridge University Press. Sethi J., Sadanand. K., & Jindal, D. V. (2004).
7. A Practical Course in English Pronunciation. New Delhi: PHI.
8. Yule, G. (1995). The Study of Language. Cambridge: Cambridge University Press.
9. Quirk and Greenbaum. A University Grammar of English
10. Langscker R. W. Language and its Structure
11. An Introduction to English Morphology: Word and their Structure

Semester: IV

Introduction to Language

Unit no: 1 **(Credit 01)** (No. of Lectures: 15)

Human Language and Animal Communication

Unit no: 2 **(Credit 2)** (No. of Lectures: 30)

Title of the Unit: Phonetics and Phonology

Unit no.3 **(Credit: 01)** (No. of Lectures: 15)

Title of the Unit: Morphology

PUNYASHLOK AHILYADEVI HOLKAR SOLAPUR UNIVERSITY, SOLAPUR.

B. A. –II (Semester IV)

ENGLISH (OPTIONAL) Paper V

Title of the Paper: Introduction to Language

Nature of Question Paper

Q.1. Rewrite the following sentences choosing the correct alternative 8 Marks

(All Topics to be covered)

Q.2. Answer **any four** of the following questions.(Out of six) 12 Marks

(Practical type questions to be set on the syllabus topic two and three)

Q.3. Answer **any one** of the following questions. 10 Marks

(A broad answer type question to be set with an internal option on syllabus topic two and three)

Q.4. Answer the following question. 10 Marks

(Abroad answer type question to be set on the topic Human Language and Animal Communication System)

Punyashlok Ahilyadevi Holkar Solapur University, Solapur

B.A. Part–II (English)

Indian Writing in English

(Paper-IV and VI)

Semester III & IV

(2020-21, 2021-22, 2022-2023)

(CBCS Semester Pattern Syllabus *w.e.f.* June, 2020)

❖ **Preamble:**

In continuation with study of representative early 20th century Indian English writers/writing in B.A. Part II, students are to be further acquainted with development of this body of writing in later 20th and early 21st century with a focus on major literary genres.

❖ **Objectives of the Course:**

- To introduce students to Indian socio-cultural scenario as reflected in the writings of post-independence Indian English writers.
- To help them understand the pluralistic dimensions and different genres of Indian English literature.
- To acquaint them with variety of themes, styles as reflected in the prescribed texts.

❖ **Course Outcome:**

By the end of the course, students will-

- Understand gradual development of Indian English literature from mid-twentieth century to post 2000 period.
- Get acquainted with major genres/themes through the study of texts prescribed.
- Be familiar with Indian socio-cultural ethos as revealed through texts prescribed and try to correlate it with everyday situations.
- Be able to understand and interpret literature on their own and in further cultivate interest in study of literatures in English.

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Semester III

I.) General/Survey Topics: (Credit: 01) (Lectures-15)

1. Characteristic features of Post-independence Indian drama

(With reference to prescribed texts)

II.) Poems Prescribed: **(Credit: 01) (Lectures-15)**

1. ArunKolatkar:The Bus.
2. Kamala Das: A Hot Noon in Malbar
3. Vikram Seth: Round and Round.
4. ImtiazDharker: Another Woman.
5. Agha Shahid Ali: Postcard from Kashmir

III.) Drama: (Credit: 02) (Lectures-30)

Mahesh Dattani: Bravely Fought the Queen

Semester IV

I.) General/Survey Topics: (Credit: 01) (Lectures-15)

1. Salient Features of Post-Independence Indian English Novel.

(With special reference to text prescribed)

II.) Poems Prescribed: (Credit: 01) (Lectures-15)

1. Gieve Patel: On Killing a Tree
2. Sarojini Naidu: The PardahNashin
3. Nissim Ezekiel: Philosophy.
4. A. K. Ramanujan: Obituary.
5. Shiv K. Kumar: Pilgrimage.

III.) Novel: (Credit: 02) (Lectures-30)

ShashiDeshpande: That Long Silence

❖ **Reference Books:**

1. R. Parthsarathy (edi): Ten Twentieth Century Indian Poets (Oxford University Press-2001)
2. MenkaShivadasani (edi): Anthology of Contemporary Indian Poetry (Vol. 1) Big Bridge Press, 2013.
3. A.K. Mehrotra (edi): Oxford Indian Anthology of Twelve Indian Modern Poets (Oxford Uni. Press 1993)
4. Bruce King: Three Indian Poets: Nissim Ezekiel, A.K. Ramanujan, DomMoraes. (OUP-1991)
5. K. R. SrinivasIyengar: Indian Writing in English, (Sterling publishers, 1962.)
6. M.K. Naik: A History of Indian English Literature. (SahityaAkademi, New Delhi, 1982)
7. NatesanSharadaIyer: Musings on Indian Writing: Drama (Sarup and Sons, 2007)
8. KaustavChakraborty: Indian Drama in English.
9. A.N. Dwivedi: Studies in Contemporary English Drama.
10. Dr. S.S. Upase: Power in Karnad's Plays.
11. Nandkumar: Indian English Drama: Study in Myths.
12. N. Bharucha and Vilas Sarang (edi): Indian English Fiction – 1980-90- An Assessment.
13. Shashi, Deshpande. *That Long Silence*, Penguin Books, New Delhi.
14. Currimbhoy, Asif .*The Dumb Dance*,Writers workshop, Calcutta. 1992

PUNYSHLOK AHILYADEVI HOLKAR SOLAPUR UNIVERSITY, SOLAPUR

B.A. (English) Part II

Indian Writing in English

Texts/Chapter Wise Credit Distribution

Semester III

[Credits: Theory (04), Practicals (0)]

Theory Lectures – 60

Unit No. 1- **(Credit-01)** **(Lectures: 15)**

Title of the Unit: General/Survey Topics:

Unit No. 2- **(Credit-01)** **(Lectures: 15)**

Title of the Unit: Poems

Unit No. 3- **(Credit-02)** **(Lectures: 30)**

Title of the Unit: Drama/ Fiction

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Semester-IV

[Credits: Theory -(04), Practicals (00)]

Theory Lectures - 60

Unit No. 1- **(Credit -01)** **(Lectures: 15)**

Title of the Unit: General/Survey Topics:

Unit No. 2-Poems **(Credit -01)** **(Lectures: 15)**

Title of the Unit: Poems:

Unit No. 3- **(Credit -02)** **(Lectures: 30)**

Title of the Unit: Drama/ Novel

❖ **Course Structure:**

Semester	Paper No.	Title of Paper	No. of Lectures	College Assessments (Marks)	University Assessments (Marks)	Total Marks	Credits
III	IV	Indian writing in English	60	10	40	50	04
IV	VI	Indian English Literature	60	10	40	50	04

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PUNYASHLOK AHILYDEVI HOLKAR SOLAPUR UNIVERSITY, SOLAPUR

B.A. (English) Part II

Indian Writing in English

Pattern of Question Paper For Sem III and IV Paper IV and VI

Total Marks: 40

Q. 1 Rewrite the following sentences choosing the correct alternative: - (08 Marks)

(Poetry/Drama/Fiction)

Q. 2 Answer any Four out of Six in two/three sentences: - (12 Marks)

(2 Poetry/2 Drama/Fiction, 2 Survey Topic)

Q. 3 Broad Answer type questions with internal option. (10 Marks)

(Poems)

Q.4 Answer any one of the following: - (10 Marks)

(Novel/Drama)

B.A. Part II Semester III & IV

Linguistics IDS

(With effect from 2020-2021)

Title of the Paper**: Basics of Linguistics**

Preamble : The paper 'Basics of Linguistics' is introduced at BA (Part II) for semester III & IV as an IDS paper of Linguistics with an aim to introduce students with the basic knowledge of Linguistics and more specifically it is an introduction of 'Linguistics' as an IDS subject for those who opt for any language as a special subject. The components in the syllabus will cope with the present need of the students in the socio- educational scenario.

Course Objectives:

- To introduce students to the basics of linguistics
- To apply the knowledge of linguistics in day to day use of English
- To make students aware of the recent trends in Linguistics
- To familiarize students with Linguistics as a field of study
- To enable them to use language properly in communication

Course Outcome:

At the end of the course, the students will be able to-

- Explain the basic concepts in Linguistics
- Apply knowledge of Linguistics in daily communication
- Elucidate recent trends in Linguistics
- Communicate with proper pronunciation

Semester III

1. **Language and Linguistics (30 L)**

   1.1 Language and its definitions
   1.2 Characteristics of human language
   1.3 Animal communication system and human language.
   1.4 Linguistics: Levels of organization of language

2. **Phonetics and Phonology (30L)**

   2.1 Phonetics and Phonology.
   2.2 Articulatory Phonetics
   2.3 Initiation, Phonation and articulation
   2.4 Description of speech sounds of English: Consonants and Vowels.
   2.5 Transcription (Phonemic) of words with stress, minimal pairs, CV structure of syllables, weak forms and intonation patterns.

Semester-IV

3 Morphology and Syntax (30 L)

3.1 Morphology, morpheme and its types.

3.2 Word formation Processes; Major and Minor.

3.3 Morphological Analysis of Words (labeled tree diagram)

3.4 Words: Open class words and closed classes

4 Semantics and pragmatics (30 L)

4.1 Semantics and its definitions

4.2 Lexical relations: Synonym, Antonym, Polysemy, Homonymy and Homophone.

4.3 Pragmatics and its definitions

4.4 Speech acts, implicature, politeness and cooperative principle

Books Recommended

- Verma and Krishnaswamy; *Modern Linguistics; An Intoducation*
- Crystal, David: *A Course in Modern Linguistics.*
- Balasubramanian, T:*A Textbook of English Phonetics for Indian Students*
- Bansal and Harrison *: Spoken English for India*
- Quirk, R. and S. Greenbaum: *A University Grammar of English*
- Lyons, John: *Language and Linguistics*
- Palmer: *Semantics*
- Jones, Daniel: *English Pronouncing Dictionary*
- Leech Geoffrey: *English Grammar for Today.*
- Yule, George, *Pragmatics*
- Krishnaswamy, N., S. K. Verma and M. Nagarajan. *Modern AppliedLinguistics.*

Nature of Question paper

BA II (Sem3) Linguistics (IDS)

Name of the Paper: Basics of Linguistics

Q1 Multiple type questions to be set on the syllabus topic 2

(Phonetics and Phonology/ Morphology and Syntax)
Marks 8

Q2 Short answer type questions (practical type questions) to be set on the syllabus topic2

(Phonetics and Phonology / Morphology and Syntax) (4out of6)
Marks12

Q3 A broad answer type question with an internal option (A or B) to be set on the syllabus topic 1

(Language and Linguistics / Semantics and Pragmatics)
Marks 10

Q4 A broad question on the syllabus topic 1

(Language and Linguistics / Semantics and Pragmatics)
Marks 10

PUNYASHLOK AHILYADEVI HOLKAR SOLAPUR UNIVERSITY, SOLAPUR

Revised Syllabus (CBCS)

(Introduced from June 2020)

B.A.II - OPTIONAL LINGUISTICS

Title of the Paper: Semantics

1. **Preamble**: The paper 'Semantics' is introduced at B.A.II for Semester III & IV as an optional paper of Linguistics with the basic knowledge of Semantics and more.specifically it is an introduction to Semantics as an independent subject. The components in the syllabus will cope with the present need of the students in the socio-educational scenario.
2. **Objectives:**
   - To acquaint the students with the nature and significance of Semantics.
   - To impart to the students the knowledge of Semantics.
3. **Outcome**: At the end of the course students will…
   - Understand the significance of Semantics.
   - Have a clear understanding of Semantics.

SEMESTER III (Paper No. – III)

1. Introduction to Semantics (Credit 2)
   - Traditional Semantics
   - Approaches to Semantics
   - Context & Reference
   - The Exclusion of Context
   - Context of Situation
   - Generative Versus Interpretative Semantics
   - Semantic Testing
2. Units of Semantics (Credit 1)
   - The Word
   - The Sentence
   - Propositions
3. Lexical Semantics (Credit 1)
   - Collocation
   - Idioms

SEMISTER IV (Paper - V)

1. Components & Contrasts of Meanings (Credit 2)
   - Componential Analysis
   - Justifying Componential Analysis
2. Meaning Relations (Credit 1)
   - Synonymy
   - Antonymy
   - Polysemy & Homonymy
   - Ambiguity
3. Seven Types of Meaning (Credit 1)
   - Conceptual Meaning
   - Connotative Meaning
   - Social Meaning
   - Affective Meaning
   - Reflected Meaning
   - Collective Meaning
   - Thematic Meaning

NATURE OF QUESTION PAPER

Semester III (Paper III) Marks: 40

Q.1. Objective type question (on all topics) 8 Marks

Q.2. Answer any four of the following questions. (on Lexical Semantics) 12 Marks

Q.3. Answer any one of the following questions. (on Approaches to Semantics/Units of Semantics) 10 Marks

Q.4. Answer the following question. (on Approaches to Semantics/Units of Semantics) 10 Marks

Semester IV (Paper V) Marks: 40

Q.1. Objective type question (on all topics) 8 Marks

Q.2. Answer any four of the following questions. (on Meaning Relations) 12 Marks

Q.3. Answer any one of the following questions. (on Approaches to Semantics/Units of Semantics) 10 Marks

Q.4. Answer the following question. (on Approaches to Semantics/Units of Semantics) 10 Marks

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Books Recommended:

1. Leech, G.N. 1974. *Semantics*. Pelican.
2. Palmer, F.R. 1981. *Semantics*. Cambridge.

PUNYASHLOK AHILYADEVI HOLKAR SOLAPUR UNIVERSITY, SOLAPUR

Revised Syllabus (CBCS)

(Introduced from June 2020)

B.A.II - OPTIONAL LINGUISTICS

SOCIOLINGUISTICS

1. **Preamble**: The paper 'Sociolinguistics' is introduced at B.A.II for Semester III & IV as an optional paper of Linguistics with the basic knowledge of Sociolinguistics and more specifically it is an introduction to Sociolinguistics as an independent subject. The components in the syllabus will cope with the present need of the students in the socio-educational scenario.
2. **Objectives**:
   - To acquaint the students with the nature and significance of Sociolinguistics.
   - To impart the students to the knowledge of Sociolinguistics.
3. **Course Outcome:**
   - Critically analyze Sociolinguistic studies
   - Develop the competence to explore a specific sociolinguistic topic in depth

SEMESTER III (Paper - IV)

1. Introduction to Sociolinguistics (30 L) (Credits 2)
   - Scope of Sociolinguistics
   - Meaning of Sociolinguistics
   - Nature of Sociolinguistics
   - Sociolinguistic Conditions
   - Sociolinguistic Truths
   - Sociolinguistic Development of Language
2. Language Variation (30 L) (Credits 2)
   - Linguistic Items
   - Varieties of Language
   - Speech Community
   - Language Dialect, Register
   - Standard Language
   - Mixture of Varieties
   - Pidgin & Creole

SEMESTER IV (Paper – VI)

1. Language, Culture & Thought (30 L) (Credits 2)
- Linguistics & Culture
- Language & Thought
2. Bilingualism & Multilingualism (30 L) (Credits 2)
- Societal Bilingualism
- Balanced Bilingualism
- Additive & Subtractive Bilingualism
- Multilingualism

NATURE OF QUESTION PAPER

Semester III (Paper – IV) Marks: 40

Q.1. Objective type question (on all topics) 8 Marks

Q.2. Answer any four of the following questions. (Language Variation) 12 Marks

Q.3. Answer any one of the following questions. (Sociolinguistics/Language Variation)

10 Marks

Q.4. Answer the following question. (Sociolinguistics/Language Variation)

10 Marks

Semester IV (Paper VI) Marks: 40

Q.1. Objective type question (on all topics) 8 Marks

Q.2. Answer any four of the following questions. (Bilingualism) 12 Marks

Q.3. Answer any one of the following questions. (Language, Culture & Thought/Bilingualism & Multilingualism) 10 Marks

Q.4. Answer the following question. (Language, Culture & Thought/Bilingualism & Multilingualism) 10 Marks

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सोलापूर विद्यापीठ
।। विद्यया संपन्नता ।।
NAAC Accredited - 2015
'B' Grade (CGPA - 2.62)

Name of the Faculty: Humanities

Name of the Course: B. A. (English) Part – III

Name of the Course: Compulsory English

Semester- V & VI

With effect from June-2021-22, 2022-23 & 2023-24

Punyashlok Ahilyadevi Holkar Solapur University, Solapur

Name of the Course**: BA/BSC Part III**

Name of the Paper**: Compulsory English**

Semester: V& VI

Preamble:

Significance of English Language Skills in the days of technology is the need of the hour. Strengthening the basic language skills of English language acquired in the previous years of under graduation is essential. Oral and written communication skills along with the soft skills are required in this global scenario. The aspirants for jobs in private, public sectors, and PG Courses have to clear English proficiency test. This course will be instrumental in preparing the learners in these areas.

Objectives of the Course:

- Strengthening comprehension skills
- Developing appreciation abilities for Literature
- Strengthening oral & written communication skills
- Galvanizing soft skills

Course Outcome:

By the end of the course the students will be able to

- Use oral and written English effectively
- Appreciate literary language
- Use English language in creative writing
- Apply English language skills in clearing competitive examinations

Punyashlok Ahilyadevi Holkar Solapur University, Solapur

Name of the course**: BA/BSC Part III**
Name of the Paper**: Compulsory English**
Semester: V

CREDITS: 04 60 Lectures

Unit No: I - Prose

1) The Gift of the Magi: O' Henry
2) The Homecoming: Rabindranath Tagore

Unit No: II - Poetry

1) **The Solitary Reaper** William Wordsworth
2) The Queen's Rival Sarojini Naidu
3) The Village School Master Oliver Goldsmith
4) The Road not Taken Robert Frost

Unit No: III - Grammar & Vocabulary

1) Active & Passive Voice
2) Phrasal Verbs

Unit No: IV - 21st Century Skills
1) 21st Century Skills
2) Types of 21st Century Skills
3) Learning Skills (The 4 Cs)

Punyashlok Ahilyadevi Holkar Solapur University, Solapur

Name of the course**: BA/BSC Part - III**
Name of the Paper**: Compulsory English**
Semester: VI

CREDITS: 04 60 LECTURES

Unit No: I - Prose

1) Growing Up Joyce Cary
2) God Sees the Truth, but Waits Leo Tolstoy

Unit No: II - Poetry

1) Sita Toru Dutt
2) My Last Duchess Robert Browning
3) Ode to Beauty John Keats
4) Life Charlotte Bronte

Unit No: III - Grammar & Vocabulary

1) Adverbials
2) Direct and Indirect speech

Unit No: IV - Communication Skill

1) Literacy Skills (IMT)
2) Life Skills (FLIPS)
3) Other Skills

PUNYASHLOK AHILYADEVI HOLKAR SOLAPUR UNIVERSITY, SOLAPUR

Name of the Course: **B. A. (English) Part–III**
Name of the Paper: **Compulsory English**
Semester**: V & VI**
(2021-2022, 2022-2023, 2023-2024)
(CBCS Semester Pattern Syllabus *w. e. f.* June, 2021)

Semester	**Paper No.**	**Title of Paper**	**No. of Lectures**	**College Assessments (Marks)**	**University Assessments (Marks)**	**Total Marks**	**Credits**
V & VI	-	Compulsory English	60	10	40	50	04

Question Paper Pattern

Name of the Course: BA/BSC Part III
Name of the Paper**: Compulsory English**
SEM- V & VI

Q. **1 Rewrite the following sentences by choosing the correct alternative.** 08 Marks
(Poetry, Prose & Grammar)

Q. 2 Write answers in short (any four out of six)12 Marks
(Prose & Poetry)

Q. 3 Broad Question (any one) 10 Marks
(Communication skills)

Q. 4 Broad Question 10 Marks
(Communication skills)

Equivalent subject for old syllabus (Compulsory Syllabus)

Sr. No	Name of the Old Papers	Name of the New Papers
1	Compulsory English	Compulsory English

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NAAC Accredited - 2015
'B' Grade (CGPA - 2.62)

Name of the Faculty: Humanities

Name of the Course: B. A. (English) Part – III

Name of the Course: Introduction to Literary Criticism

Paper No. – VII & XII

Semester – V & VI

With effect from June-2021-22, 2022-23 &2023-24

Punyashlok Ahilyadevi Holkar Solapur University, Solapur

Name of the Course**: B.A. (English) Part–III**

Name of the Paper**: Introduction to Literary Criticism**

Semester – V & VI

Preamble:

It is a prime concern to inculcate the crucial skill of critical thinking among the students to lead them to a more balanced life. The ability to think critically and from multiple perspectives is very essential to make good evaluation and take the best decisions to lead a successful and satisfied life. The ability is quite needed for making the responsible good citizens. This paper aims at nourishing among the students the understanding of critical thinking: processes, terms, concepts, views, perspectives, approaches, theories, and practices. Keeping in view these basics, the paper includes the general understanding of the concept of criticism: meaning, nature, function, objectives, types, introductory history, and trends. So also, there is the inclusion of theories representing different eras as well as different perspectives.

Objectives:

- To introduce the students to the basics of literary criticism.
- To give the students an overview of the critical practices from traditional criticism
- To acquaint the students with types of Literary Criticism
- To develop in them a critical perspective and ability to relate and compare various critical approaches.

Course Outcomes:

By the end of the course the students will be able to:

- Understand the basics of literary criticism
- Trace the development of critical practices from traditional criticism
- Read and understand the representative theories/essays.
- Know the different critical terms/concepts/trends/movements/schools of Literary Criticism
- Look at a literary piece from different perspectives and relate them.

Punyashlok Ahilyadevi Holkar Solapur University, Solapur

Name of the Course**: B.A. (English) Part–III**

Name of the Paper**: Introduction to Literary Criticism**(Paper-VII)

Semester – V

CREDITS: 04 60 LECTURES

Unit 1. Literary Criticism: Basics (Credit: 01) Lectures (15)

Literary Criticism: Definitions/Meaning, Nature, Function, Qualifications of a good literary critic

Unit 2. Classical Criticism (Credit: 01) Lectures (15)

Aristotle: Theory of Imitation

Unit 3. Neoclassical Literary Criticism (Credit: 01) Lectures (15)

Samuel Johnson's 'Preface to Shakespeare'

Unit 4. Types of Criticism (Introductory) (Credit: 01) Lectures (15)

Comparative, Expressive, Feminist, Historical, Social, Textual, and Theoretical

References:

1. Abrams, M.H., Geoffery Galt Harpham, *Dictionary of Literary Terms and Literary Theory*, Cengage Learning India Private Limited. 2015.
2. Barry, Peter. *Beginning Theory: An Introduction to Literary and Cultural Theory*, Manchester University Press, 2002
3. Brooks, Cleanth and Wimsatt, *A Short History of Literary Criticism*, Univ of Chicago Pr. 1983.
4. Butcher, S. H.(Trans.) *The Poetics of Aristotle*. Macmilan. 1902
5. Cuddon, J. A. *Penguin Dictionary of Literary Terms and Literary*Theory.Penguin Books. 1999
6. Daiches, David. *Critical Approaches To Literature.* Orient Longman Limited, 1984
7. Fowler, Roger and Peter Childs. *The RoutledgeDictionary of Literary Terms.*Taylor and Francis. 2005
8. Guern, Wilfred L. *A Handbook of Critical Approaches to Literature*. Oxford University Press,1999.
9. Hudson, W.H. *An Introduction to the Study of Literature.* George G. Harrap and Co. Press.London.
10. Leech, G. N. *A Linguistic Guide to English Poetry*.Longman. 1969
11. Thorat, Ashok. *Kumar Iyer and et al.A Spectrum oif Literary Criticism*.Frank Bros. and Co. Ltd., 2001.
12. Wellek, Rene. and Austen Warren. *Theory of Literature*.Penguine Books Publicatin, 198

Question Paper Pattern

Name of the Course**: B. A. Part III**
Name of the Paper: **Introduction to Literary Criticism**
SEM- V

1. Rewrite the following sentences by choosing the correct alternative from given below. 08 Marks

(Unit 2 Aristotle: Theory of Imitation/ Unit 3 Samuel Johnson's 'Preface to Shakespeare')

2. Answer any Four of the following questions (Any Four out of Six) 12 Marks
(Unit 4. Types of Criticism)

3. Answer the following question. (One out of Two) 10 Marks
(Unit 2 Aristotle: Theory of Imitation/ Unit 3 Samuel Johnson's 'Preface to Shakespeare')

4. Answer the following Question (Only One) 10 Marks
(Unit 1. Literary Criticism: Basics)

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Name of the Course**: B.A. (English) Part–III**

Name of the Paper**: Introduction to Literary Criticism** (Paper-XII)

Semester - VI

Preamble:

This paper aims at creating the awareness of the critical creed, multiple perspectives, theoretical bases and actual practice of relating theories, approaches, and perspectives to a literary piece. Further, the paper is an attempt to integrate theory with practice making the students able to think critically. With the application of theoretical knowledge in like-like situations, the students are expected to lead more balanced life. The introduction of wide range material is with the end to bridge the gap between lab and land and develop the practical knowledge and skill of the students. The inclusion of approaches, representative theories and practical criticism would enhance the capabilities of the students. The practical criticism included in the syllabus is with the aim to make students more intensive and practice-oriented.

Objectives:

1. To introduce different approaches to the students.
2. To make the students aware of theoretical diversity.
3. To enable the students to understand different literary devices.

Course Outcomes:

By the end of the course the students will be able:

1. To identify the features of different critical approaches.
2. To understand an essay from romantic criticism.
3. To understand an essay from 20th century literary criticism
4. To understand literary devices.

Punyashlok Ahilyadevi Holkar Solapur University, Solapur

Name of the Course**: B.A. (English) Part–III**

Name of the Paper**: Introduction to Literary Criticism** (Paper-XII)

Semester - VI

CREDITS: 04 60 LECTURES

Unit 1. Critical Approaches to Literature (Credit: 01) Lectures (15)

I. Biographical Approach to Literature.

II. Psychological Approach to Literature.

III. Sociological Approach to Literature

Unit 2. Romantic Criticism (Credit: 01)Lectures (15)

William Wordsworth's 'Preface to Lyrical Ballads' (1802)

Unit 3. Twentieth Century Criticism (Credit: 01) Lectures (15)

T. S. Eliot's 'The Function of Criticism'

Unit 4. Literary Devices/Terms (Credit: 01) Lectures (15)

Theme, Tone, Mood, Imagery, Symbols, Alliteration, Onomatopoeia, Repetition, Rhyme, Antithesis, Hyperbole, Pun, Metonymy, Climax, Anticlimax, Conceit.

References:

1. Barry, Peter Beginning Theory: *An Introduction to Literary and Cultural Theory*, Manchester University Press, 2002
2. Brooks, Cleanth and Robert Penn Warren. *Understanding Poetry*. Henry Holt 1938. rpt 1950.
3. Daiches, David. *Critical Approaches To Literature.* Orient Longman Limited, 1984
4. Richards, I. A. *Practical Criticism*. London, 1929
5. Eliot, T S. *Selected Essays*. Faber and Faber.1932
6. Eliot, T.S. *Selected Essays* 1917-1932, Harcourt,Brace and Company. 1932
7. Eliot, T. S. *Selected Essays*. Faber. 1999.
8. Evans, Robert. *Critical Approaches to Literature: Moral*. Salem Press. 2017.
9. Harpham, Geoffrey and Abrams M.H. *A Glossary of Literary Terms*. Cengage Learning, 2015.
10. Leech, G. N. *A Linguistic Guide to English Poetry*.Longman. 1969
11. Lennard, John. *The Poetry Handbook: A Guide to Reading Poetry for Pleasure and Practical Criticism*, Oxford Publication. 1996
12. Richards, I. A. *Practical Criticism*. London, 1929
13. Seturaman, V.S. and C.T.Indra, T. Sriraman, *Practical Criticism*, Macmillan Publishers India Limited, 1990.
14. Tyson, Lois. ENGL A337 *Critical Approaches to Literature*. Taylor & Francis. 2018.
15. Warren, Austin, and Wellek, René. *Theory of Literature*. Dalkey Archive Press.

PUNYASHLOK AHILYADEVI HOLKAR SOLAPUR UNIVERSITY, SOLAPUR

Name of the Course: **B. A. (English) Part–III**

Name of the Paper: **Introduction to Literary Criticism**

Semester**: V & VI**

(2021-2022, 2022-2023, 2023-2024)

(CBCS Semester Pattern Syllabus *w. e. f.* June, 2021)

Semester	Paper No.	Title of Paper	No. of Lectures	College Assessments (Marks)	University Assessments (Marks)	Total Marks	Credits
V & VI	VII & XII	**Introduction to Literary Criticism**	60	10	40	50	04

Question Paper Pattern

Name of the Course**: B. A. Part III**

Name of the Paper: **Introduction to Literary Criticism (Paper-XII)**

SEM- VI

Q. 1. Rewrite the following sentences by choosing the correct alternative from given below.08 Marks

(Unit 2.William Wordsworth's 'Preface to Lyrical Ballads' (1802) and Unit 3. T. S. Eliot's 'The Function of Criticism')

Q. 2. Answer any Four of the following questions (any four out of Six) 12 Marks

Unit 4: Literary Devices/Terms

Q. 3. Answer the following question. (One out of Two) 10 Marks

A) Unit 2.William Wordsworth's 'Preface to Lyrical Ballads'

Or

B) Unit 3. T. S. Eliot's 'The Function of Criticism')

Q. 4. Answer the following Question (Only One)10 Marks

(Unit 1. Critical Approaches to Literature)

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NAAC Accredited - 2015
'B' Grade (CGPA - 2.62)

Name of the Faculty: Humanities

Name of the Course: B. A. (English) Part – III

Name of the Paper: British Literature

Paper No. – VIII & XIII

Semester – V & VI

With effect from June-2021-22, 2022-23 &2023-24

PUNYASHLOK AHILYADEVI HOLKAR SOLAPUR UNIVERSITY, SOLAPUR

Name of the Course: **B.A. (English) Part–III**
Name of the Paper: **British Literature**
Semester V & VI

Preamble:

British literature is widely read and interpreted worldwide. It is necessary for the students to be introduced to different literary forms practiced by the writers in the British literary tradition.

Objectives:

1. To acquaint the students with the major genres of British Literature.
2. To introduce various movements and major contribution to British literature.
3. To enhance literary, linguistic and aesthetic competence of the students.

Course Outcomes:

By the end of the course the students will:

- Gain knowledge about stylistic strategies and diction of British literature.
- Be able to explore the creativity and the human experiences in fiction, poetry and drama.
- Be able to cultivate aesthetic and ethical values in life through literary texts.
- Gain knowledge of major trends and traditions of British literature.

PUNYASHLOK AHILYADEVI HOLKAR SOLAPUR UNIVERSITY, SOLAPUR

Name of the Course: **B.A. (English) Part–III**

Name of the Paper: **British Literature (Paper-VIII)**

Semester V

CREDITS: 04 60 LECTURES

Survey Topics: Credit 01 Lectures 15

1. Characteristics of Elizabethan Stage

2. Romance and Fantasy in English Novels

Poems: Credit 01 Lectures 15

1. Edmund Spenser**:** ***Ice and Fire***
2. John Donne**:** ***Lovers' Infiniteness***
3. William Shakespeare**:** ***True Love***
4. John Milton**:** ***When I Consider How my Light is Spent***
5. George Herbert**:** ***The Flower***

Drama: Credit 01 Lectures 15

1. William Shakespeare: ***Antony and Cleopatra***

Novel: Credit 01 Lectures 15

1. Thomas Hardy: ***Two on a Tower***

References:

1. Shakespeare, William, *Antony and Cleopatra*, Rupa& Co 2004.
2. Hardy, Thomas, *Two on a Tower*, Everyman India, 2010.
3. David Scott Kastan, ed. *The Oxford Encyclopediaof British Literature*, Oxford University Press, 2003.
4. Ford Boris, *The Pelican Guide to English Literature*, Penguin Books, 1955.
5. Green, David (Ed.), *The Winged Word* MacMillan Publishers India Pvt Ltd. 2016.
6. Herbert J. C. Grierson*A Critical History of English Poetry*, London, Hogarth Press, 1946.
7. Kettle, Arnold, *An Introduction of Novel*, Universal Book Stall, Vol 1 & 2.
8. Mundra J.N., and Mundra S.C. (1998), *A History of English Literature*, Vol. I,II, III.

PUNYASHLOK AHILYADEVI HOLKAR SOLAPUR UNIVERSITY, SOLAPUR

Name of the Course: **B.A (English) Part–III**

Name of the Paper: **British Literature (Paper-XIII)**

Semester: VI

CREDITS: 04 60 LECTURES

Survey Topics: Credit 01 15 Lectures

1. Victorian Poetry

2. Victorian Women Writers

Poems: Credit 01 15 Lectures

1. Robert Browning**:** ***Meeting at Night***

2. Tennyson:***Come into the Garden, Maud***

3. Matthew Arnold**:** ***Shakespeare***

4. C.G. Rossetti:***A Christmas Carol***

5. G.M. Hopkins**:** ***Spring***

Drama: Credit 01 15 Lectures

1. John Osborne: ***Look Back in Anger***

Novel: Credit 01 15 Lectures

1. Charlotte Bronte: ***The Professor***

References:

1. Osborne, John. *Look Back in Anger*, Pearson Education. 2011.
2. Bronte, Charlotte.*The Professor* Wordsworth Editions Ltd, 2009.
3. David Scott Kastan, ed. *The Oxford Encyclopediaof British Literature*.Oxford University Press, 2003.
4. Ford Boris.*The Pelican Guide to English Literature*.Penguin Books, 1955.
5. Green, David (Ed.), *The Winged Word*.MacMillan Publishers India Pvt Ltd. 2016.
6. Herbert J. C. Grierson. *A Critical History of English Poetry*.London, Hogarth Press, 1946.
7. Kettle, Arnold.*An Introduction of Novel*.Universal Book Stall, VolI& II.
8. MundraJ.N., and Mundra S.C. (1998).*A History of English Literature*, Vol. I,II, III.

PUNYASHLOK AHILYADEVI HOLKAR SOLAPUR UNIVERSITY, SOLAPUR

Name of the Course**: B.A (English) Part–III**
Name of the Paper**: British Literature**
Semester V & VI
(2021-2022, 2022-2023 &2023-2024)
(CBCS Semester Pattern Syllabus *w.e.f*. June, 2021)

Semester	Paper No.	Title of Paper	No. of Lectures	College Assessment	University Assessment	Total Marks	Credits
V	VIII & XIII	British Literature	60	10	40	50	04

Question Paper Pattern

Name of the Course: B. A. Part III
Name of the Paper**: British Literature**
SEM- V & VI

Que-1- Multiple Choice Questions. (8 Marks)
(Poetry, Drama & Novel)

Que-2- Short Answer Type Question. (12 Marks)
(2 Survey Topics &4 Poetry)

Que-3- Broad Question with an internal option. (A or B).
(Drama)(10 Marks)

Que-4- Broad Question. (10 Marks)
(Novel)

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NAAC Accredited - 2015
'B' Grade (CGPA - 2.62)

Name of the Faculty: Humanities

Name of the Course: B. A. (English) Part - III

Name of the Paper: Indian English Literature

Paper No. – IX & XIV

Semester: V & VI

With effect from June-2021-22, 2022-23 &2023-24

Punyashlok Ahilyadevi Holkar Solapur University, Solapur
Name of the Course**: B.A. (English) Part- III**
Name of the Paper: **Indian English Literature**
Semester: V & VI

Preamble:-

In continuation with the study of early20th century representative IndianEnglish writers/writings covering major literary genres in B.A.Part-2, students are further to beacquainted with the developmentof Indian English Literature in late 20th century with focus on selected authors and texts .

Objectives of the course:-

- To introduce to the students the socio-cultural and intellectual background of the post-independence IndianEnglish Literature.
- To acquaint undergraduates withdifferent literary genres as practised by representative IndianEnglish writers in early post-independence period.
- To help students to understand,interpret variety of themes and styles as reflected in the prescribed texts.

Course Outcomes:-

By the end of the course, studentswill –

•Understand gradual developmentof Indian English Literature in thelatter half of the 20th century.

•Get acquainted with important themes &issues through study of texts prescribed.

•Get acquainted with Indian ethosas revealed through prescribed texts.

•Be able to interpret and analyse on their own & further nurture interest in the study of Indian literatures, especially Indian English Literature.

Punyashlok Ahilyadevi Holkar Solapur University, Solapur

Name of the course**: B.A. Part III**

Name of the Paper**: Indian English Literature (Paper-IX)**

Semester: V

CREDITS: 04 60 LECTURES

(I) Survey Topics- (Credit-01) (Lectures-15)

1) Salient Features of Modern Indian English Poetry. (With referenceto the poems prescribed).

2) Salient Features of Modern IndianEnglish Drama.(With referenceto the translated Indian plays in English).

(II)Poems Prescribed-(Credit-01) (Lectures-15)

1)**Nissim Ezekiel**-Poet,Lover,Birdwatcher.

2)**ArunKolatkar**-Between Jejuri andRailway Station.

3)**Shiv K. Kumar**-Letter from NewYork.

4)**JayantMahapatra**-Dawn at Puri.

5)**A. K. Mehrotra**-Letter to a Friend.

(III) Drama-(Credit-01) (Lectures-15)

1**. Garbo by** Mahesh Elkunchwar

(Collected Plays of Mahesh Elkunchwar) (Oxford India Paperbacks, 2010.)

(IV)Fiction- (Credit-01)(Lectures-15)

1. The Foreigner-Arun Joshi.(Orient Paperbacks-2010)

List of Reference Books-

1)K.R.SrinivasIyengar-*Indian Writing in English*.(Sterling Pub.)

2)M.K.Naik-*A History of Indian English Literature*.(SahityaAkademiNew Delhi-1982)

3)Bruce King:*Three Indian Poets: Nissim Ezekiel,A.K.Ramanujan,DomMoraes* (OUP-1991)

4)M.K.Naik-*Indian English Poetry:From Beginning to 2000*.

5)Meenakshi Mukherjee- *The TwiceBorn Fiction.*(Pencraft,New Delhi)

6)N.Bharucha& Vilas Sarang (edi)-*Indian English Fiction-1980-90- An Assessment.*

7)M.K.Bhatnagar(edi)-*The Novels of Arun Joshi-A Critical Study*.(Atlantic -January,2014)

8)Siddhartha Sharma-*Arun Joshi's Novels:A Critical Study*.(Atlantic Pub.)

9)AN.Dwivedi-*Studies in Contemporary English Drama.*

10)KaustavChakraborty- *Indian Drama in English*.

11)NatesanSharadaIyer- *Musings on Indian Writing:Drama*.(Sarup& Sons, 2007).

Punyashlok Ahilyadevi Holkar Solapur University, Solapur

Course Name**: B. A. (English) - Part-III**

Paper Name**: Indian English Literature**(Paper No. XIV)

Semester-VI

CREDITS: 04 60 LECTURES

(I)General/Survey Topics-(Credit-01) (Lectures-15)

1**) Salient features of post-modernIndian English Poetry.**(With spl.reference tothe poems prescribed).

2)**Salient features of post-modern Indian English Novel.** (With spl. reference tothe Diasporic Indian English Novel).

(II) Poems Prescribed-(Credit-01) (Lectures-15).

1)**A. K. Ramanujan-**Looking for aCousin on a Swing.

2)**DilipChitre-**Felling of Bunyan Tree

3)**Eunice De Souza-**Feeding thePoor at Christmas.

4)**ManoharShetty**-Animal Planet.

5)**MamtaKalia-**Tribute to Papa.

(III)Drama-(Credit-01)(Lectures-15).

1**. Nagamandala**- GirishKarnad.Updated Students' Version)(Oxford University Press-1999).

(IV)Fiction- (Credit-01)(Lectures-15)

1.The Namesake-JhumpaLahiri.(Mariner Books-Reprint-2004)

List of Reference Books-

1) A.K.Mehrotra (Edi), *Ten TwentiethCentury Indian English Poets.*(Oxford University Press-2001).

2) Menka, Shivdasani (Edi). *Anthology of Contemporary Indian Poetry* - (Big Bridge Press -2013).

3) Bruce, King.*Three Indian Poets Nissim Ezekiel, A.K.Ramanujan ,DomMoraes.(*OUP-1991).

4) Kaustav, Chakraborty.*IndianDrama in English.*

5) NatesanSharadaIyer, *Musingson Indian Writing: Drama*.(Sarup& Sons,2007)

6) Dr.S.S.Upase.*Power in Karnad's Plays.*

7) Nandkumar. *Indian EnglishDrama:Study in Myths.*

8) N.Bharucha& Vilas Sarang (Edi).*Indian English Fiction 1980-90-An Assessment*.

9) VineyKirpal (Edi). *The Post-modern Indian English Novel-Interrogating the 1980s & 1990s.*(Allied Publication -1996).

10) NizaraHazarika, Johnson, Day(Edi.). *Contemporary Indian Women Writers in English: CriticalPerspectives.*(Pencraft -2015)

11)AngshumanKar (Edi.). *TheContemporary Indian Diaspora:Literary & Cultural Representation* (Rawat Pub. 2015).

PUNYASHLOK AHILYADEVI HOLKAR SOLAPUR UNIVERSITY, SOLAPUR

Name of the Course: **B. A. (English) Part–III**

Name of the Paper:**Indian English Literature**

Semester**: V & VI**

(2021-2022, 2022-2023 &2023-2024)

(CBCS Semester Pattern Syllabus *w. e. f.* June, 2021)

Semester	**Paper No.**	**Title of Paper**	**No. of Lectures**	**College Assessment (Marks)**	**University Assessment (Marks)**	**Total Marks**	**Credits**
V & VI	IX&XIV	**Indian English Literature**	60	10	40	50	04

Question Paper Pattern

Name of the Course: B. A. Part III

Name of the Paper**: Indian English Literature**

SEM- V & VI

Que-1- Multiple Choice Questions. (8 Marks)
(Poetry, Drama & Fiction)

Que-2- Short Answer Type Question. (12 Marks)
(Survey Topics & Poetry)

Que-3- Broad Question (A or B). (10 Marks)
(Drama)

Que-4- Broad Question. (10 Marks)
(Novel)

PUNYASHLOK AHILYADEVI HOLKAR SOLAPUR UNIVERSITY, SOLAPUR

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NAAC Accredited - 2015
'B' Grade (CGPA - 2.62)

Name of the Faculty: Humanities
Name of the Course: B. A. (English) Part - III

Name of the Paper: Literatures in English

Paper No. – X & XV

Semester: V & VI

With effect from June-2021-22, 2022-23 & 2023-24

PUNYASHLOK AHILYADEVI HOLKAR SOLAPUR UNIVERSITY, SOLAPUR

Name of the Course: **B. A. –III (Semester V)**

Name of the Paper: **Literatures in English**

Semester: V & VI

Preamble:

Many outstanding literary figures from different part of the world have been contributing and enriching literature. As English is the World Language, it is essential to introduce World Literature to B.A. III year students so as to get acquitted with these literary exponents and take an opportunity to study cultures, society, language and tradition depicted by them in their works.

Objectives

• To develop a clear understanding of the key concepts of world literature

• To expose students to alternative literature produced in the world

• To provide an exposure to various writers from the entire world.

• To familiarize students with the different literary tradition of the world

• To help students understand and respond to literary texts of different time and period.

Course Outcome:

By the end the course, the students will:

• Understand Literature from the world around.

• Understand the salient features of postcolonial fiction and absurd theatre.

• Be able to respond critically to world literatures in English.

• Get acquainted with different cultures across the world through literature.

PUNYASHLOK AHILYADEVI HOLKAR SOLAPUR UNIVERSITY, SOLAPUR

Name of the Course: **B. A. –III (Semester V)**

Name of the Paper: **Literatures in English (Paper-X)**

Semester: V

CREDITS: 04 60 LECTURES

I) General Topics: (Credit: 01) Lectures (15)

1. Characteristic Features of the Russian Literature with reference to the Novel prescribed

2. Characteristic Features of the 20th Century Dramas with reference to the work prescribed.

II) Novel (Credit: 01) Lectures (15)

Leo Tolstoy**: *War and Peace*** (Fingerprint Publishing, 2015)

III) Drama(Credit: 01) Lectures (15)

Tennessee Williams**:*The Streetcar Named Desire*** (Delhi Open Books, 2019)

IV) Poems: (Credit: 01) Lectures (15)

1. Pablo Neruda: ***If You Forget Me.***
2. Amrita Pritam: ***The Will***
3. Louise Gluck: ***The Wild Iris***
4. Max Ehrmann: ***Desiderata***
5. Czeslaw Milosz: ***Account***
6. Edgar Allen Poe: ***A Dream within a Dream***
7. Li Po: ***Drinking Alone in the Moonlight***

PUNYASHLOK AHILYADEVI HOLKAR SOLAPUR UNIVERSITY, SOLAPUR

Name of the Course: **B. A. –III**

Name of the Paper: **Literatures in English (Paper-XV)**

Semester: VI

CREDITS: 04 60 LECTURES

I) Survey Topics:(Credit: 01) Lectures (15)

1. Characteristic Features of Afro-American drama

2. A Psychological Thriller

II) Novel:(Credit: 01) Lectures (15)

Paula Hawkins: ***The Girl on the Train*** (Random House Publishing, 2015)

III) Drama: (Credit: 01) Lectures (15)

Lorraine Hansberry: **A Raisin in the Sun.** (Vintage: Reprint, Reissue Edition,2004)

IV) Short Story: (Credit: 01) Lectures (15)

1. William Somerset Maugham: ***The Luncheon***

2. Guy de Maupassant: ***The Necklace***

3. Sudha Murthy: ***How I Taught My Grandmother to Read***

4. Franz Kafka: ***Wedding Preparation in the Country***

5. Maxim Gorky: ***Twenty-Six Men and a Girl***

List of References:

1. Andrews, W., F. Foster and T. Harris (eds).*The Oxford Companion to African American Literature*. Oxford, 1997.
2. Gilyard, K., and A. Wardi. *African American Literature*. Penguin, 2004.
3. Peterson, Carla (1995). *Doers of the Word: African-American Women Speakers and Writers in the North (1830–1880)*. New York: Oxford University Press.
4. Bennett, Michael Y. *The Cambridge Introduction to Theatre and Literature of the Absurd.* Cambridge: Cambridge University Press, 2015.
5. Esslin, Martin. Essay: "The Theatre of the Absurd". *The Tulane Drama Review*, Vol. 4, No. 4 (May, 1960), Publisher: MIT Press.
6. Terras, Victor (1985). *Handbook of Russian Literature*. New Haven, CT: Yale University Press
7. Bhabha, Homi K. (1994): *The Location of Culture.*Routledge, London and New York. Print.
8. Stone, Jonathan (2013). *Historical Dictionary of Russian Literature*.Rowman& Littlefield
9. Davies, Carole Boyce, and Anne Adams Graves. eds. *Ngambika: Studies of Women in African Literature*. Trenton: African World P, 1986.
10. Fanon, Frantz. *The Wretched of the Earth.* Trans. Constance Farrington. Middlesex: Penguin, 1967.
11. Gilbert, Helen (2001): *Introduction to Pantomime by Derek Walcott in): Postcolonial Anthology: An Anthology*. Routledge Chapman & Hall, London, 128-131. Print
12. Nayar, Pramod K. (2008): *Postcolonial Literature: An Introduction*. Pearson
    a. Longman, New Delhi, India. Print.

PUNYASHLOK AHILYADEVI HOLKAR SOLAPUR UNIVERSITY, SOLAPUR

Name of the Course: **B.A (English) Part–III**

Name of the Paper**: Literatures in English**

Semester: V & VI

Semester	Paper No	Title of the Paper	No. of Lectures (Theory)	College Assessment (Marks)	University Assessment (Marks)	Total Marks	Credits
V & VI	X & XV	Literatures in English	60	10	40	50	100

(2021-2022, 2022-2023 & 2023-2024)

(CBCS Semester Pattern Syllabus *w.e.f*. June, 2021)

Question Paper Pattern

Name of the Course: B. A. Part III

Name of the Paper**: Literatures in English**

SEM- V & VI

Que.1 Rewrite the following sentences by choosing the correct alternative. 08 Marks

(Novel, Drama & Poetry)

Que. 2 Write the answers in short. (Any Four out Six) 12 Marks

(Survey Topics, Poems & Short Stories)

Que.3 Broad question (any one) 10 Marks

(Drama)

Que. 4 Broad question.10 Marks

(Novel)

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NAAC Accredited - 2015
'B' Grade (CGPA - 2.62)

Name of the Faculty: Humanities

Name of the Course: B. A. (English) Part - III

Name of the Paper: Introduction to the Structure and Function of Modern English

Paper No. – XI & XVI

Semester: V & VI

With effect from June-2021-22, 2022-23 &2023-24

PUNYASHLOK AHILYADEVI HOLKAR SOLAPUR UNIVERSITY, SOLAPUR

Name of the Course**: B. A. (English) Part-III**

Name of the Paper**: Introduction to the Structure and Function of Modern English (Paper-XI)**

Semester: V

Preamble:

The paper, as its name suggests, introduces the students to various structures of modern English and their functions. It familiarizes them with the inter-relations of the units in a structure. It aims to help them frame and analyse structures and use appropriate words and expressions to convey various meanings.

Objectives:

- To acquaint the students with the classification of words
- To acquaint them with the structures and functions of phrases, and enable them to analyse phrases
- To acquaint them with the elements of clause
- To acquaint them with the active and passive clause patterns
- To introduce them to a few communicative concepts

Course Outcomes:

By the end of the course, the students will be able to:

- Identify the class of words
- Know the structure and function(s) of phrases and analyse them
- Identify clause elements
- Construct sentences using basic clause patterns
- Use appropriate words and expressions to communicate the prescribed concepts

PUNYASHLOK AHILYADEVI HOLKAR SOLAPUR UNIVERSITY, SOLAPUR

Name of the Course: **B. A. –III**

Name of the Paper: **Introduction to the Structure and Function of Modern English**

(Paper-XI)

Semester: V

CREDITS: 04 60 LECTURES

Teaching Components:

1. Unit No: 1: Words **(Credit: 01)** **(Lectures: 15)**

1.1 Open and closed word classes

1.2 Analysis of open and closed word classes

2. Unit No. 2: Phrases **(Credit: 01)** **(Lectures: 15)**

2.1 Main Phrase and Subordinate Phrase

2.2 Classes of Phrase: NP, PP, GP, AjP, AvPand VP.

2.3 Analysis of Phrases

3. Unit No. 3 Clauses **(Credit: 01)** **(Lectures: 15)**

3.1 Elements of Clause

3.2 Classification of Clauses—Subordinate and Main Clauses

3.3 Subordinate Clause and its types

3.4 Finite (Tensed), Non-finite Tenseless and Verbless Subordinate Clauses

3.5 Types of Main Clause: Declarative Clause, Interrogative Clause, and Imperative Clauses

3.6 Active and passive Clauses

3.7 Basic Clause Patterns

4. Unit No. 4: Communicative Concepts **(Credit: 01)** **(Lectures: 15)**

4.1 Statements, Questions and Responses

4.2 Denial and Affirmation

4.3 Agreement and Disagreement

4.4 Degrees of Likelihood

Books Recommended:

1. Leech, Geoffrey, Margaret Deuchar and Robert Hoogenraad. *English Grammar for Today*. London: Palgrave, 1982.
2. Quirk, Randolph and Sidney Greenbaum. *A University Grammar of English*. Hong Kong: Longman, 1993.
3. Greenbaum, Sidney and Randolph Quirk. *A Student's Grammar of the English Language*. New Delhi: Pearson Education, 2009.
4. Greenbaum, Sidney. *Oxford English Grammar*. New Delhi: OUP, 2009.
5. Leech, Geoffrey, and Jan Svartvik. *A Communicative Grammar of English*. Delhi: Longman, 2002.

Question Paper Pattern

Name of the Course**: B. A. Part III**

Name of the Paper**: Introduction to the Structure and Function of Modern English**

Semester: V (Paper No. XI)

Time: Marks: 40

Instructions:

1. All questions are compulsory.
2. Figures to the right indicate full marks

Q.1. Choose the correct alternative. 10 Marks

(Ten multiple type questions will be set on all the topics)

Q.2. Answer any five of the following in brief. 10 Marks

(Six questions will be set on the topic *Words*)

Q.3. A) Answer any twoof the following questions in brief. 06 Marks

(Three questions will be set on the topic *Communicative Concepts*)

Q.3.B) Answer any two of the following in brief. 04 Marks

(Three questions will be set on the topic *Phrases*)

Q. 4. Answer *any one* of the following questions. 10 Marks

(Two broad answer type questions will be set on the topic *Clauses*)

PUNYASHLOK AHILYADEVI HOLKAR SOLAPUR UNIVERSITY, SOLAPUR

Name of the Course: **B. A. –III**

Name of the Paper: **Introduction to the Structure and Function of Modern English**

(Paper-XVI)

Semester: VI

(Credits: 04) (Total lectures: 60)

Preamble:

The paper, as its name suggests, introduces the students to various structures of modern English and their functions. It familiarizes them with the inter-relations of the units in a structure. Moreover, it makes them realize how language varies according to the medium in which it is put, the relationship or the relative distance between the addresser and the addressee(s), and the function it fulfils in communication. It aims to help them use correct structures, and use appropriate words and expressions to convey various meanings.

Objectives:

- To acquaint the students with the classification of sentence
- To acquaint them with the processes of subordination and coordination
- To acquaint them with the structures and functions of subordinate clauses
- To introduce them to the basic and derived structures
- To introduce them to discourse analysis with reference to mode, tenor and domain
- To introduce them to a few more communicative concepts other than the ones prescribed in the preceding semester

Course Outcomes:

By the end of the course the students will be able to:

- Identify the simple and complex sentences
- Know the difference between subordination and coordination
- Derive structures from the basic ones
- Analyse a discourse with reference to its mode, tenor and domain
- Use appropriate words and expressions to communicate.

PUNYASHLOK AHILYADEVI HOLKAR SOLAPUR UNIVERSITY, SOLAPUR

Name of the Course: **B. A. –III**

Name of the Paper: **Introduction to the Structure and Function of Modern English**

(Paper-XVI)

Semester: VI

CREDITS: 04 60 LECTURES

Teaching Components:

Unit No.1: Subordination and Coordination **(Credit: 01) (Lectures: 15)**

1.1 Kinds of Sentences: Simple and Complex
1.2 Subordinate Clauses (SCls)
1.2.1 Structure of Subordinate Clauses
1.2.2 Functions of Subordinate Clauses
1.3 Classification of Subordinate Clauses: Finite (Tensed) and Non-finite (Tenseless)
1.4 Kinds of Subordinate Clauses: Noun Clauses, Adverbial Clauses, Relative Clauses, Comparative Clauses, and Prepositional Clauses
1.5 Subordination: Direct and Indirect
1.6 Coordination

Unit No. 2: Basic and Derived Structures **(Credit: 01) (Lectures: 15)**

2.1 Basic and Derived Structures
2.2 'Missing' Elements
2.3 Split Constituents
2.4 Double Analysis
2.5 Style and Structure-changing Rules

Unit No. 3: Discourse Analysis **(Credit: 01) (Lectures: 15)**

3.1 Dimensions of Discourse: Mode, Tenor, and Domain
3.2 Mode: Speech and Writing
3.2.1 Speech and Writing: Which Comes First?
3.2.2 Functions of Writing and Speech
3.2.3 The Form of Speech and Writing
3.2.4 Linguistic Characteristics of Speech and Writing
3.2.5 An analysis of Spoken and Written Discourse
3.3 Tenor
3.3.1 Tenor and Discourse
3.4 Domain
3.4.1 Domain and Discourse

Unit No. 4: Communicative Concepts **(Credit: 01) (Lectures: 15)**

4.1 Describing Emotions
4.2 Friendly Communications
4.3 Permission and Obligation
4.4 Influencing People

Books Recommended:

1. Leech, Geoffrey, Margaret Deuchar and Robert Hoogenraad. *English Grammar for Today*. London: Palgrave, 1982.
2. Quirk, Randolph and Sidney Greenbaum. *A University Grammar of English*. Hong Kong: Longman, 1993.
3. Greenbaum, Sidney and Randolph Quirk. *A Student's Grammar of the English Language*. New Delhi: Pearson Education, 2009.
4. Greenbaum, Sidney. *Oxford English Grammar*. New Delhi: OUP, 2009.
5. Leech, Geoffrey, and Jan Svartvik. *A Communicative Grammar of English*. Delhi: Longman, 2002.

PUNYASHLOK AHILYADEVI HOLKAR SOLAPUR UNIVERSITY, SOLAPUR

Name of the Course: **B.A (English) Part–III**

Name of the Paper**: Introduction to the Structure and Function of Modern English**

Semester V & VI

(2021-2022, 2022-2023 &2023-2024)

(CBCS Semester Pattern Syllabus *w.e.f.* June, 2021)

Sem.	P-No	Title of the Paper	No. of Lectures	C A Marks	UA marks	Total marks	Credits
VI	XI & XVI	Introduction to the Structure and Function of Modern English	60	10	40	50	04

C A: College Assessment
U A: University Assessment

Question Paper Pattern

Name of the Course**: B. A. Part III**

Paper No. XVI: Introduction to the Structure and Function of Modern English

Semester: VI

Time: Marks: 40

Instructions:

1. All questions are compulsory.
2. Figures to the right indicate full marks

Q.1. Choose the correct alternative. 10 Marks

(Ten multiple type questions will be set on all the topics)

Q.2. Answer any five of the following in brief. 10 Marks

(Six questions will be set on the topic *Basic and Derived Structures)*)

Q.3. A) Answer any twoof the following questions in brief. 06 Marks

(Three questions will be set on the topic *Communicative Concepts*)

Q.3.B) Give form and function labels to any two of the underlined clauses in the given sentences.04 Marks

(Three questions will be set on the topic *Subordination and Coordination*)

Q.4. Analyse any one of the given discourses with reference to its mode, tenor and domain supporting with at least two examples of each from it. 10 Marks

(Two examples of discourse – one written and the other spoken based on the topic *Discourse Analysis* will be given.)

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सोलापूर विद्यापीठ
।। विद्यया संपन्नता ।।
NAAC Accredited - 2015
'B' Grade (CGPA - 2.62)

Name of the Faculty: Humanities

Name of the Course: B. A. (English) Part - III

Name of the Paper: Content Writing and Editing in English Language

With effect from June-2021-22, 2022-23 & 2023-24

PUNYASHLOK AHILYADEVI HOLKAR SOLAPUR UNIVERSITY, SOLAPUR

Name of the Course: **B. A. –III**

Name of the Paper: **Content Writing and Editing in English Language**

Preamble:

In this course, the students will study how to write and edit content in English. The course will examine different types of content writings.Consistent, engaging, and high-quality **content** impacts the audience more than any other technique. **Content writing** allows your brand to create cohesive pieces of information. Consistency, especially in brand messaging, is one of the significant factors to determine the growth and success of your business. An editor will find themselves planning, coordinating and editing material for publication at newspaper, magazine, publishing house or other organization This course offers the writing and editing skills to train "aspiring-content writers and editors.

Objectives of the Course:

1. The course aims to inculcate the content writing and content editing skills among the students.
2. This course can also be beneficial to the existing content writers in honing their skills.

Course Outcome:

1. Content writing is considered a highly skilled area and presents opportunity for a full time/part time career.
2. Students will able to write and edit the content.

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Name of the Course: **B. A. –III**

Name of the Paper: **Content Writing and Editing in English Language**

[Credits:04 Theory-(45), Practical-(15)]

Total Theory Lectures-(45) **Total Credits – (04)**

Unit No: 1 Introduction to Content Writing and Editing (Credit: 01) **(15)**

Unit No: 2 Structuring and Writing Quality Content (Credit: 01) **(15)**

Unit No: 3 Copy Writing, Sales, Advertising and Promotion. (Credit: 01) **(15)**

Unit No: 4 Digital Content Writing (Credit: 01) **(15)**

Course Structure:

Semester	Paper No.	Title of Paper	No. of Lectures	College Assessments (Marks)	University Assessments (Marks)	Total Marks	Credits
		CONTENT WRITING AND EDITING IN ENGLISH	60	20	80	100	04

PUNYASHLOK AHILYADEVI HOLKAR SOLAPUR UNIVERSITY, SOLAPUR

Name of the Course: **B. A. –III**

Name of the Paper: **Content Writing and Editing in English Language**

Unit: I Introduction to Content Writing and Editing

- Origin and need of content writing
- Career in content writing
- Types of content writings
- The Concept of Content Marketing
- Difference between Academic and Content Writing.

Unit: II Structuring and Writing Quality Content

- Brainstorming and Collection of Material
- Proof Reading Techniques
- How to Structure a Book and ensure content Quality?
- Documentation and Formatting

Unit: III Copy Writing, Sales, Advertising and Promotion.

- Writing Newsletters, Product Descriptions and Press Releases
- Importance of Page Layout and Text Outline
- Effective Writing Techniques
- Writing Articles
- Mistakes to Avoid

Unit: **IV** – **Digital Content Writing**

- Video scripts
- Email newsletters
- Keynote speeches
- Social media posts
- Podcast titles
- Web page copy
- YouTube video descriptions
- Blog

List of References:

1. A. Z. Gill, Content Writing: A helpful Guide,

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NAAC Accredited - 2015
'B' Grade (CGPA - 2.62)

Name of the Faculty: Humanities

Syllabus Name of the Course: M.A. English Part I

(For Affiliated Colleges)

With effect from June 2020-21, 21-22, 22-23

Punyashlok Ahilyadevi Holkar Solapur University, Solapur

Paper Details to be introduced for MA (English) in Affiliated Colleges from June 2020

Semester-I	**Code**	**Title of Paper**	**Semester Exam**			**L**	**T**	**P**	**Total Credits**
			Theory	I A	Total				
Subject	**Hard Core**	**Hard Core (Compulsory) Papers**							
HCT	1.1	British Literature	80	20	100	4	1	0	5
HCT	1.2	Indian Writing	80	20	100	4	1	0	5
HCT	1.3	Linguistics	80	20	100	4	1	0	5
	DSE	**Discipline Specific Elective (Any One) Optional**							
DSE	1.1	Comparative Literature	80	20	100	4	1	0	5
DSE	1.2	Literatures in English	80	20	100	4	1	0	5
	Soft Core	**Soft Core (Any One) Optional**							
SCT	1.1	Enhancing Soft Skills and Personality Development	80	20	100	4	1	0	5
SCT	1.2	English for Competitive Exams.	80	20	100	4	1	0	5
		Total	**400**	**100**	**500**	**20**	**05**	**00**	**25**

Semester-II	Code	Title of Paper	Semester Exam			L	T	P	Total Credits
			Theory	I A	Total				
Subject	**Hard Core**	**Hard Core (Compulsory) Papers**							
HCT	2.1	British Literature	80	20	100	4	1	0	5
HCT	2.2	Indian Writing	80	20	100	4	1	0	5
HCT	2.3	Linguistics	80	20	100	4	1	0	5
	DSE	**Discipline Specific Elective (Any One) Optional**							
DSE	2.1	Comparative Literature	80	20	100	4	1	0	5
DSE	2.2	Literatures in English	80	20	100	4	1	0	5
	Soft Core	**(Generic Elective) (Any One) Optional**							
OET	2.1	Enhancing Soft Skills and Personality Development	80	20	100	4	1	0	5
OET	2.2	English for Competitive Exams.	80	20	100	4	1	0	5
		Total	**400**	**100**	**500**	**20**	**05**	**00**	**25**
		Sem. I & II Total	**800**	**200**	**1000**	**40**	**10**	**00**	**50**

Punyashlok Ahilyadevi Holkar Solapur University, Solapur

M.A. (English) Part-I

British Literature (paper-I)

Semester-I

(2020-21, 2021-22, 2022-23)

CBCS Semester Pattern Syllabus w.e.f. June 2020

Preamble:

British literature is widely read and interpreted worldwide. It is necessary to introduce to the students the different British literary forms and literary traditions.

●Objectives of the Course:

- **To provide students with the opportunity to study Literature within its cultural context.**
- **To enable them to comprehend literary works in the historical context.**
- **To introduce and acquaint students with major trends and major writers in British literature.**
- **To make the students curious readers of Poetry, Drama and Novel.**

Outcome:At the end of the course students will be….

- Able to understand the western culture and traditions
- Able to understand the British literary pieces.

●General Topics: **Credits 01**

1) Elizabethan Drama
2) Elizabethan Poetry
3) Victorian Novel

●Poems: **Credits 01**

1) My Mistress Eyes Sonnet No:130 : William Shakespeare
2) A Valediction; Forbidding Mourning : John Donne
3) An Elegy Written in a Country ChurchYard : Thomas Grey
4) Bright Star : John Keats
5) To Virgil : A.L.Tennyson
6) Dover Beach : Mathew Arnold

●Drama: **Credits 01**

Dr. Faustus : Christopher Marlowe

●Novel: **Credits 01**

Vanity Fair : W.M. Thackeray

●Essays: A.G. Gardiner's Essays **Credits 01**

1) All about a Dog
2) On a Painted Face
3) On Doing Nothing
4) On Habits

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M.A. (English) Part-I
British Literature (paper-IV)
Semester-II
(2020-21, 2021-22, 2022-23)
CBCS Semester Pattern Syllabus w.e.f. June 2020

●General Topics: **Credits 01**

1) War Poetry
2) Features of Absurd Drama
3) Stream of Conscious Technique in Modern Novel

●Poems: credit **Credits 01**

1) Anthem for a Doomed Youth : Wilfred Owen
2) Menelaus and Helen : Rupert Brooke
3) Sailing to Byzantium : W.B. Yeats
4) The Death Bed : SiegfriedSassoon
5) Do Not Go Gentle Into That Goodnight : Dylan Thomas
6) If : Rudyard Kipling

●Drama: **Credit 01**

The Birthday Party : Harold Pinter

●Novel: **Credit 01**

A Portrait of an Artist as a Youngman : James Joyce

●Short Stories: **Credit 01**

1) The Destructors : Graham Green
2) William the Conqueror : Rudyard Kipling
3) The Horse Dealer's Daughter : D. H. Lawrence
4) The Road from Colonus : E.M. Forster

References:

1. Sandors Andrew: The Short Oxford History of English Literature (3rd edition) New Delhi, OUP, 2005
2. Daiches David: A Critical History of English Literature Vol I to IV

3. Ford, Boris, The New Pelican Guide to English Literature Vol. I to VIII
4. Rassenthen M. L.: The Modern Poets: A Critical Introduction, London, Constable, 1965.
5. Drabble, Margaret. The Oxford companion to English literature.5th ed. rev. and updated. Oxford; New York: Oxford
University Press, 1995.
6. Harmon, Willliam; Holman, C. Hugh. A handbook to literature. 7th ed. Upper Saddle River, NJ: Prentice-Hall, 1996. 8.
A Dictionary of modern critical terms.Ed. Roger Fowler. Rev. ed. London: Routledge&Kegan Paul, 1987.

7. Wr Goodman, History Of English Literature Vol 1&2, Doaba House, New Delhi,
8. The Cambridge history of English literature. Ed. A. W. Ward, A. R. Waller. New York; London: Putnam, 1907
9. Delightful Gardiner; Collection of Essays, London.

●Works by Alfred George Gardiner at Project Gutenberg

M. A.(English) Part – I British Literature (Paper I and IV)
Semester I &II
(2020-21, 2021-22, 2022-2023)
(CBCS Semester Pattern Syllabus w.e.f. June, 2020)

COURSE STRUCTURE

Semester	Paper No	Title of The Paper	No of Lectures (Theory)	College Assessment (Marks)	University Assessment (Marks)	Total Marks	Credits
I	I	British Literature	60	20	80	100	05
II	V	British Literature	60	20	80	100	05

Punyashlok Ahilyadevi Holkar Solapur University, Solapur

M. A.(English) Part – I British Literature (Paper I and IV)
Semester I and II
(2020-21, 2021-22, 2022-2023)
(CBCS Semester Pattern Syllabus w.e.f. June, 2020)
Nature of Question Paper
Total Marks – 80

Instructions:
1]All questions are compulsory.
2] **Figures to the right indicate full marks.**

1: Rewrite the following by choosing the correct alternative from given below. 16
(Drama, Novel, Essays/Short Story, Poetry)

2. Attempt any Four questions out of Six **16**
(Poems, General Topics)

3: Answer briefly on Novel. 16
(Two out of Four)

4 : Question on Drama with internal option **16**
A
OR
B

5: A Broad Question on Essays / Short story **16**

Punyashlok Ahilyadevi Holkar Solapur University, Solapur

M. A.(English) Part – I Indian English Literature (Paper- II)
Semester I
(2020-2021, 2021-2022, 2022-2023)
(CBCS Semester Pattern Syllabus w.e.f. June, 2020)

Preamble:

The course introduces students to a body of literature that has now assumed canonicity, and that perhaps most aptly exemplifies the hybrid nature of the operations of English in India today. Indian English is now acknowledged as a distinct language with a distinct tradition of literature. The course charts the growth, development and new directions of this vibrant body of literature.The study helps the aspirants to understand the Indian Creativity and the spirit of India expressed through different genres of literature.

Objectives:

1. To introduce students to later phases of development of Indian English Literature and to familiarize them with ethos of India

2. To offer students a wider vision of Indian writing in English by including larger range of authors and genres.

3) To introduce the students to different themes, styles, genres as reflected in poetry, drama, prose, novel prescribed.

4) To create literary sensibility and emotional response to the literary texts and implant sense of appreciation of literary text

Course outcome:

1) At the end of the course the students will get acquainted with later phases of development of Indian English Literature and familiar with Indian ethos as reflected in texts prescribed.

2) At post-graduation level, students will enjoy reading of a number of authors and important literary genres as practiced by select Indian English figures.

3) As planned while designing the syllabus of this paper, students will get acquainted with thematic plurality, genres handled and style reflected in seminal texts of poetry, fiction drama and nonfiction.

Semester I

I General Topics **Credit 1**

1. Features of Indian English Novel

2. Trends in Modern Indian English Poetry

3. Development of Indian English Short Story

II Poetry **Credit 1**

1. ArunKolatkar- Yashwantrao

2.Nissim Ezekiel- Poet, Lover, Birdwatcher

3. Kamla Das- A Hot Noon in Malabar

4. DilipChitre- The House of My Childhood

5. A. K. Ramanujan- Small-scale Reflections on a Great House

6. Shiv K Kumar- A Letter to a Friend

Fom- *Approved Voices*, (Contemporary Indian English Poetry: A Selection) Ed. by Dr. GirishChindhade , Dr. Ashok Thorat. And *Ten Twentieth Century Indian Poets* Ed. by R.Parathsarathy.OUP.

III Novel **Credit 01**

1) Ruskin Bond- *The Room on the Roof* (1956)- Penguin Books India Ltd. New Delhi

IV Short Story **Credit 01**

1) Mulk Raj Anand- *Old Bapu*

2) R. K. Narayan- *The Shelter*

3) Raja Rao- *Javni*

4) Jai Nimbkar- *The Childless One*

5) Arun Joshi- *The Only American from Our Village*

(From- Contemporary Indian English Stories- Ed. Madhusudan Prasad- Sterling Publishers.(1998)

IV Drama **Credit 01**

GirishKarnad- *The Fire and the Rain*

From- Collected plays of GirishKarnad. Oxford University Press, Volume 2.New Delhi

References :

Dimensions of Indian English in Literature. By Naik, M. K. : New Delhi: Sterling, 1984.

Indian Novel in English.By Singh R. S. New Delhi: Arnold Heinemann, 1977.

Indian Women Novelists – Set-1, Vol.2 ed. by R. K. Dhawan

Indian English Literature 1980-2000 A Critical Survey by M.K. Naik and Shyamala A Narayan

Post Colonial Women Writers: New Perspectives by SunitaSinha

Aspects Of Indian Writing In English by M. K. Naik

Indian English Poetry: From Beginning to 2000 by M. K. Naik

The Twice Born Fiction by Mukherjee, Meenakshi. (Pencraft, New Delhi, 2001)

Studies in Contemporary Indian English Short Story.Ed.byDwivedi, A. N.B. R. Publishing Corporation, Delhi 1991.

M. A.(English) Part – I Indian English Literature (Paper- V)

Semester II

I General Topics **Credits 01**

1)Trends in Modern Indian English Drama

2) Development of Postcolonial Indian English Prose

3) Features of Indian Feminism

II—Poetry **Credits 01**

1) AnjuMakhija – *A Farmer's Ghost*

2) TishaniDoshi- *That Woman*

3) GayatriMajumdar- *Tribute to Revolutionaries*

4) Laksmisree Banerjee- *Gandhi at the Crossroads*

5) MenkaShivdasani- *Why Rabits Never Sleep*

6) ArundhatiSubramanium- *5.46, Andheri Local*

From --*Anthology of Contemporary Indian Poetry (2004) ed.* by MenkaShivdasani

III –Drama **Credit 01**

Mahesh Dattani- *Dance like a Man*.

From-- Collected plays of Mahesh Dattani ,(2000) Penguin Books India Ltd. New Delhi,

IV—Novel **Credit 01**

Anita Nair- *Ladies Coupe* (2003)Penguin Books India Ltd. New Delhi,

V --Non-Fiction **Credit 01**

1) Dr. A P J Abdul Kalam- Ignited Mind- Penguin Books India Ltd. New

References :

The Modern Indian Fiction Ed. by OPMathur.Abhinav Publications New Delhi

Indian English Poetry: critical Perspectives .Ed. by JaydipsinghDodiya. Swarup and Sons. New Delhi

Indian Writings in English ed. by ManmohanBhatnagar .1st to 7th editions Atlantic Publications. New Delhi

Indian English Literature by BaswarajNaikar.Atlantic Publications. New Delhi

New readings in Indian English Literature Ed by B K Das. Prakash Book Depot Barelli.

New directions in Indian Drama Ed. by SudhakarPandey. Prestige New Delhi

Perspectives on Indian Prose in English.By. M. K .Naik. Ed. New Delhi: Abhinav, 1982.

The Second Sex by Simone de Beauvoir, Trans. 1997. H.M. Parshley. London: Vintage

Feminism and the Post-modern Indian Women Novelists in English byAnitaMyles.Sarup& Sons, 2006

M A Part I

Indian English Literature Paper No II. Semester I

Pattern of Question Paper and Distribution of Marks

Q.1: Multiple choice questions on text prescribed – poetry, novel, drama, short story) (16 Marks)

Q.2: Short answer types question (4 out of 6) (16 Marks)

(Questions on short stories and Poems)

Q.3: Short answer type questions – (2 out of 4) (16 Marks)

(Questions on General / Survey Topics and poems)

Q.4: Broad question with internal option (Novel) (16 marks)

Q.5: Broad question (Drama) (16 Marks)

M A Part I

Indian English Literature. Paper No V Semester II

Pattern of Question Paper

Q.1: Multiple choice questions on text prescribed – poetry, novel, drama, non-fiction)

(16 Marks)

Q.2: Short answer types question (4 out of 6) (16 Marks)

(Questions on non-fiction and Poems)

Q.3: Short answer type questions – (2 out of 4) (16 Marks)

(Questions on General / Survey Topics and poems)

Q.4: Broad question with internal option (Novel) (16 marks)

Q.5: Broad question (Drama) (16 Marks)

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M. A. I English Syllabus
Paper No.III (HCT)
Title of the Paper: Introduction to Language and Linguistics
[Credits: Theory-4; Tutorial:1 Total=05]
Semester I

Preamble: The paper 'Introduction to Language and Linguistics' is introduced at M.A.I for Semester I. The components in the syllabus will cope with the present need of the students in the socio-educational scenario.

Introduction to Theoretical Linguistics

Objectives: 1. To develop an interest in language studies among students

2. To acquaint the students with language as a mechanism and linguistic theories

3. To introduce the basic concepts in linguistics to the students

4. To introduce the various branches of linguistics.

Outcome: at the end of the course students will be

- Interested in the language
- Familiar with some of the mechanism and theories of linguistics

Teaching Components:

Unit No: 1 (Credit: 2)

1. Introductory Linguistics
   1.1. Definition, nature and scope of linguistics
   1.2. Branches/ dimensions of linguistics
   1.3. Basic concepts in linguistics

Unit No: 2 (Credit 2)

2. Schools of Linguistics
   2,1. Traditional Grammars (from Plato to Comparative Philology of the 19th Century)
   2.2. Structural Linguistics (phoneme, morpheme and sentence analysis)
   2.3. Cognitive linguistics (Introductory aspects of TG Grammar)

Unit No. 3 (Credit 1)

3. Semantics
3.1. What is semantics?
   3.2. Seven Types of meaning
   3.3. Theories of meaning

List of Reference Books:

1. Frank Palmer, Semantics, Cambridge, 1981.
2. Frank Palmer, Grammar, Penguin, 1971.
3. Geoffrey Leech, Semantics, Pelican, 1974.
4. Crystal David, Linguistics, Pelican, 1971.
5. Crystal David, What Is Linguistics?, Pelican.
6. John Lyon's Language and Linguistics
7. Krishnaswamy, Verma and Nagrajan-Modern Linguistics, Macmillan, 1992.

Semester II (Paper No VI)
Introduction to Applied Linguistics

Objectives: 1. To introduce the concept of applied linguistics to the students
2. To enable the students to apply linguistic theories to different types of text
3. To acquaint the students with different types of registers of language

Teaching Components:

Unit No. 1 (Credit 2)

1. Introductory Pragmatics
   1.1. Definition, nature and scope of Pragmatics
   1.2. Speech Act Theory
   1.3. Cooperative Principle

Unit No. 2 (Credit 2)

2. Sociolinguistics
   2.1. Definition, nature and scope of sociolinguistics
   2.2. Varieties of language (Idiolect, dialect and registers)
   2.3.Concept of standard language

Unit No. 3 (Credit 1)

3. Stylistics
   3.1. Emergence of stylistics (literary criticism and stylistics)
   3.2. Types of stylistics
   3.3. Literary Language and the concept of foregrounding

List of Reference Books:

1. **George Yule, Pragmatics**
2. **Hudson R.A., Sociolinguistics, Cambridge, 1980.**
3. **Krishnaswamy, Verma and Nagrajan-Modern Applied Linguistics, Macmillan, 1992.**
4. **Leech Geoffrey, Principles of Pragmatics**
5. **Leech G. N., A Linguistic Guide to English Poetry, Longman 1965.**
6. **Levinson S.C., Pragmatics, Cambridge University Press 1997.**
7. **Peter Trudgill, Sociolinguistics**

9. Punyashlok Ahilyadevi Holkar Solapur University, Solapur

M. A. I English Syllabus

Paper No.IIIandVI (HCT)

Title of the Paper: Introduction to Language and Linguistics

Semester	Paper No.	Title of the Paper	No. of Lectures (Theory)	University Assessment Marks	College Assessment Marks	Total Marks	Total Credits
I	III	Introduction to Language and Linguistics	60	80	20	100	5
II	VIII	Introduction to Language and Linguistics	60	80	20	100	5

Equivalent Paper for old syllabus

Sr. No.	Name of the old paper	Name of the new paper
1.	Introduction to Language and Linguistics	Introduction to Language and Linguistics

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M. A. I English Syllabus

Paper No. III and VI (HCT)

Title of the Paper: Introduction to Language and Linguistics

Nature of Question Paper

(With effect from June 2020)

Q.1. Multiple Choice question 16

Q. 2. Answer any the following questions (Four out of Six) 16

Q. 3. Answer any the following questions (Two out of Four) 16

Q. 4. Broad question with internal option 16

Q. 5. Answer the following question. 16

M. A. English Part- I
Name of the Course: Comparative Literature
Discipline Specific Elective (1)
Semester: I & II
CBCS Pattern
With effect from June, 2020

Preamble:

Comparative Literature is an academic field dealing with the study of literature and cultural expression across linguistic, national and disciplinary boundaries. Most frequently, comparative literature is practiced with works of different languages, it may also be performed on the works of the same languages if the works originate from different nations or cultures among which that language is spoken. Comparative literature is of interdisciplinary nature in which literature is studied across national borders, periods, languages, genres, boundaries between literature and other arts like music, painting, dance, film etc., and disciplines like literature and psychology, philosophy, history, science, sociology, architecture and politics.

There are numerous explanations as to why comparison is done during comparative studies. To start with, comparison brings to light most of the things that may have been omitted or obscured in the national literature. The traditional literary studies do not consider the comparison of different groups according to their varying backgrounds. Instead, the study is used as a reflection of the state of the nation. Comparative literature brings another perspective and unmasks various aspects that may not have been covered in the traditional national literature. Moreover, through comparative studies, literary works that are not related in any way may reveal significant similarities and differences.

Secondly, evolution and dissemination of literary varieties and editions can be easily traced across periods and space. This is revealed through the powerful tool of comparison while attempting literary comparative studies. The relationship between literature and the group of people, its history and politics and various philosophies are brought out through comparison and contrast. This type of contrast helps to explain how literature has developed over time and the different aspects that may have influenced its spread or hindered its growth across various languages. In addition, through comparison, the cultural factors that may influence the spread of literature in one language or group of people can be brought out clearly.

Comparative literature studies involve comparisons between literature and the cultural factors, politics, philosophy and cultural arts of the groups being studied. Through comparison, trends in literature across time and space and drifts in national cultures can be better understood and explained.

Objectives of the Course:

The course has the following objectives:

1. To introduce the students to the discipline of comparative literature

2. To familiarize them with the definition, nature, scope, concepts, issues, and methodologies of comparative literature

3. To promote the ideal of one world by appreciation of comparative literature beyond regional and national boundaries so as to rise above separate identities of single national literature

4. To spread the concept of VishwaSahitya, as visualized by Tagore and Goethe

5. To create an awareness among the students about more than one language/literature

6. To establish the rationale of comparative literature in a multilingual, multicultural and multinational studies

Comparative Literature
DSE(1)
Semester: I Paper- IV

Total Theory Lectures: 60

(A) General Topics: **Credit 1**

1. The Concept of Comparative Literature
2. History of Comparative Literature
3. The Interdisciplinary Nature of Comparative Literature
4. The Importance of Comparative Literature in Indian Context

(B) Texts: Autobiographies **Credit 2**

Minimum frame of comparison: Alienation, Discrimination, Social/Racial Injustice, Self Narration, etc in Autobiographies.

1.**Maya Angelou**: I Know Why the Caged Bird Sings

2. **Malika Amar Shaikh**: मलाउध्वस्तव्हायचंय

(C) Texts: Poems **Credit 2**

Minimum frame of comparison: Literary Form, Socio-religious Sensibilities, Alienation, Life and Adversities, etc in Poetry.

1. Agha Shahid Ali: English Gazals

1. The only language of loss left in the world is Arabic
2. Rumours of spring- they last from dawn till dusk
3. Swear by the olive in the God-kissed land
4. I'll do what I must if I'm bold in real time
5. In a mansion once of love I lit a chandelier of fire

2. Suresh Bhat: मराठीगझल

1.लाभलेअम्हासभाग्यबोलतोमराठी

2. इतुकेचमलाजातानासरणावरकळलेहोते

3. आताजगायचेअसेमाझे

4. उषःकालहोताहोता

5. रंगुनीरंगतसाऱ्या

(D) Reference Books:

1. Damrosch, David. What is Comparative Literature?. Princeton UP, 2003.

2. Damrosch, David, Natalie, Melas& M. Buthelezi. The Princeton Sourcebook in Comparative Literature: From the European Enlightenment to the Global Present. Princeton: Princeton UP, 2009.

3. Steven, TotosyZepetnek&Tutun, Mukherjee (eds). Companion to Comparative Literature, World Literature and Comparative Cultural Studies.

4. Gifford, Henry. Comparative Literature. London: Rutledge and Kegan Paul,1969.

5. Patil, Dr.Anand. TaulanikSahitya: Nave SidhantaniUpyojan. SaketPrakashan, Aurangabad, 1998.

6. Agrawal, K.A. Toru Dutt: The Pioneer Spirit of Indian English Poetry: A Critical Study, Atlantic, 2009

7. Sharma, Ritu. Toru Dutt: A Precursor Of Indo Anglian Poetry, Unistar Publishers, Mohali

8. Tandon, Neeru. Thematic Patterns of Emily Dickinson's Poetry, Atlantic Publishers & Distributors Pvt Ltd, 2008

9. Bloom, Harold. Emily Dickinson Bloom's Modern Critical Views, Chelsea House Publications, 2008

10. Benvenuto, Richard. “The Return of the Native as a Tragedy in Six Books.” Nineteenth Century Fiction, 1971

11. Deen, Leonard W. “Heroism and Pathos in Hardy's Return of the Native” Nineteenth-Century Fiction, 1960

12. Kolekar T.N. Marginal Consciousness: Identity and Achievement. Mumbai “Pencraft Publications, 2015.

13. Benvenuto, Christine (2002). "Agha Shahid Ali". *The Massachusetts Review*. **43** (2): 261–273

14. Parveen, Rasheda (2014). "Agha Shahid Ali's English Ghazals and the Transnational Politics of Literary Subversion" (PDF). *The Challenge*. **23** (1).

15. Gillespie, Marcia Ann, Rosa Johnson Butler, and Richard A. Long. (2008). *Maya Angelou: A Glorious Celebration*. New York: Random House.

16. Gillespie, Marcia Ann, Rosa Johnson Butler, and Richard A. Long. (2008). *Maya Angelou: A Glorious Celebration*. New York: Random House.

17. Bloom, Harold, ed. (2004). *Maya Angelou's I Know Why the Caged Bird Sings*. New York: Chelsea House Publishers.

Comparative Literature
DSE - I
Credits: Theory (04) Practicals (NA)
Semester – II

Total Theory Lectures: 60

(A) General Topics: Credit 1

1. The Schools of Comparative Literature
2. The Theories of Comparative Literature
3. The Comparative Cultural Studies
4. The Future of Comparative Literature in the Indian Context

(B) Texts: Plays Credit 2

Minimum frame of comparison: Family Play, Traditional Conflict, Emotional Conflict, Identity Crisis, etc in plays.

1. **Harold Pinter**: *Homecoming*

2. **SatishAlekar**: *महानिर्वाण*

(C) Texts: Short Stories Credit 2

Minimum frame of comparison: Setting, Humour, Human Nature, Narrative Technique, Characterization, etc in Short Stories.

1. Franz Kafka: Metamorphosis and Other Stories

2.**DilipChitre**: ऑर्फिअस

(D) Reference Books:

1. Jahagirdar, Chandrashekhar. (Ed.) TaulanikSahityabhyas :TatveaniDisha.

   Kolhapur: SaurabhPrakashan, 1992.

2. Dev, Amiya. Idea of Comparative Literature in India. Calcutta: Papiras,1984.

3. Dev, Amiya& Das Sisir Kumar. (Eds) Comparative Literary Theory & Practice. Simla: Indian Institute of Advance Studies. Sterling Publication, 1989.

4. Majumdar, Swapan. Comparative Literature: Indian Dimensions, Calcutta: Papiras, 1987.
5. Batty, Mark. *About Pinter: The Playwright and the Work*. London: Faber and Faber, 2005.

6. Esslin, Martin.*The Peopled Wound: The Work of Harold Pinter*. London: Methuen, 1970.
7. Corngold, Stanley (1972). *Introduction to The Metamorphosis*. New York: Bantam Classics.
8. Duttlinger, Carolin (2013). *The Cambridge Introduction to Franz Kafka*. Cambridge: Cambridge University Press.
9. Yarrow, Ralph (2001). *Indian theatre: theatre of origin, theatre of freedom*. Routledge.
10. *Collected Plays of SatishAlekar*. OUP, Delhi 2009.
11. "Mahanirvan: SameekshaaaniSansmarne" (A volume of critique in Marathi on the play, Edited by Dr. RekhaInmadar-Sane published by M/s RajhansPrakashan, Pune,I Edition Dec 1999, II Edition March 2008)

Nature of the Question Paper
Semester I & II

Marks: 80

Que.1. Rewrite the following sentences with the correct alternatives given below. **16**

(Sixteen questions to be set on texts from Group B and C)

Que.2. Answer the following. (Four out of Six) **16**

(Questions to be set on texts from Group B and C)

Que.3. Answer the following. (Two out of Four) **16**

(Questions to be set on General Topics)

Que.4 A broad question will be set on the two texts from Group B for comparative assessment. 16

OR

A broad question will be set on the two texts from Group B for comparative assessment.

Que.5.A broad question will be set on the prescribed texts from Group C for comparative assessment. 16

Punyashlok Ahilyadevi Holkar Solapur University, Solapur

Programme: MA Languages and Literature, University Campus

Choice Based Credit System

2020-21

Name of the Course/paper: Literatures in English

Discipline Specific Elective (2)

Semester-I

Preamble:

Many outstanding personalities across the world have been contributing to literature. It is essential to introduce to the students these writers, their culture and the various issues and trends taken up. This will develop a clear understanding of the key concepts of various types of literature and expose students to world literature at large. It will also help to familiarize students to the rich and complex literary tradition from across the world.

Course Objectives: There is a wide and varied range of literary expressions in English written in different forms across the globe. The course/paper '***Literatures in English***' aims to develop an understanding of the natures and functions of literatures in English and methods of literary study. It further seeks to inform about literary expressions and understand its thematic perspectives. Moreover, it aims to encourage critical reading, interpretation, evaluation, an appreciation of, and an informed personal response to literatures in English.

Course Outcomes:

1. The students are introduced to different literary expressions written in English language.
2. The students understand thematic perspectives of the literatures written in different countries.
3. The students develop sensitivity and balanced responses to the complexity of human nature as portrayed in literary works.
4. The students develop understanding of the natures and functions of literatures in English.
5. The students develop an awareness of the relationship between texts and their cultural contexts.

SYLLABUS

Unit-I: General Topics: --- Credit 01

1. Myth and Literature
2. Symbolism in Literature

Unit-II: Poetry Credit 01

1 Sick by Shel Silverstein

2 Those Winter Sundays by Robert Hayden

3 Sympathy by Paul Laurence Dunbar

4 Shall I compare thee to a summer's day? (Sonnet 18) byWilliam Shakespeare

5 If I can stop one heart from Breaking by Emily Dickinson

6 I taught myself to live simply by Anna Akhmatova

7 There Will Come Soft Rain by Sara Teasdale

8 Remember by Christina Rossetti

9 When I die I want your hand on my eyes by Pablo Neruda

Unit-III: Novel/fiction **Credit 01**

A Sorrow Beyond Dreams Peter Handke

Unit-IV: Drama/play **Credit 01**

For colored girls who have considered suicide / when the rainbow is enuf by NtozakeShange (American black feminist)

Unit-V: Short stories: **Credit 01**

Selected stories by Anton Chekov

1. The Bet
2. Difficult People
3. The Post
4. Dreams
5. The Lottery Ticket
6. Happiness
7. A Happy Man
8. The Album
9. Darkness

Reference Books:

- Peter Handke. *A Sorrow Beyond Dreams.* NYRB Classics (30 November 2002)
- NtozakeShange. *For colored girls who have considered suicide / when the rainbow is enuf*. Scribner; Reprint edition (September 1, 1997)
- Anton Chekhov. *Selected Stories of Anton Chekhov.*RichardPevear (Introduction) Larissa Volokhonsky (Translator) Published October 31st 2000 by Modern Library (first published 1903)
- Charles I. Glicksberg. *Literature and Society.* Springer; Softcover reprint of the original 1st ed. 1972 edition (December 14, 2011)

Punyashlok Ahilyadevi Holkar Solapur University, Solapur

Programme: MA Languages and Literature, University Campus

Choice Based Credit System

2020-21

Name of the Course/paper: Literatures in English

Discipline Specific Elective (2)

Semester-II

1.

SYLLABUS

Unit-I: General Topics: **Credit 01**

1 Functions of literature

2 Women voices in Literature from third world

Unit-II : Poetry **Credit 01**

1When the Great Trees Fall by Maya Angelou

2 Paper Boats by Rabindranath Tagore

3 Wait for me by Konstantin Simonov

4 Homeward by Bassey Ikpi

5 Kevin by Bill Manhire

6 Home They Brought her Warrior Dead by Alfred lord Tennyson

7 On Being Brought from Africa to America by Philllis Wheatley

8 O Me! O Life! by Walt Whitman

9 Questions from a worker who reads by Bertolt Brecht

Unit-III: Novel/fiction: **Credit 01**

Celestial Bodies Jokha al-Harthi (Afganisthan)

Unit-IV: Play/Drama: **Credit 01**

Fences August Wilson

Unit-V: Essays **Credit 01**

1 Evolution by John Galsworthy

2 On the Art of Living with Others by Sir Arthur Helps

3 On History by Thomas Carlye

4 Ramblings in Cheapside by Samuel Butler

5. Reflections on Exile (Essay number 17) from the essay collection entitled Reflections on Exile by Edward Said

6 On going home by Joan Didion

7 Self-Reliance Ralph by Waldo Emerson

8 The Death of a Moth by Virginia Woolf

9 Shooting an Elephant by George Orwell

Reference Books:

- Jokha al-Harthi*Celestial Bodies* Sandstone Press Ltd (21 June 2018)
- Wilson, August (1986). *Fences: A Play* (First ed.). New York: Plume. ISBN 0-452-26401-4.
- Said, Edward. *Reflections on Exile and other essays*. New York, 2000.

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Nature of the Question Paper
Semester I & II

1]All questions are compulsory.
2] **Figures to the right indicate full marks.**

1: Rewrite the following by choosing the correct alternative from given below. 16
(Drama, Novel, Essays/Short Story, Poetry)

2. Attempt any Four questions out of Six 16
(Poems, General Topics)

3: Answer briefly on Novel. 16
(Two out of Four)

4 : Question on Drama with internal option 16
A
OR
B

5: A Broad Question on Essays / Short story 16

PUNYASHLOK AHILYADEVI HOLKAR SOLAPUR UNIVERSITY, SOLAPUR
Soft Core (1)
M.A. (English) Part – I Enhancing Soft Skills and Personality Development
(Semester I &II)(CBCS Semester Pattern Syllabus)
w.e.f. June, 2020
1) Title of the Course:- M. A. (English) Part – I EnhancingSoft Skills and Personality Development

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2) Preamble English is the language introduced as the special subject at M. A. It introduces the language skills and soft skills. Soft skills are personal attributes that influence how well you can work or interact with others. These skills make it easier to form relationships with people, create trust and dependability, and lead teams. This course introduces some of the soft skills for effective communication. The soft skills aim to strengthen students skills such as reading, comprehension, listening, Communication, Organization, Teamwork, Critical thinking, Social, Creativity, Interpersonal communication, Adaptability, Mindset and so on. Through the careful study of various Soft Skills students can develop their personality for better life.

3) Objectives of the Course:

1) To enable students to adopt different soft skills.
2) Soft Skills are highly demanded at work place
3) To develop a sense of comprehensibility by exposure through soft skills.
4) To improve the linguistic competence along with the literarycompetence of students.
5) To enable to students to develop critical thinking, teamwork and creativity.

4) Structure of the Course: -

M. A. Part - I
Semester I
(20 CA+ 80 UA= 100 Marks)

Credit – 4 **60 contact Hrs**

Sr. No	Units	Credit
1	What are Soft Skills?	1
2	Know Yourself/ Self Discovery	1
3	Personality Development	0.5
4	Developing Positive Attitude	0.5
5	Forming Values	0.5
6	Etiquettes of Manners	0.5
7	Intrapersonal Skills	0.5
8	Interpersonal Skills	0.5
	Total	5

M. A Part - I

Semester II

(20 CA+ 80 UA= 100 Marks)

Credit – 4 **60 contact Hrs**

Sr. No	Units	Credit
1	What is Communication?	1
2	The Art of Effective Communication	1
3	The Art of Listening	0.5
4	The Art of Reading	0.5
5	The Art of Speaking	0.5
6	The Art of Writing	0.5
7	Improving Perception	0.5
8	Body Language	0.5
	Total	5

Unit: 1- What are Soft Skills?

a) Introduction
b) Importance of soft skills
c) Attributes regarded as soft skills
d) Identifying your soft skills
e) Improving your soft skills
f) Train yourself
g) Top soft skills

Unit: 2- Know Yourself/ Self Discovery

a) Introduction
b) Importance of knowing yourself
c) Process of knowing yourself
d) SWOT analysis
e) Benefits of SWOT analysis
f) Using SWOT analysis

Unit: 3- Personality Development

a) Definition
b) Description
c) Temperament of Environment
d) Social Etiquettes
e) Personal grooming
f) P. W. Traits
g) Significance of pleasing personality

Unit: 4- Developing Positive Attitude

a. Introduction
b. Features of attitude
c. Attitude of behaviour
d. Formation of attitude
e. Ways of changing attitude
f. The power of positive attitude
g. Developing Positive attitude
h. Obstacles in developing positive attitude
i. Examples of positive attitude

Unit: 5 - Forming Values

a. Introduction
b. What is Value?
c. What are the core values?
d. Values relating self and others
e. Values of attributes
f. Importance of Values
g. Formation of Values
h. Types of Values
i. Power of values

Unit: 6 - Etiquettes of Manners

a. Introduction

b. Benefits of etiquettes
c. Classification of etiquettes
d. Modern etiquettes
e. Why practice etiquettes?

Unit: 7- Intrapersonal Skills

a. What are intrapersonal skills?
b. Intrapersonal techniques
c. Awareness of your intrapersonal skills
d. Some of the intrapersonal skills [visualization, recognizing negativity, compassion, positive affirmation, positive decision making etc]
e. Developing intrapersonal skills

Unit: 8- Interpersonal Skills

a. What are interpersonal skills?
b. Types of interpersonal skills
c. Awareness your interpersonal skills
d. Some examples of interpersonal skills. [Coordination, mentoring, negotiation, persuasion, service orientation, social perceptiveness]

PUNYASHLOK AHILYADEVI HOLKAR
SOLAPUR UNIVERSITY, SOLAPUR
M. A.(English) Part – I
b) Semester II
(CBCS Semester Pattern Syllabus w.e.f. June, 2020)

Unit : 1-What is Communication?

a. Define Communication
b. Communication Process
c. Channels of Communication
d. Formal Communication Network
e. Informal Communication Network
f. Importance of Communication
g. Barriers to Communication
h. Tips for Effective Communication

Unit: 2 –The Art of Effective Communication

a) Introduction
b) Theory of Communication
c) Types and Modes of Communication
d) Tips for Effective Communication
e) Become a Skilled Communicator

Unit: 3 –The Art of Listening

a) Introduction
b) What is listening?
c) Active Listening v/s Passive Listening
d) Kinds of Listening
e) Benefits of Active Listening
f) Factors that hamper Listening
g) Listening Tips

Unit: 4 – The Art of Reading

a. Introduction
b. Reading is a cognitive Process
c. Different types of reading
d. The SQ3R Technique
e. Different stages of reading
f. Problems of Reading
g. Becoming an effective reader

Unit : 5 The Art of Speaking

a) Introduction
b) Why is Communication Important?
c) Conversation Tips
d) Art of good communication
e) Benefits of good communication.

Unit: 6 – The art of Writing

a) Introduction
b) Importance of writing
c) Creative Writing
d) Tips for effective writing.
e) Drawbacks of written communication.
f) Benefits of effective writing

Unit: 7–Improving Perception

a. Introduction
b. Meaning.
c. Factors influencing perception.
d. Perceptual process
e. Improving perception
f. Perception and its application

Unit: 8–Body Language

a. Introduction
b. Forms of Body Language
c. Origin of Body Language
d. Parts of Body Language
e. Use of Body Language
f. Body Language In building interpersonal relations
g. Improving your body language
h. Developing confidence with correct body language.

References

1) "Personality Development and **Soft Skills** (Old Edition)" by Barun K Mitra.
2) "Soft **Skills** – Enhancing Employability: Connecting Campus with Corporate" by M S Rao.
3) "Communication and **soft** skill development (first edition)" by career publications and AshwiniDeshpande.
4) *"Identifying your Skills & Attributes"*. *Retrieved 5 December 2016.*
5) Workforce connections: Key soft skills that foster youth workforce success, Child Trends, June 2015
6) *"the definition of soft skills"*. *Retrieved 5 December 2016.*

PUNYASHLOK AHILYADEVI HOLKAR SOLAPUR UNIVERSITY, SOLAPUR
M. A.(English) Part – I
Semester - I
(2020-2021, 2021-2022, 2022—2023)
(CBCS Semester Pattern Syllabus w.e.f. June, 2020)
Nature of Question Paper
Total Marks - 80

Instructions:
1] All questions are compulsory
2] Figures to the right indicate full marks

1. Rewrite the following by choosing the correct alternative from given below. 16

(All the Topics)

2. Attempt any four questions out of six 16

(Unit: 1- What are Soft Skills?Unit: 2- Know Yourself/ Self Discovery)

3. Answer Briefly. (Two out of Four)

16

(Unit: 3- Personality Development, Unit: 4- Developing Positive Attitude)

4. Essay type question. 16

(Unit: 5 - Forming Values, Unit: 6 - Etiquettes of Manners)

A

Or

B

5. Broad Question 16

(Unit: 7- Intrapersonal Skills, Unit: 8- Interpersonal Skills)

PUNYASHLOK AHILYADEVI HOLKAR SOLAPUR UNIVERSITY, SOLAPUR

M. A. (English) Part – I

Semester - II

(2020-2021, 2021-2022, 2022—2023)

(CBCS Semester Pattern Syllabus w.e.f. June, 2020)

Nature of Question Paper **Total Marks - 80**

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Instructions:

1] All questions are compulsory

2] Figures to the right indicate full marks

1. Rewrite the following by choosing the correct alternative from given below. 16

(All the Topics)

2. Attempt any four questions out of six **16**

(Unit : 1- What is Communication? , Unit: 2 – The Art of Effective Communication)

3. Answer Briefly. (Two out of Four) **16**

(Unit: 3 – The Art of Listening, Unit: 4 – The Art of Reading)

4. Essay type question. **16**

(Unit : 5 The Art of Speaking, Unit: 6 – The art of Writing)

A

Or

B

5. Broad Question **16**

(Unit: 7 – Improving Perception, Unit: 8 – Body Language)

Punyashlok Ahilyadevi Holkar Solapur University, Solapur

Programme: MA Languages and Literature, University Campus

Choice Based Credit System

2020-21

Name of the Course/paper: English for Competitive Examinations

Semester I

Course Objectives: English Language and literature forms an important area in all competitive examinations. The questions are designed to judge the language and literature skills of the candidates. The paper/course '*English for Competitive Examinations*' aims to introduce the topics on English language and literature skills based on syllabus prescribed for different competitive examinations, provide awareness about the topics on Language and literature, equip them with techniques to develop vocabulary, sentence construction, analyzing skills, reading comprehension, literary appreciation, etc. so that they create their mindset for mental alertness, quick thinking power, presence of mind, as well as the judgment related to topics on English language and literature.

Course Outcomes:

1. The students are introduced to the topics on English language and literature skills based on syllabus prescribed for competitive examinations.
2. The students are provided awareness about scope and areas in English Language and literature important for competitive examinations.
3. The students are provided techniques to develop vocabulary, sentence construction, analyzing skills, reading comprehension, literary appreciation, etc.
4. The students get sufficient practice of solving questions on English language and literature asked in competitive examinations.
5. The students develop confidence to face questions on English language and literature.

SYLLABUS

Unit-I (Credit: 1 :5)

Idioms, Phrases, vocabulary development strategies, correct formation of words and sentences, Synonyms/antonyms, One word substitution, -logy/ –graphy, etc.

Unit-II (Credit: 1 :5)

Translation: Understanding fundamentals of translation, ethics of translation, translation practice from English to Marathi language and Marathi to English language.

Unit-III (Credit: 1)

- Summarizing paragraphs/poems
- Note making
- Sentence rearrangement and paragraph jumbles

Unit-IV (Credit: 1)

Essay writing:
(Development of an essay on local, national and international environmental, social, gender related, economic, historic, developmental and cultural issues)

Reference books:

- Norman Lewis. Word power made easy. Goyal, New Delhi.
- Michael McCarthy, Felicity O'Dell. English vocabulary in use. Cambridge.
- Merriam-Webster's Vocabulary Builder
- Mona BakerGabriela Saldanha. Routledge Encyclopedia of Translation Studies. Published October 7, 2019 by Routledge
- Wren and Martin. High schools English Grammar and Composition. Ed. Rao N. D., V. Prasada Rao.
- PulkitKhare. ESSAYS for Civil Services and Other Competitive Examinations. January 2014.
- Gupta, S. C. 151 Essays Paperback – 1 January 2016

Punyashlok Ahilyadevi Holkar Solapur University, Solapur

Programme: MA Languages and Literature, University Campus

Choice Based Credit System

2020-21

Name of the Course/paper: English for Competitive Examinations

(Soft Core 2)

Semester: I

Pattern of Question paper

Q. 1 Multiple choice questions on Idioms, Phrases, vocabulary development strategies, correct formation of words and sentences, Synonyms/antonyms, One word substitution, -logy/ –graphy, etc. (16 questions)
(16 marks)

Q. 2 Questions on Translation.
Translate following paragraphs. (Any 4 out of 6) (16 marks)

Q. 3 Questions on Sentence rearrangement and paragraph jumbles. (Two out of Four)
(16 marks)

Q. 4 Solve any one of the following.

a) Summarizing paragraphs/poems (16 marks)
OR
b) Note making

Q.5
Essay writing (No choice) (16 marks)

Punyashlok Ahilyadevi Holkar Solapur University, Solapur

Programme: MA Languages and Literature, University Campus

Choice Based Credit System

2020-21

Name of the Course/paper: English for Competitive Examinations

Soft Core (2)

Semester-II

SYLLABUS

Unit-I

Basic rules of grammar, rules for use of noun, pronoun, adjective, verb, adverb, preposition, conjunction, interjection, articles, etc. (Credit: 1 :5)

Unit-II (Credit: 1 :5)

- Paraphrasing
- Rules of Punctuation
- Critical appreciation of prose/poetry

Unit-III Precis writing: (Credit: 1)

Fundamentals of précis writing, dos and don'ts in précis writing.

Unit-IV (Credit: 1)

Reading, understanding, and comprehension of paragraph for locating facts and inferences from the paragraph.Comprehending development, types and themes of paragraph.

Reference books:

- Norman Lewis. Word power made easy. Goyal, New Delhi.
- Michael McCarthy, Felicity O'Dell. English vocabulary in use. Cambridge.
- Merriam-Webster's Vocabulary Builder

- Mona BakerGabriela Saldanha. Routledge Encyclopedia of Translation Studies. Published October 7, 2019 by Routledge
- Wren and Martin. High schools English Grammar and Composition. Ed. Rao N. D., V. Prasada Rao.
- PulkitKhare. ESSAYS for Civil Services and Other Competitive Examinations. January 2014.
- Gupta, S. C. 151 Essays Paperback – 1 January 2016

Punyashlok Ahilyadevi Holkar Solapur University, Solapur

Programme: MA Languages and Literature, University Campus

Choice Based Credit System

2019-20

Name of the Course/paper: English for Competitive Examinations

Semester: II

Pattern of Question paper

Q. 1 Basic rules of grammar, rules for use of noun, pronoun, adjective, verb, adverb, preposition, conjunction, interjection, articles, etc. (16 marks)

Q. 2 Questions on Translation.
Critical appreciation of prose/poetry. (Any 4 out of 6) (16 marks)

Q. 3 Questions on Rules of Punctuation. (Two out of Four) (16 marks)

Q. 4 Solve any one of the following.

a) Paraphrasing (16 marks)

OR

b) Precise writing

Q.5

Reading comprehension: questions based on vocabulary, facts, understanding and inferences based on paragraph. (Compulsory question) (16 marks)

Punyashlok Ahilyadevi Holakar Solapur University, Solapur

पुण्यश्लोक अहिल्यादेवी होळकर
सोलापूर विद्यापीठ
।। विद्यया संपन्नता ।।
NAAC Accredited - 2015
'B' Grade (CGPA - 2.62)

M. A. II English Syllabus for Affiliated College

Paper Details to be introduced for M. A. (English) in Affiliated College from June, 2021

Semester III

Semester	Code	Title of the Paper	Semester Exam			L	T	P	Total Credits
			Theory	IA	Total				
Semester III		**Hardcore Compulsory Paper**							
HTC	3.1	Contemporary Critical Theories	80	20	100	4	1	0	5
HTC	3.2	Postcolonial Literature	80	20	100	4	1	0	5
HTC	3.3	Research Methodology	80	20	100	4	1	0	5
		Discipline Specific Elective (Any One)							
DSE	3.1	Translation Studies	80	20	100	4	1	0	5
DSE	3.2	Cultural Studies	80	20	100	4	1	0	5
		Soft Core/Generic (Any One)							
SCT	3.1	21ST Century Skills	80	20	100	4	1	0	5
SCT	3.2	Introduction to Film Studies	80	20	100	4	1	0	5
		TOTAL	400	100	500	20	05	00	25

Punyashlok Ahilyadevi Holakar Solapur University, Solapur

Paper Details to be introduced for M. A. (English) in Affiliated College from June, 2021

Semester IV

Semester	Code	Title of the Paper	Semester Exam			L	T	P	Total Credits
			Theory	IA	Total				
Semester IV		**Hardcore Compulsory Paper**							
HTC	4.1	Contemporary Critical Theories	80	20	100	4	1	0	5
HTC	4.2	Postcolonial Literature	80	20	100	4	1	0	5
HTC	4.3	Research Methodology	80	20	100	4	1	0	5
		Discipline Specific Elective (Any One)							
DSE	4.1	Translation Studies	80	20	100	4	1	0	5
DSE	4.2	Cultural Studies	80	20	100	4	1	0	5
		Soft Core/Generic (Any One)							
SCT	4.1	21ST Century Skills	80	20	100	4	1	0	5
SCT	4.2	Introduction to Film Studies	80	20	100	4	1	0	5
		TOTAL	400	100	500	20	05	00	25

Hardcore Compulsory Paper

PUNYASHLOK AHILYADEVI HOLKAR SOLAPUR UNIVERSITY, SOLAPUR

Name of the Faculty: Humanities

Name of the Course: M. A. (English) Part – II

Name of the Paper: Contemporary Critical Theories

Semester- III & IV

With effect from June-2021-22, 2022-23 & 2023-24

Name of the Course: M.A (English) Part–II
Name of the Paper: Contemporary Critical Theories

Semester: III & IV

PREAMBLE:

Critical Theories are reflective assessment and critique of society, culture and literary studies. They familiarize students with the assumptions, history and theorists of the contemporary period. The course introduces various theories, the essays of some prominent theorists, concepts and terms that are used in contemporary critical theories. It also focuses on the ways in which literary texts have been interpreted by the theorists. Moreover, it helps students to read and interpret literary texts critically.

COURSE OBJECTIVES:

1. To introduce to the learners contemporary critical theories.
2. To familiarize the learners with various contemporary critical theorists and their essays.
3. To sensitize the learners to contemporary critical approaches.
4. To enable the learners to appreciate literary texts critically.
5. To develop the learners' critical thinking.

COURSE OUTCOMES:

By the end of the course, the students will:
1. Understand how various critical theories developed in the course of the 20th Century.
2. Read & contextualize contemporary theories to the best of their ability.
3. Develop competency to mark differences and similarities in these theories and schools.
4. Develop an ability to apply the critical theories to literary texts.
5. Acquire ability to understand their own theoretical/critical stance as readers.

Name of the Course: M.A (English) Part–II
Name of the Paper: Contemporary Critical Theories
Semester – III

[Credits: Theory-(05)] **Total Theory Lectures (75)**

General Topics: (Credit: 01) Lectures (15)

1. Formalism
2. Reader Oriented Theories
3. Structuralist Theories
4. Marxist Theories
5. Feminist Theories

Texts: (Credit: 03) Lectures (45)

1. Victor Shklovsky : **From 'Art as Technique'**
2. Stanley Fish : **Interpreting the Variorum**
3. Roman Jakobson : **Linguistics and Poetics**
4. George Lukacs : **The Ideology of Modernism**
5. Elaine Showalter : **Feminist Criticism in the Wilderness**

Critical Terms: (Credit: 01) Lectures (15)

1. Affective Fallacy
2. Metaphor and Metonymy
3. Defamiliarization
4. Heteroglossia
5. Phenomenology
6. Transtextuality
7. Ideology and Hegemony
8. Interpellation
9. Sex and Gender
10. Gynocriticism

References:

1. Abrams, M, H, and Geoffrey Galt Harpham. *A Glossary of Literary Terms,* Cengage Learning India, 2015. **(for Critical Terms)**

2. Barry, Peter. *Beginning Theory: An Introduction to Literary & Cultural Theories*, 2nd ed., Manchester, Manchester University Press, 2004. **(for General Topics and Critical Terms)**

3. David, Lodge, ed.—*Twentieth Century Literary Criticism,* London, Longman, 1972. **(for George Lukacs)**

4. David, Lodge, ed.—*Modern Criticism and Theory :* A Reader, London, Longman, 1988. **(for Stanley Fish, Elaine Showalter, Roman Jakobson)**

5. Selden, Widdowson, and Brooker, Eds. *A Reader's Guide to Contemporary Literary Theory*, New Delhi: Pearson, 2006. **(for General Topics and Critical Terms)**

6. Philip, Rice, & Patricia Waugh, — edsrea. *A Modern Literary Theory* : A Reader, Third edition. Arnold, 1999. **(For Victor Shklovsky)**

Name of the Course: M.A (English) Part–II
Name of the Paper: Contemporary Critical Theories
Semester – IV

[Credits: Theory-(05)] **Total Theory Lectures (75)**

General Topics: (Credit: 01) Lectures (15)

1. Poststructuralist Theories
2. New Historicism
3. Psychoanalytical Theories
4. Postcolonial Theories
5. Cultural Studies

Texts: (Credit: 03) Lectures (45)

1. M.H. Abrams : **The Deconstructive Angel**
2. Stephen Greenblatt: **Resonance and Wonder**
3. Ernest Jones : **Hamlet the Psychological Solution**
4. Homi Bhabha : **Of Mimicry and Man: The Ambivalence of Colonial Discourse**
5. Edward Said : **From 'Culture and Imperialism'**

Critical Terms: (Credit: 01) Lectures (15)

1. Logocentrism
2. Readerly and Writerly Text
3. Improvisation
4. Circulation
5. Collective Unconscious
6. Anxiety of Influence
7. Orientalism
8. Negritude
9. Nationalism
10. Imperialism

References:

1. Abrams, M, H, and Geoffrey Galt Harpham. *A Glossary of Literary Terms*,Cengage Learning India, 2015. **(for Critical Terms)**

2. Barry, Peter. *Beginning Theory: An Introduction to Literary & Cultural Theories*, 2nd ed., Manchester, Manchester University Press, 2004. **(for General Topics and Critical Terms)**

3. David, Lodge, ed.—*Modern Criticism and Theory* : A Reader, London, Longman, 1988. **(for M.H. Abrams)**

4. Philip, Rice, & Patricia Waugh, —edsrea. *A Modern Literary Theory :* A Reader, third edition. Arnold, 1999. **(For Stephen Greenblatt, Homi Bhabha and Edward Said)**

5. Selden, Widdowson, and Brooker. Eds, *A Reader's Guide to Contemporary Literary Theory*, New Delhi: Pearson, 2006. **(for General Topics and Critical Terms)**

6. William, Handy, & Max Westbook, eds.—*Twentieth Century Criticism*, New York, Free Press, Macmillan, 1977. **(for Ernest Jones.)**

Equivalent Subject for Old Syllabus

Sr. No.	Name of the Old Paper	Name of the New Paper
1	Contemporary Critical Theory	Contemporary Critical Theories

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Name of the Course: **M. A. (English) Part–II**
Name of the Paper**: Contemporary Critical Theories**
Semester: III & IV
COURSE STRUCTURE

Semester		Title of the Paper	No of Lectures (Theory)	College Assessment (Marks)	University Assessment (Marks)	Total Marks	Credits
III & IV		**Contemporary Critical Theories**	75	20	80	100	05

Name of the Course**: M.A (English) Part–II**
Name of the Paper: **Contemporary Critical Theory**
Semester: III & IV

Pattern of Question Paper and Distribution of Marks

Q.1: Multiple choice questions (16 Marks)
(General Topic and prescribed essays)

Q.2: Short answer types questions (4 out of 6) (16 Marks)
(Questions on Critical Terms)

Q.3: Short answer type questions (2 out of 4) (16 Marks)
(Questions on General Topics)

Q.4: Broad question with an internal option (16 marks)
(Prescribed Essays- First Three essays)

Q.5: Broad question (16 Marks)
(Prescribed Essays- Last two essays)

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'B' Grade (CGPA - 2.62)

Name of the Faculty: Humanities

Name of the Course: M. A. (English) Part – II

Name of the Paper: Postcolonial Literature

Semester- III & IV

With effect from June-2021-22, 2022-23 & 2023-24

Name of the Course**: M.A (English) Part–II**
Name of the Paper**: Postcolonial Literature**
Semester – III & IV

Preamble:

The course is text-oriented and consists of creative writings in English from the countries formerly colonized by the European countries. The course explores poetry, fiction, drama and prose highlighting the relationship between the colonizer and the colonized. It mainly focuses on the colonizers' reactions to the colonial and neo-colonial forces. It is designed with an intention to introduce students to the key concepts in postcolonial studies and major postcolonial thinkers and writers. The literary texts under consideration are seen as a cultural meeting-point of male and female characters of different races, classes and ethnic groups. The course will assist students in widening their literary horizon and in analyzing and interpreting the colonial and postcolonial literary texts on their own. It will also help students broaden their hearts and empathize with the marginal and race and gender discriminated people.

Objectives of the Course:

1. To introduce the students to the study of Postcolonial Literature.
2. To help students get acquainted with major issues in postcolonial literature.
3. To introduce the students to colonialism and its effects on cultures and societies.
4. To motivate students to read colonial and postcolonial texts and analyze them from the postcolonial perspective.
5. To develop the students' understanding of the cultural politics of imperialism.
6. Problematize the idea of postcolonial literature and ask whether the geographically and culturally dispersed authors can be subsumed under the umbrella term "postcolonial".

Course Outcomes:

Upon successful completion of this course, students will have the knowledge and skills to:

1. Analyze and interpret the colonial and postcolonial texts applying the postcolonial literary theory.
2. Define the key concepts in postcolonial studies.
3. Read, comprehend and engage with postcolonial literary criticism.
4. Know how race, class, gender, history and identity are presented and problematized in the literary texts,
5. Know how a literary text, explicitly or allegorically represents various aspects of colonial oppression.

Name of the Course: **M. A. (English) Part–II**
Name of the Paper**: Postcolonial Literature**
Semester: III & IV
COURSE STRUCTURE

Total Theory Lectures-(75)

Total Credits – (05)

Unit No: 1 General Topics and Poetry **(**Credit: 02) **(30)**

Unit No: 2 Fiction (Credit: 01) **(15)**

Unit No: 3 Essays (Credit: 01) **(15)**

Unit No.4 Drama (Credit: 01) **(15)**

Course Structure:

Semester		**Title of Paper**	**No. of Lectures**	**College Assessments (Marks)**	**University Assessments (Marks)**	**Total Marks**	**Credits**
III		POSTCOLONIAL LITERATURE	75	20	80	100	05
IV		POSTCOLONIAL LITERATURE	75	20	80	100	05

Punyashlok Ahilyadevi Holakar Solapur University, Solapur

Name of the Course**: M.A (English) Part–II**

Name of the Paper**: Postcolonial Literature (Paper VII)**

Semester – III

Total Credits – (05) **Total Theory Lectures-(75)**

General Topics:

1. Imperialism and Colonialism
2. Post colonialism – Major Issues
3. Negritude and Nativism

Poetry:

1. Kamau Brathwaite : **Bread**
2. Gabeba Baderoon : **The Flats**
3. Roberta Sykes : **Miscegenation**
4. Meena Alexander : **Muse**
5. David Diop : **The Renegade**
6. Chinua Achebe : **Vultures**

Fiction:

1. George Lamming: **The Immigrants**

Drama:

1. *Wole Soyinka:* ***Dance of the Forest***

Essays:

a) Edward Said: Orientalism
b) Benedict Anderson: Imagined Communities (From The Postcolonial Studies Reader – Bill Ashcroft, Gareth Griffiths and Helen Tiffin)
c) Homi Bhabha: "Of Mimicry and Man: The ambivalence of Colonial Discourse" (*from* The Location of Culture)

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Name of the Course**: M.A (English) Part–II**
Name of the Paper**: Postcolonial Literature**
Semester – IV

General Topics:

1. Race, Gender and Ethnicity in Postcolonial Literature
2. Diaspora
3. Decolonization

Poetry: Selected Poems of Dereck Walcott

1. A Far Cry from Africa
2. The Season of Phantasmal Peace
3. A City's Death by Fire
4. After the Storm
5. Dark August
6. Map of the New World

Fiction:

1. V. S. Naipaul: **The Mimic Men**

Drama:

1. Dina Mehta *:* **Getting Away with Murder**

Essays:

a) **Ngũgĩ wa Thiong'o:** The Language of African Literature (From *Decolonizing the Mind)*
b) Gayatri Spivak Chakravorty: "Can the Subaltern Speak?"
c) Frantz Fanon – The Man of Colour and the White Woman (*From* Black Skin, White Masks)

Reference Books:

1. David, Daiches. *A Critical History of English Literature - Volume 1 and 2* (Combo Pack. Supernova Publishers
2. Ford, Boris. *The Pelican Guide to English Literature*
3. Ahmad, Aijaz. *In theory : Classes, Nations, Literatures* (Delhi: Oxford University Press,1994)
4. Ashcraft, Bill, et al. *The Empire Writes Back* (London:Routledge,1989)
5. --- *The Post-Colonial Studies Reader.* (London:Routledge,2003)
6. Abraham, Taisha. *Introducing Postcolonial Theories*. (Delhi : Macmillan India Ltd, 2007).
7. Barker, F, P, Hulme and M. Iversen, (eds.) *Colonial Discourse/Postcolonial Theory*. (Manchester : Manchester University Press, 1994)
8. Bhabha, Homi. *The Location of Culture*. (London:Routledge,1994)
9. --- *Nation and Narration* (London : Routledge, 1998)
10. Boehmer, Elleke. *Empire Writing: An Anthology of colonial Literature*, 1870-1918. (Oxford: Oxford University Press, 1999).
11. --- *Colonial and Postcolonial Literature*. (Oxford: Oxford University Press, 1995).
12. Cesaire, Aime. *Discourse on Colonialism.* (New York : Monthly Review Press, 1972)
13. Chides, Peter and R. J. Patrick Williams. An Introduction to Postcolonial Theory. (London : Prentice Hall, 1977)
14. Fanon, Frantz. *Black Skin, White Masks.* (London : Pluto, 1986)
15. --- *The Wretched of the Earth.* (London : penguin 1990)
16. Gandhi, Leela. *Postcolonial Theory: A Critical Introduction*. (Delhi: Oxford University, 1998)
17. Harlow, Barbara. *Resistance Literature*. (New York and London : Metheum, 1987)
18. Hulme, Peter, ed. *Postcolonial Theory and Colonial Discourse*. (Manchester : Manchester University Press, 1993)
19. Jan, Mohamed, Abdul. *Manichean Aesthetics: The Politics of Literature in Colonial Africa.* (Amherst : University of Massachusetts Press, 1983)
20. Loomba, Ania. *Colonialism / Post Colonialism* (London : Routledge, 1998)
21. Miller, D. M. et al, *Dominance and Resistance.* (London : Unwin Hyman, 1989)
22. Moore, Gilbert Bart. *Post-Colonial Theory: Contexts, Practices, Politics*. (London : Verso, 1997)
23. McLeod, John. *Beginning Postcolonialism* (Manchester : Manchester University Press, 2007)
24. Memmi, Albert. *The Colonizer and the Colonized.* (New York : Oxon Press, 1965)
25. Mennoni, Octave. *Prospero and Caliban : The Psychology of Colonization.* trans, by Pamela Powerland. (New York : Prager,. 19664)
26. Mongia, Padmini, (ed.), *Contemporary Post-Colonial Theory: A Reader*. (New Delhi : Oxford University Press, 2000)
27. Nandy, Ashish. *The Intimate Enemy: Loss and Recovery of Self under Colonialism*. (New Delhi : Oxford University Press, 1983)
28. Ngugi Wa Thiong'O. *Decolonizing the Mind: The Politics of Language in African Literature.* (London: James Currey 1986)
29. Said, Edward. *Culture and Imperialism*. (London :Chatto and Windus, 1993)

30. --- *Orientalism.* (London : Penguin, 1991)
31. Spivak, Gayatri. *In other worlds : Essays in Cultural Politics.* (London : Routledge, 1987)
32. Tomllinson, John. *Cultural Imperialism.* (London : Printer, 1991)
33. Walder, Dennis. *Post-Colonial Literature in English: History, Language, Theory.* (Oxford : Blackwell, 2002)
34. Williams, Patrick, and Laura Chrisman. *Colonial Discourse and Post-Colonial Theory.* (Hamel Hempstead : Harvester Wheat Sheaf, 1994)
35. Young, Robert J. C. *Postcolonialism : An Historical Introduction*.(Oxford : Blackwell, 2001)
36. Young, S. C. *Colonial Desire: Hybridity in Theory, Culture and Race.* (London : Routledge, 1995)

Punyashlok Ahilyadevi Holkar Solapur University, Solapur

Name of the Course**: M.A (English) Part–II**

Name of the Paper**: Postcolonial Literature**

<u>Pattern of Question Paper for Semester III & IV</u>

Total Marks: 80

Q. 1 Choose the correct answer. **(16 Marks)**

(Poetry/Fiction/Drama/ Essays)

Q. 2 Answer any four of the following questions in short. (4/6) **(16 Marks)**

(Poetry)

Q. 3 Answer any two of the following. (2/4) **(16 Marks)**

(General Topics/ Essays)

Q.4 A broad answer type question with an internal option. **(16 Marks)**

(Drama)

Q. 5 A broad answer type question. **(16 Marks)**

(Fiction)

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Name of the Faculty: Humanities

Name of the Course: M. A. (English) Part – II

Name of the Paper: RESEARCH METHODOLOGY

Semester- III & IV

With effect from June-2021-22, 2022-23 & 2023-24

PUNYASHLOK AHILYADEVI HOLKARSOLAPUR UNIVERSITY, SOLAPUR

M.A. (English) Part – II

Title of the course: RESEARCH METHODOLOGY

(Semester III &IV)(CBCS Semester Pattern Syllabus)

w.e.f. June, 2021

Preamble:

Research comprises creative and systematic work undertaken to increase knowledge, including knowledge of humans, culture and society and its use to devise new application. The research is carried out scientifically and methodically following predetermined procedures, where the researcher describes, explains and predicts phenomena of the research methodology. The present course 'Research methodology' aims to develop research orientation and acquaint students on fundamentals of research, techniques, processes, methods, designs, methodologies, data analysis, writing results and ethical aspects of the process.

The Course objectives:

At the end of the course, students will be able to:

- Demonstrate knowledge of basic concept and framework of research and its methodologies.
- Develop an understanding of various research designs and techniques.
- Identify various sources of information for literature review and data collection.
- Develop an understanding of the ethical dimensions of conducting applied research.
- Appreciate the components of scholarly writing and evaluate its quality.

PUNYASHLOK AHILYADEVI HOLKAR SOLAPUR UNIVERSITY, SOLAPUR
M. A. (English) Part – II
Name of the Paper: Research Methodology
Semester III
(80 UA + 20 CA = 100 Marks)

Credit – 5 **75 Contact Hrs**

UNIT No.	UNIT	Credit	Contact Hrs.
Unit –I	**Introduction to Research** Meaning and Definition of Research Purpose of Research Characteristics of Research Research Methods and Methodology Research in Language and Literature	1	15
Unit-II	**Types of Research** Qualitative and Quantitative Research Fundamental/pure or Theoretical Research Experimental or Applied Research Survey Research	1	15
Unit-III	**Theory Based Research** Psychoanalytical Approach Feminist Approach Postcolonial Approach Marxist Approach Formalistic Approach	2	30
Unit-IV	**Genre Based Research** Novels (Science-fiction, fantasy, bildungsroman, etc.) Poetry Plays Children Literature	1	15

PUNYASHLOK AHILYADEVI HOLKAR SOLAPUR UNIVERSITY, SOLAPUR
M. A. (English) Part – II
Name of the Paper: Research Methodology

Semester IV

(80 UA +20 CA = 100 Marks)

Credit – 5 **75 Contact Hrs**

UNIT No.	UNIT	Credit	Contact Hrs.
Unit –I	**<u>Research Process</u>** Research Problem-definition Review of Literature Formulation of Hypothesis Primary and Secondary Sources Analysis and Writing Conclusion Compiling a Working Bibliography	2	30
Unit-II	**<u>Tools Used for Data Collection</u>** Questionnaires Interviews Schedules Observation Techniques Rating Scales	1	15
Unit-III	**<u>The Mechanics of Research Writing</u>** Citations and Style Sheets Ethical Issues Related to Research Plagiarism Plagiarism Checking Tools	1	15
Unit-IV	**<u>Interpretation of Data and Research Writing</u>** Processing and Analysis of Data Layout of a Research Report Report Writing	1	15

References:

- Garg, B.L., Karadia, R., Agarwal, F. and Agarwal, U.K., *An introduction to Research Methodology*, RBSA Publishers2002.
- Kothari, C.R., *Research Methodology: Methods and Techniques.* New Age International. 418p1990.
- Gibaldi,Joseph. *MLA Handbook for Writers of Research Papers*, VIII Edition: Affiliated East – West Press, New Delhi, 2016.
- Sinha, S.C. and Dhiman, A.K., *Research Methodology*, Ess Ess Publications. 2 volumes2002.
- Thorpe, James. Ed. *The Aims and Methods of Scholarship in Modern Languages and Literatures.* New York: PMLA, 1970.
- Ralph, Berry. *The Research Project How to Write it*, London: Routledge and Hegean Paul, 1995.S

PUNYASHLOK AHILYADEVI HOLKAR SOLAPUR UNIVERSITY, SOLAPUR
M. A. (English) Part – II
Name of the Paper: Research Methodology
Semester - III
Nature of Question Paper
Total Marks - 80

Instructions:
1] All questions are compulsory
2] Figures to the right indicate full marks

1. Rewrite the following by choosing the correct alternative from given below. 16

(All Topics)

2. Attempt any four questions out of six 16

(Unit: 1 - Introduction to Research)

3. Essay type question. 16

(Unit: 2 – Types of Research)

4. Essay type question with an internal option. 16

(Unit: 3 – Theory Focused Research)

A

Or

B

5. Broad Question 16

(Unit: 4 –Genre Focused Research)

PUNYASHLOK AHILYADEVI HOLKAR SOLAPUR UNIVERSITY, SOLAPUR

M. A. (English) Part – II
Name of the Paper: Research Methodology
Semester - IV
Nature of Question Paper
Total Marks - 80

Instructions:
1] All questions are compulsory
2] Figures to the right indicate full marks

1. Rewrite the following by choosing the correct alternative from given below. 16

(All Topics)

2. Attempt any four questions out of six 16

(Unit: 1 – Research Process)

3. Essay type question. 16

(Unit: 2 – Tools Used for Data Collection)

4. Essay type question with an internal option. 16

(Unit: 3 – The Mechanics of Research Writing)

A

Or

B

5. Broad Question 16

(Unit: 4 –Interpretation of Data and Research Writing)

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Discipline Specific Elective
(Any One)

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'B' Grade (CGPA - 2.62)

Name of the Faculty: Humanities
Name of the Course: M. A. (English) Part – II

Name of the Paper: Translation Studies

Semester- III & IV

With effect from June-2021-22, 2022-23 & 2023-24

PUNYASHLOK AHILYADEVI HOLKAR SOLAPUR UNIVERSITY, SOLAPUR

Name of the Course**: M.A (English) Part–II**

Name of the Paper: **Translation Studies** Elective – A

Semester- III & IV

Preamble:

Translation Studies is an academic interdisciplinary field of study dealing with the systematic study of theory, description and application of translation, interpreting and localization. As an interdisciplinary field, it borrows much from various fields of study that support translation. These include Comparative literature, Computer Science, History, Linguistics, Philosophy, Semiotics, Cultural Studies, Sociology and so on. Translation studies in the Humanities are comprised of two components: translation theory and practice of translation as a literary art. In the theoretical domain, students are expected to achieve conversance with the history and philosophy of translation and to discover for themselves an understanding of a number of abstract (theoretical) questions with significant implications. In the study of translation as a literary art, students learn to read translations critically and labor to render artfully texts from a source language into target language.

Translation as a relatively hermetic activity has become a major buzzword in today's world. Students and the general public find it more and more necessary to be informed vis-a-vis the multicultural and multilingual environment we inhabit. Translation studies help one to develop skills to be able to communicate efficiently and emphatically between languages and cultures. It is an academic research area that has expanded massively in recent years. Translation was formerly studied as a language-learning methodology or as part of comparative literature, translation workshops and contrastive linguistic courses. Over time, the interdisciplinary of the subject has become more evident and recent developments have seen increased specialization and the continued importation of theories and models from other disciplines.

Objectives of the Course:

1. To introduce students to translation studies as a separate discipline of knowledge
2. To increase their awareness related to the nature and scope of translation studies
3. To introduce students contemporary theoretical issues in Translation Studies
4. To help students comprehend major issues and methods in Literary Translation
5. To enhance the students' knowledge of the **warp and weft** of different languages

Course Outcomes:

By the end of the course, the students will be able to:

1) Comprehend translation studies as a separate discipline of knowledge
2) Comprehend the nature, scope and theoretical issues in translation studies
3) Comprehend major issues and methods in literary studies

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Name of the Course**: M.A (English) Part–II**

Name of the Paper**: Translation Studies** Elective – A

Semester – III

General Topics: (Credit 01) Lectures 15

1. Literary Translation: Issues and Methods
2. History of Translation Studies
3. Types of Translation
4. Problems of Translation

Essays (Credit 02) Lectures 30

1. Micaela Munoz-Calvo:**Translation and Cross-Cultural Communication***(from Translation and Cultural Identity: Selected Essays on Translation and Cross-Cultural Communication)*

2. Roman Jakobson**:On Linguistic Aspects of *Translation*** *(from The Translation Studies Reader Ed: Lawrence Venuti)*

3. Walter Benjamin:**The Translator's Task**(*from The Translation Studies Reader Ed: Lawrence Venuti)*

4. Gayatri Spivak:**The Politics of Translation**(*from The Translation Studies Reader Ed: Lawrence Venuti)*

Non Fiction -(English to Marathi) (Credit 01)

Lectures 15

1. Sudha Murthy's ***Wise and Otherwise***(Translated by Leena Sohoni)

Mehta Publishing House, Kolhapur

Drama:(Marathi to English) (Credit 01) Lectures 15

1. Vijay Tendulkar's *The Vultures* (Gidhade)

Translated by Priya Adarkar, *Five Plays* OUP, New Delhi

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Name of the Course**: M.A (English) Part–II**

Name of the Paper**: Translation Studies (Paper-XVI)** Elective – A

Semester – IV

Total Theory Lectures – 75

General Topics:**(Credit 01)** **Lectures 15**

1. The Notion of Equivalence in Translation
2. Ethics and Politics in Translation
3. Translation in a Globalized World (Media, Communication, Culture & Conflict
4. Machine Translation

Poetry –(Marathi to English) **(Credit 01)** **Lectures 15**

From *Jejuri* by Arun Kolatkar

1. The Door (*Darwaja)*
2. The Horseshoe Shrine (*Nalband Tap*)
3. Manohar (*Manohar*)
4. The Butterfly (*Fulpakhru*)
5. Makarand (*Makarand*)
6. Yeshwantrao (*Yashwantrao*)

Autobiography

(Autobiography- Marathi to English) **(Credit 01)** **Lectures 15**

An Outsider* (*Upara)by Laxman Mane , Translated by A K Kamat , Sahitya Akademi 1997.

Short Stories- Hindi to English **(Credit 02)** **Lectures 30**

From *Eleven Stories* by Munshi Premchand

1. Penalty(*Jurmana)*
2.A Lesson in the Holy Life (*Guru Mantra)*
3. The Road to Salvation (*Mukti Marg)*
4. Kafan Shroud
5. Thakur's Well (*Thakur Ka Kuan)*
6. Big Brother (*Bade Bhai Sahib)*

List of Reference Books:

1. Baker, M. & K.Malmkjar (eds). *Routledge Encyclopedia of Translation Studies*. 1st edition, London & New York: Routledge ,1998

2. Baker, M. & G. Saldhana (eds). *Routledge Encyclopedia of Translation Studies.* 2nd edition, London & New York: Routledge 2008

3. Bassnett, S. *Translation Studies.* London & New York: Routledge, 1980

4. Bassnett S. & A. Lefevere (eds). *Translation, History & Culture*. London & New York: Pinter, 1990

5. Catford, J.C.A. *Linguistic Theory of Translation*. Oxford: O.U.P., 1965

6. Bassnett S. & H. Trivedi (eds). *Post-Colonial Translation: Theory & Practice.* London & New York: Routledge, 1999

7. Bassnett S. & A. Lefevere (eds). *Constructing Cultures: Essays on Literary Translation*. Clevedon: Multilingual Matters, 1998

8. Munday, Jeremy. *The Routledge Companion to Translation Studies.* London & New York: Routledge, 2009

9. Bell R.T. *Translation & Translating: Theory & Practice.* London & New York: Longman, 1991.

10. Munday, Jeremy. *Introducing Translation Studies: Theories & Applications*. London & New York:
Routledge, 2001.

11. *Handbook of Natural Language Processing and Machine Translation*. Editors: Olive, Joseph, Christianson, Caitlin, McCary, John (Eds.) DARPA Global Autonomous Language Exploitation,2011.

Course Structure:

Semester		Title of the Paper	No of Lectures (Theory)	College Assessment (Marks)	University Assessment (Marks)	Total Marks	Credits
IV		**Translation Studies**	**75**	**20**	**80**	**100**	**05**

Punyashlok Ahilyadevi Holkar Solapur University, Solapur

Name of the Course**: M.A (English) Part–II**

Name of the Paper**: Translation Studies**

Pattern of Question Paper for Semester III & IV

Total Marks -80

Que.1. Choose the correct alternatives from the following. 16 Marks

(Questions to be set on texts from section (A, B, C & D)

Que.2. Answer any four of the following. 16 Marks

(Questions to be set on texts from section B, C & D covering themes, motives, central ideas, Openings, titles, Syntax & Semantics)

Que.3. (A) Translate any two of the seen/unseen passages into English/Marathi.08 Marks

(Questions to be set on translation skills/techniques)

(B) Write short notes on any two of the following. 08 Marks

(Questions to be set on General Topics)

Que.4. A) A broad question on the text form section B 16 Marks

OR

Que.4. B) A broad question on the text form section C

Que.5. A broad question on the prescribed texts from section D 16 Marks

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NAAC Accredited - 2015
'B' Grade (CGPA - 2.62)

Name of the Faculty: Humanities
Name of the Course: M. A. (English) Part – II

Name of the Paper: Cultural Studies (Elective Paper –B)

Semester- III & IV

With effect from June-2021-22, 2022-23 & 2023-24

Punyashlok Ahilyadevi Holkar Solapur University, Solapur

Name of the Course**: M.A (English) Part–II**
Name of the Paper**: Cultural Studies (Paper-)** Elective – B
Semester: III & IV

Preamble:

Cultural Studies goes beyond the usual notion associated with culture. It is definitely different from the study of culture. It includes analysis of a gamut of expressive behaviors and the interface with contemporary social and cultural reality. Amongst its prime interest are literature, film, art, popular culture, pedagogy and culture, commodity and the world of media. The notion of the text emerges from the confines of the literary text to embrace a wide world of the social and political way of life, and how an analytical mindset helps to come to terms with the dynamics of change. Cultural Studies promotes the generation of methods and paradigms that examine the changing relationship between culture, society, history, politics and technology in the contemporary world. At the same time, it also focuses attention on human creativity and how it is being shaped by social ideology and cultural consumption that straddles both the local and the global.

The cultural studies, in its general sense, deals with the cultural practices that control the power system in society through ideology, class structures, nation formation, ethnicity, sexual orientation, gender and generation. It is multidisciplinary with wide range of theories and approaches consisting of Semiotics, Marxism, Post Colonialism, Structuralism, Feminism, History, Translation studies, Ethnography, Literary theory, Political economy, Philosophy, Museum studies, Film-studies, Communication studies, Art Criticism, Media theory, Art history etc. in the globalized community. There is an urge to give the students an in depth understanding of wide range of cultural variables found in literature.

Objectives of the Course:

• To introduce to the students the emerging branch of cultural studies.
• To acquaint the students with concepts, aspects and types of culture
• To help the students to identify, understand and compare various cultural aspects.
• To create a holistic approach in the students

Course Outcome:

By the end of the course, the students will be able to:
• Understand the nature, concepts, and features of cultural studies
• Understand the meaning, aspects and types of culture
• Understand different cultural elements reflected in the given texts and compare them with other works of art
• Understand the value, significance, similarities and differences of every culture.

Punyashlok Ahilyadevi Holakar Solapur University, Solapur

Name of the Course**: M.A (English) Part–II**

Name of the Paper**: Cultural Studies (Paper-)** Elective – B

Semester III

General Topics: (Credit 01) Lectures 15

1] Culture and its Varieties.

2] Changing Cultural Portrayal of Gender Roles in Literature and Cinema.

3] Important Elements and Features of the Parsi Culture.

Fiction:(Credit 01) Lectures 15

Rohinton Mistry: **Such a Long Journey**

Poetry:(Credit 01) Lectures 15

1] In Jerusalem: Mehmoud Derwish

2]"198....'71.....'81.....83": Jean Arsanygam

3] Acceptance Speech: Lynn Powell

4] Girls Are Coming; Trishani Doshi

5] Mother, I have Been Saved: Zehra Nigah

6] If They Should Come For Us: Fatima Asghar

7] My Hotel Room At Crowne Plaza,Dubai: Jerry Pinto

Essays:(Credit 02) Lectures 30

1] Secularism in Indian Cinema: Shyam Benegal

2] From Antiquarian to Social Revolutionary: Sir Sayyad Ahmad Khan: Shamsur Rahman Faruqi

3] The Forgotten Holocaust: Witnesses Remember the Bengal Famine 77 years later: Kushanaya Choudhury

4] Rethinking Civilisation as History: Romila Thapar

Reference Books:

- Arnold, Matthew. *Culture and Anarchy.* New York: Macmillan. 1869.
- Bakhtin, M. M. *The Dialogic Imagination: Four Essays*. Ed. Michael Holquist. Trans. Caryl Press. (1981)
- Benedict, Ruth. *"Patterns of Culture". Boston: Houghton Mifflin Company.*(1934).
- Gayatri Chakravorty Spivak, *A Critique of Postcolonialism*, Harvard University Press Geertz, Clifford. 1973.
- *The Interpretation of Cultures: Selected Essays*. New York.
- James, Paul; Szeman, Imre. *Globalization and Culture, Vol. 3: Global-Local Consumption. London: Sage Publications.(2010).*
- John Nguyet Erni. *Cultural Studies of Rights: Critical Articulations.* Routledge, (2014),
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- https://writersalmanac.publicradio.org/index.php%3Fdate=2007%252F07%252F22.html
- https://www.poetryfoundation.org/poems/152744/girls-are-coming-out-of-the-woods
- https://www.poetrytranslation.org/poems/mother-ive-been-saved
- https://www.poetryfoundation.org/poetrymagazine/poems/92374/if-they-should-come-for-us
- https://lithub.com/my-hotel-room-at-the-crowne-plaza-dubai/
- Such A Long Journey : Rohinton Mistry
- https://guftugu.in/2016/02/28/romila-thapar/

Punyashlok Ahilyadevi Holakar Solapur University, Solapur

Name of the Course**: M.A (English) Part–II**

Name of the Paper**: Cultural Studies (Paper-)** Elective – B

Semester IV

General Topics(Credit 01) Lectures 15

1] Cultural Outsiders.

2] Censorship and Culture

3] Modern Trends in Popular Culture.

Short Stories(Credit 02) Lectures 30

1. Raja Rao: ***Companion***
2. Neel Patel: ***These Things Happen***
3. Oscar Wilde: ***The Fisherman and His Soul***
4. Premchand:***When Blood Turns White***
5. Earnest Hemingway:***Old Man at the Bridge***
6. O'Henry:***The Skylight Room***
7. Amrita Pritam:***The Weed***

Drama:(Credit 01) Lectures 15

Vijay Tendulkar: **Ghashiram Kotwal** (1972)

Essays:(Credit 01) Lectures 15

1] Edward Herman & Noam Chomsky: **A Propaganda Model**

2] Shashi Deshpande: **The Writer as Activist**

3] Nikole Hannah-Jones: **Our Democracy's Founding Ideals Were False When They Were Written. Black Americans have fought to make them true.** [New York Times,]

4] Howard Zinn: **The Optimism of Uncertainty**

Reference Books:

1. *The Woman Who Forgot To Invent Facebook and Other Stories*
2. *(If You See Me, Don't Say Hi)* Flatiron Books., Macmillan
3. *The Complete Short Stories of Oscar Wilde*
4. Premchand: *Complete Short Stories*
5. *The Complete Stories of Earnest Hemmingway*
6. *100 Selected Stories of O'Henry*
7. *Collected stories of Raja Rao*
8. *The Daily Star* Web Edition Vol. 4 Num. 248
9. Vijay Tendulkar's *Ghashiram Kotwal: a Reader's Companion*. M. Sarat Babu, Asia Book Club, 2003. ISBN 81-7851-008-1
10. Vijay Tendulkar's *Ghashiram Kotwal : Critical Perspectives,* Vinod Bala Sharma and M. Sarat Babu. 2005, Prestige Books, New Delhi . ISBN 81-7851-002-2.
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19. https://guftugu.in/2015/10/07/shashi-deshpande/
20. https://www.nytimes.com/interactive/2019/08/14/magazine/black-history-american-democracy.html
21. https://www.thenation.com/article/archive/optimism-uncertainty/

Punyashlok Ahilyadevi Holakar Solapur University, Solapur

Name of the Course**: M.A (English) Part–II**

Name of the Paper**: Cultural Studies (Elective: B)**

<u>Pattern of Question Paper for Semester III & IV</u>

Total Marks: 80

Q.1. Choose the correct alternatives. **Marks 16**

(On Poetry, Essay and Novel)

Q.2. Write short answers (any 4 out of 6) **Marks 16**

(On General Topics)

Q.3. Write short answers (any 2 out of 4) **Marks 16**

(On Poetry)

Q.4. Broad answer question with an internal option. **Marks 16**

(On Essay)

Q.5. Broad answer question **Marks 16**

(On Novel)

*****

Soft Core/Generic
(Any One)

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'B' Grade (CGPA - 2.62)

Name of the Faculty: Humanities

Name of the Course: M. A. (English) Part – II

Name of the Paper: 21st Century Skills (Soft Core)

Semester- III & IV

With effect from June-2021-22, 2022-23 & 2023-24

Punyashlok Ahilyadevi Holakar Solapur University, Solapur

Name of the Course**: M.A (English) Part–II**

Name of the Paper**: 21st Century Skills (Soft Core)**

Semester- III & IV

Preamble:

"The term 21st century skills refers to a broad set of knowledge, skills, work habits, and character traits that are believed, by educators, school reformers, college professors, employers and others, to be critically important for success in today's world. In simple terms, 21st Century Skills refer to the skills that are required to enable an individual to face the challenges of the 21stcentury world that is globally-active, digitally transforming, collaboratively moving, creatively progressing, seeking competent human resources and quick in adopting changes to identify competencies needed in the coming century.

Objectives of the Course:

--- To enable students to adopt different soft skills such as critical thinking and problem solving.
--- To develop a sense of comprehensibility by exposure through soft skills.
--- To develop qualities such as civic & ethical literacy
--- To enable to students to learn through discipline

Advantage of the Course:

English is the world language. It is spoken worldwide. Students of the postgraduate level should use English in their future life. With the help of soft skills students can develop their personality in an effective way for better life.

Punyashlok Ahilyadevi Holkar Solapur University, Solapur

Name of the Course**: M.A (English) Part–II**

Name of the Paper**: 21st Century Skills (Soft Core)**

Semester- III

(80 UA + 20 CA = 100 Marks)

Credit – 5 75 contact Hrs

Sr. No	Units	Credit	Contact Hrs
1	What are 21st Century Skills?	1	15
2	Some of the 21st Century Skills	1	15
3	How to teach 21st Century Skills and Knowledge?	0.5	7.5
4	Characteristics of a 21st Century Teacher	0.5	7.5
5	Characteristics of a 21st Century Student	1	15
6	Characteristics of 21st Century Literature	1	15
	Total	5	75

Semester- IV

(80 UA + 20 CA= 100 Marks)

Credit – 5 75 contact Hrs

Sr. No	Units	Credit	Contact Hrs
1	Skills for Success	1	15
2	The 4 C's	1	15
3	Significant 21st Century Skills	0.5	7.5
4	Research and Information Fluency	0.5	7.5
5	Digital Literacy / Technology	1	15
6	Information Literacy / Media Literacy	1	15
	Total	5	75

Punyashlok Ahilyadevi Holakar Solapur University, Solapur

Name of the Course: **M.A (English) Part–II**

Name of the Paper: **21st Century Skills (Soft Core)**

Semester- III

Unit: 1- What are 21st Century Skills?

a) Definition
b) Features
c) Significance
d) Empowering Ourselves with 21st Century

Unit: 2- Some of the 21stCentury Skills

a) Civic, Ethical and Social Justice Literacy
b) Scientific Literacy and Reasoning
c) Global Awareness, Multicultural Literacy
d) Environmental and Conservation Literacy
(Ecosystems Understanding)
e) Health and Wellness Literacy
(Nutrition, Diet, Exercise, Public Health and Safety)

Unit: 3- How to Teach 21st Century Skills and Knowledge?

a) Teach Through Discipline
b) Make it Relevant
c) Develop Lower/ Higher Order Thinking Skills
d) Address Misunderstandings Directly
e) Exploit Technology to Support Learning
f) Foster Students Creativity

Unit: 4- Characteristics of a 21st century teacher

a. Personalized Instruction
b. Update/Upgrade with New Technologies
c. Go Global
d. Go Digital
e. Be Smart
f. Project Based Learning
g. Innovate
h. Keep Learning

Unit: 5 - Characteristics of a 21st century student

a. Self-Awareness and Self-Management
b. Critical thinking, Creativity, Communication, Collaboration
c. Flexibility, Initiative, Productivity, Social skills
d. Research and Information Literacy
e. Digital Smart

Unit: 6 - Characteristics of 21st century literature

a. Demonstrate Independence
b. Strong Content Knowledge
c. Responsive to Varying Demands
d. Comprehend and Critique
e. Value Evidence

Punyashlok Ahilyadevi Holakar Solapur University, Solapur

Name of the Course: **M.A (English) Part–II**

Name of the Paper: **21st Century Skills (Soft Core)**

Semester- IV

Unit: 1-Skills for Success

a) Critical Thinking
b) Adaptability
c) Excellent Communication Skills
d) Cultural Understanding
e) Initiative and Drive

Unit: 2 – The 4 C's

a. Communication
b. Collaboration
c. Critical Thinking
d. Creativity

Unit: 3 – Significant 21st century skills

a. Enhancing Self
b. Self-awareness and Managing Self
c. Leadership
d. Productivity
e. Social skills
f. Citizenship
g. Civic Responsibilities
h. Building and Maintaining Relationships

Unit: 4 – Research and information fluency

a) Curiosity
b) Spirit of Enquiry
c) Check Multiple Sources
d) Refine Online Searches
e) Discover Top Educational Websites
f) Trust your Sources
g) Avoid Plagiarism

Unit: 5 - Digital literacy / Technology

a. Technology Operation and Concepts
b. Comprehension
c. Creating and Editing
d. Interdependence
e. Social Factors
f. Being Safe and Responsible

Unit: 6 – Information literacy / Media literacy

a. Meaning
b. Significance & Purpose
c. Characteristic Features

References:

- Chris Dede, *Comparing Frameworks for 21st Century Skills*, Harvard Graduate School of Education, 2009.
- Stedman Graham, *Preparing for the 21st Century: Soft Skills Matter*, Huffington Post, April 26, 2015.
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- Hanover Research, *Best Practices in Implementing 21st Century Skills InitiativesArchived* 2016-03-12 at the Wayback Machine. Retrieved 2016-03-11
- *NEA 21st-Century Learner,* summer 2011. Retrieved 2016-03-11
- *Top 10 Characteristics of a 21st Century Classroom*, Ed Tech Review, 20 December 2013. Retrieved 2016-03-11
- *Making 21st Century Schools - Creating Learner-Centered School places/Workplaces for a New Culture of Students at Work*, Bob Pearlman, EDUCATIONAL TECHNOLOGY/September–October 2009. Retrieved 2016-03-11

Name of the Course**: M.A (English) Part–II**

Name of the Paper**: 21st Century Skills (Soft Core)**

Pattern of Question Paper for Semester III

Total Marks: 80

Instructions:

1] All questions are compulsory

2] Figures to the right indicate full marks

1. Rewrite the following by choosing the correct alternative from given below. 16

(All the topics)

2. Attempt any four questions out of six 16

(Unit: 2 - Some of the 21st Century Skills)

3. Essay type question. 16

(Unit: 4 - Characteristics of a 21st Century Teacher, Unit: 1- What are 21st Century Skills?)

4. Essay type question with an internal option. 16

(Unit: 5 - Characteristics of a 21st Century Student, Unit: 3-How to Teach 21st Century Skills and Knowledge?)

A

Or

B

5. Broad Question 16

(Unit: 6 - Characteristics of 21st Century Literature)

Name of the Course**: M.A (English) Part–II**

Name of the Paper**: 21th Century Skills (Soft Core)**

Pattern of Question Paper for Semester IV

Instructions:

1] All questions are compulsory

2] Figures to the right indicate full marks

1. Rewrite the following by choosing the correct alternative from given below. 16

(All the topics)

2. Attempt any four questions out of six 16

(Unit: 1- Skills for Success, Unit: 2 – The 4 C's)

3. Essay type question. 16

(Unit: 3 – Significant 21st Century Skills, Unit: 4 – Research and Information Fluency)

4. Essay type question with an internal option. 16

(Unit: 5. Digital Literacy / Technology)

A

Or

B

5. Broad Question 16

(Unit: 6 - Information Literacy / Media Literacy)

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NAAC Accredited - 2015
'B' Grade (CGPA - 2.62)

Name of the Faculty: Humanities
Name of the Course: M. A. (English) Part – II

Name of the Paper: INTRODUCTION TO FILM STUDIES

Semester- III & IV

With effect from June-2021-22, 2022-23 & 2023-24

PUNYASHLOK AHILYADEVI HOLKAR SOLAPUR UNIVERSITY, SOLAPUR

M.A. (English) Part – II

Name of the Paper: INTRODUCTION TO FILM STUDIES (Soft Core)

Semester III &IV

Preamble:

Film Studies is an institutionalized academic discipline that focuses on the serious study of films, cinematic history and film culture and is majorly informed by film theory. The aim of introducing the present course 'Introduction to Film Studies' is to encourage students to explore their niche interests in film studies through exploration of various aspects of the narrative, artistic, cultural, economic and political implications of cinema over the years from its beginnings to the present day. Further, to make students aware of regional, cultural and technical implications of films and its methods of production and appreciation.

Course Objectives:

At the end of the course, students will be able to:

- Demonstrate basic understanding of film theory and film history.
- Identify significant movement's articulate key concepts and develop knowledge base of film genres.
- Understand the relationship between film forms and the historical and cultural contexts.
- Develop a competency in discussing the ways in which film is influenced and shaped by individuals, movements, institutions and technologies with local, national, transnational and global dimensions.

Punyashlok Ahilyadevi Holakar Solapur University, Solapur

Name of the Course: **M.A (English) Part–II**

Name of the Paper: **INTRODUCTION TO FILM STUDIES**

Semester- III

(20 CA+ 80 UA= 100 Marks)

Credit – 5 **75 Contact Hrs**

Unit No.	UNIT	CREDIT	CONTACT HRS.
Unit-I	**Understanding Film** What is a Film? Brief History of Origin of Cinema at Global Level The Language of Cinema Digital Aesthetics Semiotics of Films	2	30
Unit-II	**Indian Cinema** Origin and Evolution of Indian Cinema Referring to Pioneers (Dadasaheb Phalke, Ardershir Irani, Sohrab Modi, Guru Dutt, Raj Kapoor, Bimal Roy and Satyajit Ray) Coming up of Talkies The Era of Superstars, Multi Starrers& Angry Young Man Rise of Multiplexes (New Waves in Indian Cinema).	1	15
Unit-III	**Introduction to film genres** The Major Genres: Narrative, Avant-garde, Documentary, Other genres: Thriller, Melodrama, Musical, Horror, Western, Fantasy Animation Film Noir Expressionist Historical, Mythological, Road Movies	1	15

Unit-IV	**<u>Basics of Film Production</u>** Process of Film Production Pre-Production Production Post-Production	1	15

Punyashlok Ahilyadevi Holakar Solapur University, Solapur

Name of the Course: **M.A (English) Part–II**

Name of the Paper: **INTRODUCTION TO FILM STUDIES**

Semester- IV

(20 CA+ 80 UA= 100 Marks)

Credit – 5 **75 Contact Hrs**

Unit No.	UNIT	CREDIT	CONTACT HRS.
Unit-I	**Introduction to major movements and theories** The Silent Era; Classic Hollywood Cinema, Neo-Realism, French New Wave, Indian Cinema, Introduction to the Film Theories of Sergei Eisenstein, Andre Bazin , Auteur Theory, Christian Metz and Laura Mulvey & Contemporary International Trends	2	30
Unit-II	**Regional Cinema** The Concept and Characteristics of Indian Regional Cinema Regional Cinema and Identity Regional Marathi, Bengali, Telugu and Kannada Cinema	1	15
Unit-III	**Film Culture** Evolution of Censorship Film Criticism &Cinephilia Exhibition, Distribution and Production Film Festivals, Events and Communities	1	15
Unit-IV	**Film Appreciation** How to Appreciate Films Watching, Discussing Classic World and Indian Hindi and Regional Cinema Writing Film Analysis	1	15

References:

- Thoraval, Yves(2000).*The Cinema of India*(1896-2000)
- Roberge, Gaston. *Films for an Eology of Mind Arora: Encyclopedia of Indian Cinema* (1977).
- Andre, Bazin. *The Evolution of the Language of Cinema* (‘What is Cinema’)
- Satyajit, Ray.*What is Wrong with Indian Films* (from ‘Our Films Their Films’)
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Name of the Course**: M.A (English) Part–II**
Name of the Paper: **INTRODUCTION TO FILM STUDIES**

Pattern of Question Paper for Semester III

Instructions:

1] All questions are compulsory

2] Figures to the right indicate full marks

1. Rewrite the following by choosing the correct alternative from given below. 16

(All topics)

2. Attempt any four questions out of six 16

(Unit: 1 – Understanding Film)

3. Essay type question. 16

(Unit: 2 – Indian Cinema)

4. Essay type question with an internal option. 16

(Unit: 3 – Introduction to film genres)A Or B

5. Broad Question 16

(Unit: 4 –Basics of Film Production)

Name of the Course**: M.A (English) Part–II**
Name of the Paper: **INTRODUCTION TO FILM STUDIES**

Pattern of Question Paper for Semester IV

Instructions:

1] All questions are compulsory

2] Figures to the right indicate full marks

1. Rewrite the following by choosing the correct alternative from given below. 16

(All Topics)

2. Attempt any four questions out of six 16

(Unit: 1 – Introduction to major movements and theories)

3. Essay type question. 16

(Unit: 2 – Regional Cinema)

4. Essay type question. 16

(Unit: 3 – Film Culture)

A

Or

B

5. Broad Question 16

(Unit: 4 –Film Appreciation)

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NAAC Accredited - 2015
'B' Grade (CGPA - 2.62)

Name of the Faculty: Humanities

Name of the Course: M. A. (English) Part – II

Name of the Paper: Linguistic Competence for Advertising, Marketing and Public Relations

With effect from June-2021-22, 2022-23 & 2023-24

Punyashlok Ahilyadevi Holakar Solapur University, Solapur

Name of the Course: **M.A (English) Part–II**

Name of the Paper: **Linguistic Competence for Advertising, Marketing and Public Relations**

Objectives:

Objectives of the course are to:

7. Introduce importance linguistic Competence in communication industry.
8. Create awareness of the type of language used in advertising.
9. Explain linguistic skills required for marketing.
10. Inform linguistic skills required for public relations.

Course Outcomes:

At the end of the course, students will be able to:

1. Demonstrate knowledge of linguistic skills in communication industry.
2. Obtain linguistic skills required for advertising, marketing and public relations.
3. Draft advertise, practice marketing and establish public relations.
4. Enhance employability skills.

Punyashlok Ahilyadevi Holakar Solapur University, Solapur

Name of the Course: **M.A (English) Part–II**

Name of the Paper: **Linguistic Competence for Advertising, Marketing and Public Relations**

[Credits: 05 Theory-(45), Practical-(15)]

Total Theory Lectures-(45) **Total Credits – (05)**

Unit No: 1 Introduction to linguistic Competence and Communication Industry (Credit: 02)(30)

Unit No: 2 Linguistic Competence for Drafting Advertisement (Credit: 01)(15)

Unit No: 3 Linguistic Competence for Marketing (Credit: 01) (15)

Unit No. 4 Linguistic Competence for Public Relations (Credit: 01)(15)

Course Structure:

Semester	Paper No.	Title of Paper	No. of Lectures	College Assessments (Marks)	University Assessments (Marks)	Total Marks	Credits
		Linguistic Competence for Advertising, Marketing and Public Relations	60	20	80	100	05

Paper – Linguistic Competence for Advertising, Marketing and Public Relations

SEMESTER

Unit: I Introduction to Linguistic Competence and communication Industry

- The concept of linguistic skills in English
- Linguistic skills and employability: Interlinking
- Career communication industry
- Drivers and dynamics of the communications industry
- Developing employability through effective language skills
-

Unit: II Linguistic Competence for drafting advertisement

- Advertising as means of communication
- Writing advertising slogans: rhythm and rhyme
- Use of Extreme adjectives, superlative phrases, glowing idioms and vocabulary
- Use of parts of speeches in drafting advertisement

Unit: III Linguistic Competence for Marketing

- Importance of effective language for marketing
- Requirement of linguistic skills at marketing workplace: writing ad copy, sales collateral, blogs and newsletters
- Enhancing language proficiency
- Marketing and Public speaking skills
- Marketing and Non Verbal skills

Unit: **IV** – **Linguistic Competence for Public Relations**

- Writing for clients: press releases, reports, feature articles and opinion pieces
- Conducting media interactions including invites, pitches and interviews
- Engaging clients with reports, proposals or even simple emails
- Posting on social media channels with tweets, Instagram captions or LinkedIn articles
- Networking — face-to-face or over the phone — with the media, clients or partners

Reference book:

- Foreign Languages in Advertising: Linguistic and Marketing Perspectives by Jos Hornikx and Frank van Meurs

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Vidnyan Mahavidyalaya, Sangola Dis. Solapur

Department of Botany

Course Outcome

B.Sc. II		
NAME OF SUBJECT **:** **Botany**		
SEM : **III**		
COURSE NUMBER (PAPER NUMBER) : **V**		
TITLE OF COURSE (NAME OF PAPER) : **Anatomy & Taxonomy of Angiosperms**		
COURSE CONTENT	OBJECTIVES	OUTCOME
Unit 1: Apical meristem: Introduction & Classification of meristems , Functions of meristem , Theories of structural development- The Apical cell theory Histogen theory Tunica corpus theory	To get the knowledge about the meristem in plants.	The student can understand about the Meristamatic tissue in plants.
Unit 2 : Permanent tissues: Structure and functions of simple tissues, Structure and functions of complex tissues, Types of vascular bundles.	To get the knowledge about the permanent tissues in plants.	The student can understand about the permanent tissue in plants.
Unit 3 : Tissue system and their functions: Epidermal tissue System , Secretary Tissue System, Mechanical tissue System	To get the knowledge about the tissue system and their function in plants.	The student can understand about the tissue system in plants.

Unit 4 : Secondary body of the plant: Normal secondary growth in Dicot root and Stem. Periderm, Lenticels and annual rings. Basic structure of wood and its types.	To get the knowledge about the Secondary body of the plant.	The student can understand about the Secondary body plants.
Unit 5: Taxonomy of Angiosperms: Morphology of Inflorescence, Flower, Fruit. Study of Angiosperm families with respect to classification, morphology of vegetative & reproductive parts, floral formula, floral diagram, diagnostic features and economic importance. 1.Combretaceae 2.Asclepidaceae 3.Amaranthaceae 4.Liliaceae	To get the knowledge about the Taxonomy of angiosperms.	The student can understand about the taxonomy of angiosperms.

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Department of Botany

Course Outcome

: **B.Sc. II**		
NAME OF SUBJECT : **Botany**		
SEM : **III**		
COURSE NUMBER (PAPER NUMBER) : **VI**		
TITLE OF COURSE (NAME OF PAPER) : **PLANT ECOLOGY**		
COURSE CONTENT	OBJECTIVES	OUTCOME
Unit-1 - **Introduction** 1.1) Climatic factors 1.2) Edaphic factors	To get the knowledge about the climatic and Edaphic factors of environment.	The student can understand about the Climatic and Edaphic factors of environment.
Unit-2 **Community Ecology-** 2.1) Form and structure of communities 2.2) Classification and Physiognomy. 2.3) Community characteristics	To get the knowledge about the Community ecology.	The student can understand about the Community ecology.
Unit-3 **Ecosystems** 3.1) Concept and types 3.2) Components and Organization of ecosystem 3.3) Ecological pyramids, Food chains and food webs. 3.4) Energy flow in ecosystem. 3.5) Biogeochemical cycles – Nitrogen, Oxygen, Carbon	To get the knowledge about the ecosystem.	The student can understand about the Concept , types, various ecological pyramids and various biogeochemical cycles.

Unit-4 **Ecological Succession** 4.1) Concept and process 4.2) Primary and Secondary succession 4.3) Hydrosere and xerosere	To get the knowledge about the Ecological succession.	The student can understand about the Ecological succession.
Unit-5 **Ecological adaptations** 5.1) Concept 5.2) Xeric, Hydric and Mesic adaptations	To get the knowledge about the Ecological adaptations.	The student can understand about the Ecological adaptations in plants.
Unit-VI-**Pollution :-** 6.1)Introduction 6.2) Air pollution-Sources of air pollutants, their effects and control measures. 6.3) Water pollution- Sources of water pollutants, their effects and control measures.	To get the knowledge about the air pollution and water pollution.	The student can understand about the Air and water pollution.l

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Department of Botany

Course Outcome

B.Sc. II		
NAME OF SUBJECT : **Botany**		
SEM : **IV**		
COURSE NUMBER (PAPER NUMBER) : **VII**		
TITLE OF COURSE (NAME OF PAPER): **Plant Physiology and Cytogenetic.**		
COURSE CONTENT	OBJECTIVES	OUTCOME
Unit 1: Photosynthesis: 1.1 Introduction and significance 1.2 Photosynthetic apparatus 1.3 Photosynthetic pigments, accessory pigments Photosystems – reaction center complexes 1.4 Light reaction-cyclic and non-cyclic 1.5 Dark reactions Calvin cycle, C4 cycle CAM.	To get the knowledge about the photosynthesis.	The student can understand about the How photosynthesis process carry out in plants.
Unit 2: Nitrogen metabolism 2.1 Introduction 2.2 Nitrogen cycle 2.3 Biological N2 fixation – Definition, types & organisms involved 2.4 Mechanism of Biological Nitrogen fixation 2.5 Significance of Biological Nitrogen fixation.	To get the knowledge about the Nitrogen metabolism.	The student can understand about the Nitrogen metabolism.

Unit 3: **Genetics-** 3.1: Introduction, terminology 3.2: Mendelism- History 3.3: Principles of inheritance- Low of dominance, Law of purity of gametes, Law of independent assortment. 3.4: Gene interaction- Definition, types- complementary, supplementary and inhibitory genes.	To get the knowledge about the basic concepts and principles of genetics.	The student can understand about the Basic concepts and principles of genetics.
Unit 4:Classical genetics 4.1: Linkage-Definition, kinds of linkage-complete, incomplete and linkage groups, Significance of linkage. 4.2: Crossing over-definition, Mechanism of crossing over, Break and exchange theory, Significance of crossing over.	To get the knowledge about the linkage and crossing over.	The student can understand about the Linkage and crossing over.
Unit 5: Multiple allelism- 5.5: Introduction and definition 5.2: Eye color in Drosophila 5.3: Blood groups in man 5.4: Self incompatibility in plant.	To get the knowledge about the multiple alleles.	The student can understand about the Multiple alleles.

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Department of Botany

Course Outcome

B.Sc. II		
NAME OF SUBJECT : **Botany**		
SEM : **IV**		
COURSE NUMBER (PAPER NUMBER) : **VII**		
TITLE OF COURSE (NAME OF PAPER): **Plant Physiology and Cytogenetic.**		
COURSE CONTENT	OBJECTIVES	OUTCOME
Unit 1: Photosynthesis: 1.1 Introduction and significance 1.2 Photosynthetic apparatus 1.3 Photosynthetic pigments, accessory pigments Photosystems – reaction center complexes 1.4 Light reaction-cyclic and non-cyclic 1.5 Dark reactions Calvin cycle, C4 cycle CAM.	To get the knowledge about the photosynthesis.	The student can understand about the How photosynthesis process carry out in plants.
Unit 2: Nitrogen metabolism 2.1 Introduction 2.2 Nitrogen cycle 2.3 Biological N2 fixation – Definition, types & organisms involved 2.4 Mechanism of Biological Nitrogen fixation 2.5 Significance of Biological Nitrogen fixation.	To get the knowledge about the Nitrogen metabolism.	The student can understand about the Nitrogen metabolism.

Unit 3: **Genetics-** 3.1: Introduction, terminology 3.2: Mendelism- History 3.3: Principles of inheritance- Low of dominance, Law of purity of gametes, Law of independent assortment. 3.4: Gene interaction- Definition, types- complementary, supplementary and inhibitory genes.	To get the knowledge about the basic concepts and principles of genetics.	The student can understand about the Basic concepts and principles of genetics.
Unit 4:Classical genetics 4.1: Linkage-Definition, kinds of linkage-complete, incomplete and linkage groups, Significance of linkage. 4.2: Crossing over-definition, Mechanism of crossing over, Break and exchange theory, Significance of crossing over.	To get the knowledge about the linkage and crossing over.	The student can understand about the Linkage and crossing over.
Unit 5: Multiple allelism- 5.5: Introduction and definition 5.2: Eye color in Drosophila 5.3: Blood groups in man 5.4: Self incompatibility in plant.	To get the knowledge about the multiple alleles.	The student can understand about the Multiple alleles.

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Department of Botany

Course Outcome

B.Sc. II		
NAME OF SUBJECT : **Botany**		
SEM : **IV**		
COURSE NUMBER (PAPER NUMBER) : **VIII**		
TITLE OF COURSE (NAME OF PAPER) **:.Economic Botany**		
COURSE CONTENT	**OBJECTIVES**	**OUTCOME**
Unit 1: Botanical names, Morphology, source and economic importance of followings-Legumes-Pulse crops- chickpea (Bengal gram), red gram and fodder legumes – Lucerne and Sesbania.	To get the knowledge about the legumes and fodder legumes.	The student can understand about the Legumes and fodder legumes.
Unit 2: Plant Fibers- Morphology, source and economic importance of followings-cotton and coir	To get the knowledge about the plants used as fibers.	The student can understand about the Plant fibers.
Unit 3: Vegetable oil sources 3.1Botanical name, source and economic importance of – Groundnut, Soybean. 3.2 Brief account of cultural practices of Groundnut & Soybean	To get the knowledge about the oil yielding plants.	The student can understand about the Oil yielding plants.
Unit 4: Medicinal plants- A brief account of plant drugs and their chief constituents used in Indigenous and	To get the knowledge about the different medicinal plants.	The student can understand about the different medicinal plants.

allopathic systems in – *A)* **Rhizome** – *Zingiber officinale* *B)* **Root** –, *Withania somnifera* *C)* **Stem** – *Tinospora cordifolia* *D)* **Leaf** –*Adhatoda zeylanica* *E)* **Floral bud** – *Syzigium aromaticum* *F)* **Fruit** – *Emblica officinalis*		
Unit 5: Natural Products- 5.1: Rubber-Introduction, properties of rubber, source, morphological characters, extraction method and economic importance. 5.2: Botanical pesticides-Introduction- Botanical name, morphological characters, source and importance of Neem, Tobacco, Custard apple. 5.3: Plant Dyes- Botanical name, source and economic importance. a) Wood-Logwood, Kutch b) Bark- Oak, Teak c) Root and rhizome-manjista, turmeric	To get the knowledge about the natural product rubber.	The student can understand about the natural product rubber.

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Department of Botany

Course Outcome

B.Sc. III		
NAME OF SUBJECT - **Botany**		
SEM - **V**		
COURSE NUMBER (PAPER NUMBER) - **XI**		
TITLE OF COURSE (NAME OF PAPER)- **Plant Physiology**		
COURSE CONTENT	OBJECTIVES	OUTCOME
Unit 1: **Plant-water relations:** 1.1 : Introduction. 1.2 : Water Potential and its components. 1.3 : Water absorption- root pressure and guttation. 1.4 : Ascent of sap– cohesion-tension theory. 1.5: Transpiration- mechanism and factors affecting on transpiration.	To get the knowledge about the plant- water relation.	The student can understand about the Plant –water relation.
Unit 2: **Mineral nutrition:** 2.1 : Introduction. 2.2 : Macro and Micronutrients. 2.3 : Mineral deficiency symptoms and roles of Macro (N, P, K, Ca, Mg) elements. 2.4 : Mineral deficiency symptoms and roles of Micro (B, Cu, Mn, Mo)	To get the knowledge about the mineral nutrition in plants.	The student can understand about the mineral nutrition in plants.
Unit 3: **Nutrient Uptake:** 3.1: Introduction. 3.2: Soil as a nutrient reservoir. 3.3: Types of Absorption - Passive absorption and Active absorption	To get the knowledge about the nutrient uptake in plant.	The student can understand about the nutrient uptake in plant..
Unit 4: Phloem Transport: 4.1: Introduction.	To get the knowledge about the phloem	The student can understand about the

4.2 : Site of Phloem transport. 4.3 : Phloem loading and unloading and its mechanism (Munch Hypothesis). 4.4 : Source–sink relationship.	transport.	phloem transport.
Unit 5: Plant growth regulators: 5.1: Introduction. 5.2: Types of growth regulators. 5.3: Chemical structure. 5.4: Physiological roles and practical applications of Auxin, Gibberellins, Cytokinin, Abscisic acid, Ethylene, CCC.	To get the knowledge about the plant growth regulators.	The student can understand about the plant growth regulators.

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Vidnyan Mahavidyalaya, Sangola Dis. Solapur

Department of Botany

Course Outcome

B.Sc. III		
NAME OF SUBJECT - **Botany**		
SEM - **V**		
COURSE NUMBER (PAPER NUMBER) - **XI**		
TITLE OF COURSE (NAME OF PAPER)- **Plant Physiology**		
COURSE CONTENT	OBJECTIVES	OUTCOME
Unit 1: **Plant-water relations:** 1.1 : Introduction. 1.2 : Water Potential and its components. 1.3 : Water absorption- root pressure and guttation. 1.4 : Ascent of sap– cohesion-tension theory. 1.5: Transpiration- mechanism and factors affecting on transpiration.	To get the knowledge about the plant- water relation.	The student can understand about the Plant –water relation.
Unit 2: **Mineral nutrition:** 2.1 : Introduction. 2.2 : Macro and Micronutrients. 2.3 : Mineral deficiency symptoms and roles of Macro (N, P, K, Ca, Mg) elements. 2.4 : Mineral deficiency symptoms and roles of Micro (B, Cu, Mn, Mo)	To get the knowledge about the mineral nutrition in plants.	The student can understand about the mineral nutrition in plants.
Unit 3: **Nutrient Uptake:** 3.1: Introduction. 3.2: Soil as a nutrient reservoir. 3.3: Types of Absorption - Passive absorption and Active absorption	To get the knowledge about the nutrient uptake in plant.	The student can understand about the nutrient uptake in plant..
Unit 4: Phloem Transport: 4.1: Introduction.	To get the knowledge about the phloem	The student can understand about the

4.2 : Site of Phloem transport. 4.3 : Phloem loading and unloading and its mechanism (Munch Hypothesis). 4.4 : Source–sink relationship.	transport.	phloem transport.
Unit 5: Plant growth regulators: 5.1: Introduction. 5.2: Types of growth regulators. 5.3: Chemical structure. 5.4: Physiological roles and practical applications of Auxin, Gibberellins, Cytokinin, Abscisic acid, Ethylene, CCC.	To get the knowledge about the plant growth regulators.	The student can understand about the plant growth regulators.

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Department of Botany

Course Outcome

B.Sc. III		
NAME OF SUBJECT - **Botany**		
SEM - **V**		
COURSE NUMBER (PAPER NUMBER) - **XII**		
TITLE OF COURSE (NAME OF PAPER)- **Plant Breeding**		
COURSE CONTENT	OBJECTIVES	OUTCOME
Unit 1: **Plant Breeding:** 1.1: Introduction. 1.2: Aim and objectives. 1.3 Scope of plant breeding.	To get the knowledge about the introduction, aim and objectives of plant breeding	The student can understand about the introduction, aim and objectives of plant breeding.
Unit 2: **Methods of crop improvement:** 2.1: Introduction. 2.2: Methods of crop improvement. 2.3: Centres of origin and domestication of crop plants. 2.4: Plant genetic resources. 2.5: Introduction and acclimatization. 2.6: Selection methods: Pure line, Mass and Clonal selection. 2.7: Hybridization: Procedure. 2.8: Hybridization in self pollinated crop plants. 2.9: Hybridization in cross pollinated crop plants.	To get the knowledge about the methods of crop improvement.	The student can understand about the methods of crop improvement.
Unit 3: **Quantitative inheritance:** 3.1: Introduction. 3.2: Concept and mechanism.	To get the knowledge about the quantitative inheritance	The student can understand about the quantitative inheritance

3.3: Example of inheritance of Kernel colour in wheat. 3.4: Monogenic vs polygenic Inheritance.		
Unit 4: Mutation and Plant breeding: 4.1: Role of mutations. 4.2: Role of Polyploidy. 4.3: Role of biotechnology in crop improvement. 4.4: Distant hybridization**.**	To get the knowledge about the mutation and plant breeding.	The student can understand about mutation and plant breeding..

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Vidnyan Mahavidyalaya, Sangola Dis. Solapur

Department of Botany

Course Outcome

B.Sc.-III		
NAME OF SUBJECT - **Botany**		
SEM **VI**		
COURSE NUMBER (PAPER NUMBER) - **XIII**		
TITLE OF COURSE (NAME OF PAPER)- **Molecular Biology**		
COURSE CONTENT	OBJECTIVES	OUTCOME
Unit 1: **Nucleic acids** 1.1 : Introduction. 1.2 : Historical perspective. 1.3: DNA as the carrier of genetic information (Griffith's, Hershey & Chase expt).	To get the knowledge about the nucleic acids.	The student can understand about mutation and plant breeding.
Unit 2: **The Structures of Genetic Material** 2.1 : Introduction. 2.2 : Structure of DNA: Watson and Crick model 2.3: Salient features of double helix. 2.4: Types of DNA. 2.5: Denaturation and renaturation of DNA. 2.6: Organization of DNA in Prokaryotes and Eukaryotes. 2.7: Structure of RNA. 2.8: Types of RNA.	To get the knowledge about the structure of DNA and RNA.	The student can understand about structure of DNA and RNA.
Unit 3: **Replication of DNA** 3.1 : Introduction. 3.2 : Synthesis of DNA (Kornberg's discovery). 3.3: Replication of DNA in prokaryotes and eukaryotes. 3.4: Enzymes involved in DNA replication	To get the knowledge about the replication of DNA.	The student can understand about replication of DNA.

Unit 4: Transcription 4.1 : Introduction. 4.2 : Transcription in prokaryotes and eukaryotes. 4.3: Principles of transcriptional regulation. ***4.4*** : Prokaryotes: Regulation of lactose metabolism in ***E.coli.*** 4.5 : Eukaryotes: transcription factors, heat shock proteins, steroids and peptide hormones.	To get the knowledge about the transcription.	The student can understand about transcription.
Unit 5: Translation 5.1 : Introduction. 5.2 : Structure of Ribosome. 5.3: Assembling of Ribosome and mRNA. 5.4 : Charging of tRNA and aminoacyl tRNA synthetases. 5.5 : Steps in protein synthesis 5.6 : Proteins involved in initiation, elongation and termination of polypeptides. 5.7: Post-translational modifications of proteins.	To get the knowledge about the translation.	The student can understand about translation.

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Vidnyan Mahavidyalaya, Sangola Dis. Solapur

Department of Botany

Course Outcome

B.Sc.-III		
NAME OF SUBJECT - **Botany**		
SEM **VI**		
COURSE NUMBER (PAPER NUMBER) - **XIV**		
TITLE OF COURSE (NAME OF PAPER)- **Plant Biotechnology**		
COURSE CONTENT	OBJECTIVES	OUTCOME
Unit 1: **Recombinant DNA Technology** 1.1 : Introduction and principles. 1.2 : Enzymes involved in recombinant DNA Technology. 1.3 : Vectors. 1.4 : Southern and northern blotting technique. 1.5 : DNA finger printing. 1.6: PCR. 1.7 : DNA libraries.	To get the knowledge about the recombinant DNA technology.	The student can understand about recombinant DNA technology.
Unit 2: **Methods of Gene transfer** 2.1 : Introduction. 2.2 : Marker and Reporter genes. 2.3 : Methods of gene delivery-Physical, Chemical and Biological (Agrobacterium mediated gene transfer). 2.4 : Transgenic plants. 2.5 : Achievements in plant Biotechnology.	To get the knowledge about the methods of gene transfer.	The student can understand about methods of gene transfer.
Unit 3: **Gene Cloning:** 3.1 : Introduction. 3.2 : Recombinant DNA. 3.3 : Bacterial Transformation and selection of recombinant clones.	To get the knowledge about the gene cloning.	The student can understand about gene cloning.

3.4: PCR- mediated gene cloning. 3.5: Complementation, colony hybridization.		
Unit 4: Plant Tissue culture 4.1 : Introduction. 4.2 : Terminology in tissue culture. 4.3 : Techniques of tissue culture. 4.4 : Micro propagation. 4.5 : Anther culture. 4.6 : Protoplast isolation and culture. **4.7** : Somatic Hybridization**.**	To get the knowledge about the plant tissue culture technique.	The student can understand about plant tissue culture technique.
Unit 5: Applications of Biotechnology: 5.1 : Introduction. 5.2 : Pest resistant (Bt-cotton), herbicide resistant plant (Round Up Ready soybean), 5. 3: Transgenic crops with improved quality traits (Flavr Saver tomato, Golden rice	To get the knowledge about the application of biotechnology in plants.	The student can understand about application of biotechnology in plants.

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Vidnyan Mahavidyalaya, Sangola Dis. Solapur

Department of Botany

Course Outcome

B.Sc. III		
NAME OF SUBJECT - **Botany**		
SEM **VI**		
COURSE NUMBER (PAPER NUMBER) - **XV**		
TITLE OF COURSE (NAME OF PAPER)- **: Plant Metabolism**		
COURSE CONTENT	OBJECTIVES	OUTCOME
Unit 1: **ATP-Synthesis** 1.1: Introduction. 1.2: Structure of ATP molecule. 1.3: Mechanism of ATP synthesis. (Oxidative and photophosphorylation). 1.4: ATP synthase, Boyers conformational model, Racker's experiment, Jagendorf's experiment.	To get the knowledge about the ATP synthesis in plants.	The student can understand about ATP synthesis in plants.
Unit 2: **Carbon Oxidation** 2.1: Introduction. 2.2: Glycolysis. 2.3: Pentose phosphate pathway. 2.4: oxidative decarboxylation of pyruvate. 2.5: Regulation of PDH, NADH shuttle. 2.6: TCA cycle. 2.7: Mitochondrial electron transport. 2.8: oxidative phosphorylation. 2.9: cyanide-resistant respiration.	To get the knowledge about the carbon oxidation.	The student can understand about carbon oxidation
Unit 3: **Carbohydrate Metabolism** 3.1: Introduction and broad classification. 3.2: Monosaccharides: Properties and Examples: Trioses, Tetroses, Pentoses and Hexoses.	To get the knowledge about the carbohydrate metabolism.	The student can understand about carbohydrate metabolism.

3.3: Oligosaccharides: Properties and Examples: Sucrose, Maltose and Lactose. 3.4: Polysaccharides—Properties and Examples—Starch and Cellulose. 3.5 : Isomers, enantiomers and epimers. 3.6 : Biosynthesis of sucrose and starch. 3.7 : Degradation of sucrose and starch.		
Unit 4: Lipid Metabolism **4.1**: Introduction and classification. 4.2: Saturated fatty acids—properties and examples—Stearic and palmitic acids. 4.3: Unsaturated fatty acids—Properties and Examples—Linoleic and linolenic acids. 4.4: General outline of fatty acid biosynthesis. 4.5 : Beta oxidation of fatty acids. 4.6 : Gluconeogenesis of fatty acids during germination. 4.7 : Properties and significance of lipids.	To get the knowledge about the lipid metabolism	The student can understand about lipid metabolism

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Vidnyan Mahavidyalaya, Sangola Dis. Solapur

Department of Botany

Course Outcome

B.Sc. III		
NAME OF SUBJECT - **Botany**		
SEM **VI**		
COURSE NUMBER (PAPER NUMBER) - **XV**		
TITLE OF COURSE (NAME OF PAPER)- **: Plant Metabolism**		
COURSE CONTENT	OBJECTIVES	OUTCOME
Unit 1: **ATP-Synthesis** 1.1: Introduction. 1.2: Structure of ATP molecule. 1.3: Mechanism of ATP synthesis. (Oxidative and photophosphorylation). 1.4: ATP synthase, Boyers conformational model, Racker's experiment, Jagendorf's experiment.	To get the knowledge about the ATP synthesis in plants.	The student can understand about ATP synthesis in plants.
Unit 2: **Carbon Oxidation** 2.1: Introduction. 2.2: Glycolysis. 2.3: Pentose phosphate pathway. 2.4: oxidative decarboxylation of pyruvate. 2.5: Regulation of PDH, NADH shuttle. 2.6: TCA cycle. 2.7: Mitochondrial electron transport. 2.8: oxidative phosphorylation. 2.9: cyanide-resistant respiration.	To get the knowledge about the carbon oxidation.	The student can understand about carbon oxidation
Unit 3: **Carbohydrate Metabolism** 3.1: Introduction and broad classification. 3.2: Monosaccharides: Properties and Examples: Trioses, Tetroses, Pentoses and Hexoses.	To get the knowledge about the carbohydrate metabolism.	The student can understand about carbohydrate metabolism.

3.3: Oligosaccharides: Properties and Examples: Sucrose, Maltose and Lactose. 3.4: Polysaccharides—Properties and Examples—Starch and Cellulose. 3.5 : Isomers, enantiomers and epimers. 3.6 : Biosynthesis of sucrose and starch. 3.7 : Degradation of sucrose and starch.		
Unit 4: Lipid Metabolism **4.1**: Introduction and classification. 4.2: Saturated fatty acids—properties and examples—Stearic and palmitic acids. 4.3: Unsaturated fatty acids—Properties and Examples—Linoleic and linolenic acids. 4.4: General outline of fatty acid biosynthesis. 4.5 : Beta oxidation of fatty acids. 4.6 : Gluconeogenesis of fatty acids during germination. 4.7 : Properties and significance of lipids.	To get the knowledge about the lipid metabolism	The student can understand about lipid metabolism

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Vidnyan Mahavidyalaya, Sangola Dis. Solapur

Department of Botany

Course Outcome

B.Sc. III		
NAME OF SUBJECT - **Botany**		
SEM **VI**		
COURSE NUMBER (PAPER NUMBER) - **XVI**		
TITLE OF COURSE (NAME OF PAPER)- **Biostatistics**		
COURSE CONTENT	OBJECTIVES	OUTCOME
Unit 1: **Introduction** 1.1 : Definition. 1.2 : Basic principles. 1.3 : Statistical methods. 1.4 : Variables - measurements, functions, limitations and uses of statistics.	To get the knowledge about the introduction of biostatic.	The student can understand about basic concept of biostatic.
Unit 2: **Collection of primary and secondary data** 2.1: Introduction. 2.2: Types of data. 2.3: Methods of data collection. 2.4: Merits and demerits. 2.5: Classification of data. 2.6: Tabulation and presentation of data. 2.7: sampling methods..	To get the knowledge about the collection of primary and secondary data their types, merits and demerits.	The student can understand about collection of primary and secondary data their types, merits and demerits.
Unit 3: **Measures of central tendency** 3.1: Introduction. 3.2: Mean median and mode, merits & demerits. 3.3: Measures of dispersion- range, standard deviation and mean deviation, merits &demerits. 3.4: Co- efficient of variations.	To get the knowledge about the measures of central tendency.	The student can understand about measures of central tendency.
Unit 4: Probability 4.1: Introduction.	To get the knowledge about the probability.	The student can understand about

4.2 : Basic Concepts. 4.3 : Kinds of Probabilities. 4.4: Measures of Probability.		probability.
Unit 5: Statistical inference 4.1 : Introduction. 4.2 : Hypothesis - Student‘t’ test and chi square test and its significance.	To get the knowledge about the statistical inference.	The student can understand about statistical inference.

Signature of HOD

VIDNYAN MAHAVIDYALA SANGOLA

COURSE OUTCOME

Name of Department: Chemistry

B.Sc.I		
NAME OF SUBJECT: Physical Chemistry		
SEM I		
COURSE NUMBER (PAPER NUMBER): P-I		
TITLE OF COURSE (NAME OF PAPER): Physical Chemistry		
COURSE CONTENT	**OBJECTIVES**	**OUTCOME**
Chemical kinetics Chemical Kinetics and it's scope, Rate of reaction, Definition and units of rate constant. Factors affecting rate of reaction. Concentration, pressure, temperature and catalyst. Order and Molecularity of reaction. First order reaction: Derivation of Rate constant. Characteristics of first order reaction. Examples: Decomposition of N_2O_5 Second order reaction: Derivation of rate constant for equal and unequal concentration of the reactants. Characteristics of Second order reaction. Examples :i) Reaction between $K_2S_2O_8$ and KI . Pseudo-unimolecular reactions such as Hydrolysis of methyl acetate in presence of Acid. Methods to determine the order of reaction:	**TO know the basic concept of** Chemical Kinetics and it's scope, Rate of reaction, Definition and units of rate constant. Factors affecting rate of reaction. Concentration, pressure, temperature and catalyst. Order and Molecularity of reaction. First order reaction: Derivation of Rate constant. Characteristics of first order reaction. Examples: Decomposition of N_2O_5 Second order reaction: Derivation of rate constant for equal and unequal concentration of the reactants. Characteristics of Second order reaction. Examples :i) Reaction between $K_2S_2O_8$ and KI . Pseudo-unimolecular reactions such as Hydrolysis of methyl acetate in presence of Acid. Methods to determine the	**Students should understand** Chemical Kinetics and it's scope, Rate of reaction, Definition and units of rate constant. Factors affecting rate of reaction. Concentration, pressure, temperature and catalyst. Order and Molecularity of reaction. First order reaction: Derivation of Rate constant. Characteristics of first order reaction. Examples: Decomposition of N_2O_5 Second order reaction: Derivation of rate constant for equal and unequal concentration of the reactants. Characteristics of Second order reaction. Examples :i) Reaction between $K_2S_2O_8$ and KI . Pseudo-unimolecular reactions such as Hydrolysis of methyl acetate in presence of Acid. Methods to determine the order of reaction:

a) Integration method, b) Graphical method c) Half change method, d) Ostwald's isolation method (Numerical Problems Expected)	order of reaction: a) Integration method, b) Graphical method c) Half change method, d) Ostwald's isolation method (Numerical Problems Expected)	a) Integration method, b) Graphical method c) Half change method, d) Ostwald's isolation method (Numerical Problems Expected)ents should under stand the basic concept like
Mathematical concept Graphical representation : Graph paper, co-ordinates of a point, equation of straight line and intercept, plotting of graph based on experimental data. Derivative : Rules of differentiation (without proof) pertaining to algebraic and exponential functions. Example related to chemistry. Integration : Rules of Integration (without proof) pertaining to algebraic and exponential functions. Example related to chemistry. (Numerical Problems not expected)	**To develop a skill of solving Numerical Problems.** Graphical representation : Graph paper, co-ordinates of a point, equation of straight line and intercept, plotting of graph based on experimental data. Derivative : Rules of differentiation (without proof) pertaining to algebraic and exponential functions. Example related to chemistry. Integration : Rules of Integration (without proof) pertaining to algebraic and exponential functions. Example related to chemistry. (Numerical Problems not expected)	**Students should increase the ability of solving Numerical Problems.** Graphical representation : Graph paper, co-ordinates of a point, equation of straight line and intercept, plotting of graph based on experimental data. Derivative : Rules of differentiation (without proof) pertaining to algebraic and exponential functions. Example related to chemistry. Integration : Rules of Integration (without proof) pertaining to algebraic and exponential functions. Example related to chemistry. (Numerical Problems not expected)
Thermodynamics 3.1 Spontaneous and non spontaneous processes, Second law of thermodynamics and its different statements. 3.2 Carnot's Theorem (Heat engine), Carnot cycle and its efficiency. (Numerical Problems Expected4.1 a) **Gaseous State** Ideal and Non ideal gases, b) Deviation from ideal behaviour. (Only Boyle's law) c) Causes of deviation, van der Waal's equation, explanation	**To understand the basic concept like** 3.1 Spontaneous and non spontaneous processes, Second law of thermodynamics and its different statements. 3.2 Carnot's Theorem (Heat engine), Carnot cycle and its efficiency. (Numerical Problems Expected **To understand the basic**	**Students Should understand the basic concepts in Thermodynamics.** 3.1 Spontaneous and non spontaneous processes, Second law of thermodynamics and its different statements. 3.2 Carnot's Theorem (Heat engine), Carnot cycle and its efficiency. (Numerical Problems Expected **Students Should understand the basic concepts in** Ideal and Non ideal gases, b)

of real gas behavior by van der Waal's equation. Critical Phenomena : PV-Isotherms of real gases (Andrew's isotherms), continuity of state, Relationship between critical constants and van der Waal's constants. Liquification of gases, Joule-Thomson effect. (Numerical Problems expected)	**concept like** Ideal and Non ideal gases, b) Deviation from ideal behaviour. (Only Boyle's law) c) Causes of deviation, van der Waal's equation, explanation of real gas behavior by van der Waal's equation. 4.2 Critical Phenomena : PV-Isotherms of real gases (Andrew's isotherms), continuity of state, Relationship between critical constants and van der Waal's constants. 4.3 Liquification of gases, Joule-Thomson effect. (Numerical Problems expected)	Deviation from ideal behaviour. (Only Boyle's law) c) Causes of deviation, van der Waal's equation, explanation of real gas behavior by van der Waal's equation. 4.2 Critical Phenomena : PV-Isotherms of real gases (Andrew's isotherms), continuity of state, Relationship between critical constants and van der Waal's constants. 4.3 Liquification of gases, Joule-Thomson effect. (Numerical Problems expected)

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B.A. / B.Sc. / M.A. / M.Sc.	: **B.Sc. I**	
NAME OF SUBJECT	: Inorganic Chemistry	
SEM I / II / III / IV / V / VI	: Sem. I	
COURSE NUMBER (PAPER NUMBER)	: P-II	
TITLE OF COURSE (NAME OF PAPER)	**: Inorganic Chemistry**	
COURSE CONTENT	OBJECTIVES	OUTCOME
1. Atomic Structure and periodic properties 1.1 Atomic Structure a) Shapes of s, p, d orbital's. b) Aufbau and Pauli's exclusion principle, Hund's rule of maximum multiplicity c) General electronic configuration of s and p	Students should get knowledge about structure and periodical properties of Atoms.	Students have understood about the atomic structure, electronic configuration, and periodical properties of Atoms from s and

block elements. 1.2 General Characteristics of s and p block elements w.r.t. Atomic and Ionic radii, Ionization energy, Electron affinity, Electronegativity, Reactivity, Melting and Boiling point		p block elements.
2. Chemical bonding and Ionic Solids 2.1 Types of chemical bonding 2.2 Ionic Bonding a) Formation of ionic bond, Energetics of ionic bonding : Ionisation potential, Electron affinity and Lattice energy. b) Characteristics of ionic compounds. c) Born-Haber Cycle for Alkali metal halide (NaCl). d) Fajan's rules. 2.3 Radius ratio and crystal structure. a) Definition: Radius ratio (r+ / r-), Coordination number, Stoichiometry and unit cell. b) Concept and calculation of radius ratio (r+ / r-) for ionic solid with octahedral geometry. c) Radius ratio effect on geometry. d) Crystal structure of NaCl and CsCl w.r.t. unit cell, radius ratio, coordination number and stoichiometry.	Students should get knowledge about Chemical bonding and crystal structure of ionic solids.	Students have understood about; How the chemical bonds are formed and what are their types. Stability of crystal structure, Internal structure of ionic solids like NaCl, CsCl etc.
3. Covalent bonding: Valence Bond Theory (VBT) Approach 3.1 Valence Bond Theory: Heitler–London Theory and Pauling-Slater Theory 3.2 Limitations of VBT 3.3 Need of Hybridization 3.4 Types of hybridization and shapes of simple inorganic molecules: $BeCl_2$, BF_3, $SiCl_4$, PCl_5,SF_6, IF_7. 3.5 Valence Shell Electron Pair Repulsion (VSEPR) Theory w.r.t. NH_3, H_2O, ClF_3	Students should get knowledge about hybridization concept, structure and bonding in covalent inorganic compounds.	Students have understood about formation of diatomic molecules, concept of hybridization, structure and bonding in covalent inorganic compounds.
4. Covalent bonding: Molecular Orbital Theory (MOT) Approach Atomic and Molecular orbitals. L.C.A.O. Principle 4.3 Bonding, Antibonding and Nonbonding Molecular orbitals. 4.4 Conditions for successful overlap 4.5 Different types of overlap (s-s, s-px, px -	Students should get knowledge about formation of molecular orbital's, bonding and characteristics of simple diatomic molecules.	Students have understood about construction of molecular orbital's and there use for the explanation of bonding and characteristics

px and py- py or pz- pz) 4.6 Energy level sequence of molecular orbitals for n = 1 and n = 2 4.7 M. O. Diagrams for: a) Homonuclear diatomic molecule. H_2, Li_2, Be_2, C_2, N_2 and O_2 b) Heteronuclear diatomic molecules CO and NO w.r.t. bond order stability and magnetic properties.		(Magnetic behavior and stability) in simple diatomic molecules, Concept of electron deficient bonding (2C-1e, 3C-2e etc.)

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B.Sc. I		
NAME OF SUBJECT: Organic Chemistry		
SEM II		
COURSE NUMBER (PAPER NUMBER) P-III		
TITLE OF COURSE (NAME OF PAPER): OrganicChemistry		
COURSE CONTENT	**OBJECTIVES**	**OUTCOME**
1. Fundamentals of organic reaction mechanism 1.1 Meaning of reaction mechanism. 1.2 Curved arrow notation, Half headed and double headed arrows. 1.3 Types of bond breaking :Homolytic and Heterolytic. 1.4 Types of reagents : Electrophilic and Nucleophilic. 1.5 Types and sub-types of following organic reactions with definition and at least one example of each. a) Substitution b) Addition c) Elimination d) Rearrangement. (Mechanism is not expected) 1.6 Reactive Intermediates with examples carbocations, carbanions (formation, structure,	**To study** Meanings of terms involved in organic reactions like arrow notations, types of bonding, Types of reagents and intermediates formed in the reactions.	**Students gain in understanding of :** Basic terms involved in the organic reactions. Types and subtypes of reactions, reagents and intermediates in the organic reactions.

stability and reactions are expected). Carbon free radicals, carbenes, arenes, nitrenes (Definition with example only)		
2. Structure and Bonding 2.1 Hybridization: sp_3, sp_2 and sp w.r.t. methane, ethylene and acetylene respectively. 2.2 Bond length, Bond angle and Bond energy with factors affecting these properties w.r.t. : sp_3, sp_2 and sp hybridization 2.3 Resonance effect with respect to phenol, and nitrobenzene. 2.4 Hyperconjugation w.r.t. toluene. 2.5 Inductive effect, + I and - I . 2.6 Steric effect w.r.t. mesitoic acid	**To study** 2.1 Hybridization: sp_3, sp_2 and sp w.r.t. methane, ethylene and acetylene respectively. 2.2 Bond length, Bond angle and Bond energy with factors affecting these properties w.r.t. : sp_3, sp_2 and sp hybridization 2.3 Resonance effect with respect to phenol, and nitrobenzene. 2.4 Hyperconjugation w.r.t. toluene. 2.5 Inductive effect, + I and - I . 2.6 Steric effect w.r.t. mesitoic acid	**Students gain an understanding of :** The Hybridization involved in molecule and get knowledge of Bond length, Bond angle and Bond energy possess by molecule. Students gains the knowledge of various effects exerted by the organic compounds like Resonance effect with respect to phenol, and nitrobenzene, Hyperconjugation w.r.t. toluene, Inductive effect, + I and – I, Steric effect w.r.t. mesitoic acid
3. Alkanes and Cycloalkanes 3.1 Alkanes : Methods of formation with special reference to Wurtz reaction, Kolbe reaction, Corey-House reaction and decarboxylation of carboxylic acid. 3.2 Mechanism of free radical halogenation of alkanes. 3.3 Cycloalkanes - Nomenclature methods of formation (a) Internal Wurtz reaction (b) Distillation of calcium or barium salt of dicarboxylic acid. 3.4 Chemical properties of cyclopropane (i) Free radical substitution of chlorine in presence of light. (ii) Action of HBr and conc. H_2SO_4 iii) Catalytic reduction by	**To study** 3.1 Alkanes : Methods of formation with special reference to Wurtz reaction, Kolbe reaction, Corey-House reaction and decarboxylation of carboxylic acid. 3.2 Mechanism of free radical halogenation of alkanes. 3.3 Cycloalkanes - Nomenclature methods of formation (a) Internal Wurtz reaction (b) Distillation of calcium or barium salt of dicarboxylic acid. 3.4 Chemical properties of cyclopropane (i) Free radical substitution of chlorine in presence of light. (ii) Action of HBr and conc. H_2SO_4 iii) Catalytic reduction by H_2/Ni	**Students gain an understanding of :** 3.1 Alkanes : Methods of formation with special reference to Wurtz reaction, Kolbe reaction, Corey-House reaction and decarboxylation of carboxylic acid. 3.2 Mechanism of free radical halogenation of alkanes. 3.3 Cycloalkanes - Nomenclature methods of formation (a) Internal Wurtz reaction (b) Distillation of calcium or barium salt of dicarboxylic acid. 3.4 Chemical properties

H_2/Ni		of cyclopropane (i) Free radical substitution of chlorine in presence of light. (ii) Action of HBr and conc. H_2SO_4 iii) Catalytic reduction by H_2/Ni
4. Alkenes, Dienes and Alkynes (Contact hrs: 09) Nomenclature of alkenes. Methods of formation of alkenes with mechanism i) By dehydration of lower alcohols. ii) By dehydrohalogenation of lower alkyl halides. Chemical reactions of alkenes - Hydrogenation, Electrophilic and free radical additions, Hydroboration, Oxidation, Epoxidation, Ozonolysis, Hydration, Hydroxylation, Oxidation with $KMnO_4$, Polymerisation of alkenes - ethylene and propylene Nomenclature and classification of dienes. Isolated, Conjugated and cumulated dienes. Butadiene-Methods of formation,polymerisation,1:2 and 1:4additions and Diels-Alder reaction. Alkynes - Nomenclature, Acidity of alkynes. Electrophilic and Nucleophilic addition reactions, Hydroboration, oxidation.	**To study** Nomenclature of alkenes. Methods of formation of alkenes with mechanism i) By dehydration of lower alcohols. ii) By dehydrohalogenation of lower alkyl halides. Chemical reactions of alkenes - Hydrogenation, Electrophilic and free radical additions, Hydroboration, Oxidation, Epoxidation, Ozonolysis, Hydration, Hydroxylation, Oxidation with $KMnO_4$, Polymerisation of alkenes - ethylene and propylene Nomenclature and classification of dienes. Isolated, Conjugated and cumulated dienes. Butadiene-Methods of formation,polymerisation,1:2 and 1:4additions and Diels-Alder reaction. Alkynes - Nomenclature, Acidity of alkynes. Electrophilic and Nucleophilic addition reactions, Hydroboration, oxidation.	**Students gain an understanding of :** Nomenclature, methods of preparations, chemical reactions of Alkenes, Dienes and Alkynes.

5. Stereochemistry of organic compounds Types of stereo-isomerism - Optical isomerism, Geometrical isomerism and Conformational isomerism. Chiral center [Explanation with lactic acid] Elements of symmetry Optical isomerism in lactic acid, tartaric acid and 2,3 - dihydroxybutanic acid Enantiomers and diastereoisomers. Racemic modification. Geometrical isomerism-cause of geometrical isomerism. Geometrical isomerism w.r.t. C = C Geometrical isomerism in maleic acid and fumaric acid.	**To study** Types of stereo-isomerism - Optical isomerism, Geometrical isomerism and Conformational isomerism. Chiral center [Explanation with lactic acid] Elements of symmetry Optical isomerism in lactic acid, tartaric acid and 2,3 - dihydroxybutanic acid Enantiomers and diastereoisomers. Racemic modification. Geometrical isomerism-cause of geometrical isomerism. Geometrical isomerism w.r.t. C = C Geometrical isomerism in maleic acid and fumaric acid.	**Students gain an understanding of :** Types of stereoisomerism, their examples, Enantiomers and diastereoisomers. Racemic modification. Geometrical isomerism-cause of geometrical isomerism. Geometrical isomerism w.r.t. C = C Geometrical isomerism in maleic acid and fumaric acid.
6. Aromaticity and Benzene Meaning of the terms - Aromatic, non-aromatic, antiaromatic and psuedoaromatic compounds. a) Kekule structure of benzene b) Resonance structures of benzene. c) Molecular orbital picture of benzene. d) Representation of benzene ring. 6.3 Modern theory of aromaticity. Fundamental Concepts - delocalisation of electrons, coplanarity and Huckel's (4n + 2) π rule. Applications of Huckel's rule to napthalene,	**To study** Meaning of the terms - Aromatic, non-aromatic, antiaromatic and psuedoaromatic compounds. a) Kekule structure of benzene b) Resonance structures of benzene. c) Molecular orbital picture of benzene. d) Representation of benzene ring. Modern theory of aromaticity. Fundamental Concepts - delocalisation of electrons, coplanarity and Huckel's (4n + 2) π rule. Applications of Huckel's rule to napthalene, pyrrole and pyridine. Mechanism of electrophilic aromatic substitution in benzene w.r.t. nitration, sulphonation,	**Students gain an understanding of :** Meaning of different terms, Resonance and Molecular orbital picture of benzene. Fundamental Concepts - delocalisation of electrons, Mechanism of electrophilic aromatic substitution in benzene w.r.t. nitration, sulphonation, halogenation and Friedel - Craft's reaction-alkylation and acylation

pyrrole and pyridine. 6.4 Mechanism of electrophilic aromatic substitution in benzene w.r.t. nitration, sulphonation, halogenation and Friedel - Craft's reaction- alkylation and acylation	halogenation and Friedel - Craft's reaction- alkylation and acylation	

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B.Sc. I		
NAME OF SUBJECT: Chemistry		
SEM : II		
COURSE NUMBER (PAPER NUMBER): P-IV		
TITLE OF COURSE (NAME OF PAPER): Analytical Chemistry		
COURSE CONTENT	**OBJECTIVES**	**OUTCOME**
1. Physical properties of liquids Introduction, additive and constitutive properties1.2 **Viscosity:** coefficient of viscosity, determination of viscosity by Ostwald's Viscometer **Surface tension:**Determination of surface tension by Drop –Weight method **Parachor:**Macleod equation and its modification by Sugden, applications of parachor in thedetermination of molecular structures as benzene and NO2 group **Dipole moment:** electrical polarization of molecules Use of dipole moment in the study of molecular structure **Refractometery:** Refractive index, Snell's law Specific and molecular refractivity, Abbe's refractometer: Principle-critical angle phenomenon-construction, working and advantages Molecular refractivity and chemical constitution	To understand the properties like Introduction, additive and constitutive properties Viscosity, coefficient of viscosity, determination of viscosity by Ostwald's Viscometer Surface tension:- Determination of surface tension by Drop –Weight method Parachor:-Macleod equation and its modification by Sugden, applications of parachor in the determination of molecular structures as benzene and NO2 group Dipole moment, electrical polarization of molecules Use of dipole moment in the study of molecular structure Refractive index, Snell's law	**Student understands the concepts:** Introduction, additive and constitutive properties Viscosity, coefficient of viscosity, determination of viscosity by Ostwald's Viscometer Surface tension:- Determination of surface tension by Drop –Weight method Parachor:-Macleod equation and its modification by Sugden, applications of parachor in the determination of molecular structures as benzene and NO2 group Dipole moment, electrical polarization ofmolecules Use of dipole moment in the study of molecular

		structure 1.7 Refractive index, Snell's law
2. Environmental Chemistry: Air pollution Introduction: Meaning of terms: Environment, Pollution, Pollutant, Threshold Limit Value (TLV), Dissolved Oxygen (DO), Chemical Oxygen Demand (COD) and Biological Oxygen Demand (BOD) Types of Pollution (Only Introduction): Air pollution, Water pollution, Sound pollution, Soil pollution, Automobile pollution and nuclear pollution. Air Pollution: Classification of Air pollutants, Oxides of carbon, Sulphur and Nitrogen as air pollutants with respect to source and health hazards.	**To study** Introduction: Meaning of terms: Environment, Pollution, Pollutant, Threshold Limit Value (TLV), Dissolved Oxygen (DO), Chemical Oxygen Demand (COD) and Biological Oxygen Demand (BOD) Types of Pollution (Only Introduction): Air pollution, Water pollution, Sound pollution, Soil pollution, Automobile pollution and nuclear pollution. Air Pollution: Classification of Air pollutants, Oxides of carbon, Sulphur and Nitrogen as air pollutants with respect to source and health hazards.	**Students gain an understanding of :** Introduction: Meaning of terms: Environment, Pollution, Pollutant, Threshold Limit Value (TLV), Dissolved Oxygen (DO), Chemical Oxygen Demand (COD) and Biological Oxygen Demand (BOD) Types of Pollution (Only Introduction): Air pollution, Water pollution, Sound pollution, Soil pollution, Automobile pollution and nuclear pollution. Air Pollution: Classification of Air pollutants, Oxides of carbon, Sulphur and Nitrogen as air pollutants with respect to source and health hazards.
3. Environmental Chemistry: Water pollution Introduction: Resources of water, Types of water Pollutants, water Pollution and its sources (Brief Account) Treatment of water: A) Potable Water: Parameters of potability of water Step I: Removal of suspended matter : a) Prolonged storage b) Screening c) Sedimentation d) Coagulation e) Filtration Step II: Removal of germs and	**To Study** Introduction: Resources of water, Types of water Pollutants, water Pollution and its sources (Brief Account) Treatment of water: A) Potable Water: Parameters of potability of water Step I: Removal of suspended matter : a) Prolonged storage b) Screening c) Sedimentation d) Coagulation e) Filtration Step II: Removal of germs and bacteria- Physical and Chemical	**Students gain an understanding of :** Step I: Removal of suspended matter a) Prolonged storage b) Screening c) Sedimentation d) Coagulation e) Filtration Step II: Removal of germs and bacteria- Physical and Chemical method. Physical Methods : a) Boiling b) Exposure to UV or Sunlight

bacteria- Physical and Chemical method. Physical Methods : a) Boiling b) Exposure to UV or Sunlight c) Distillation. Chemical Method : a) Chlorination b) Fluorination c) Ozonisation d) Aeration e) Use of $KMnO_4$ B) Industrial Water: Mention names of the methods only, Ion exchange method in detail. C) Municipal Sewage: Meaning of Sewage; mention the names of methods; activated sludge process in detail.	method. Physical Methods : a) Boiling b) Exposure to UV or Sunlight c) Distillation. Chemical Method : a) Chlorination b) Fluorination c) Ozonisation d) Aeration e) Use of $KMnO_4$ B) Industrial Water: Mention names of the methods only, Ion exchange method in detail. C) Municipal Sewage: Meaning of Sewage; mention the names of methods; activated sludge process in detail.	c) Distillation. Chemical Method : a) Chlorination b) Fluorination c) Ozonisation d) Aeration e) Use of $KMnO_4$ B) Industrial Water: Mention names of the methods only, Ion exchange method in detail. C) Municipal Sewage: Meaning of Sewage; mention the names of methods; activated sludge process in detail.
4. Qualitative and Quantitative elemental analysis Qualitative analysis of Carbon, Hydrogen, Nitrogen & Sulphur Quantitative analysis of - i) Carbon and hydrogen by Combustion method ii) Nitrogen by Kjeldahl's method iii) Halogen and Sulphur by Carius method. Determination of molecular weight of an acid by titration method. Empirical formula and molecular formula determination. (Numerical Problems Expected)	**To study** Qualitative analysis of Carbon, Hydrogen, Nitrogen & Sulphur Quantitative analysis of - i) Carbon and hydrogen by Combustion method ii) Nitrogen by Kjeldahl's method iii) Halogen and Sulphur by Carius method. Determination of molecular weight of an acid by titration method. Empirical formula and molecular formula determination. (Numerical Problems Expected)	**Students gain an understanding of :** Qualitative analysis of Carbon, Hydrogen, Nitrogen & Sulphur Quantitative analysis of - i) Carbon and hydrogen by Combustion method ii) Nitrogen by Kjeldahl's method iii) Halogen and Sulphur by Carius method. Determination of molecular weight of an acid by titration method Empirical formula and molecular formula determination. (Numerical Problems Expected)
5. Petroleum and petrochemicals (Contact hrs: 07) Constituents and refining of petroleum, cracking, knocking, octane, hydro-forming Synthesis and Industrial applications of following petrochemicals: a) Ethylene oxide b) Adipic acid c) Styrene	**To Study** Constituents and refining of petroleum, cracking, knocking, octane, hydro-forming Synthesis and Industrial applications of following petrochemicals: a) Ethylene oxide b) Adipic acid c) Styrene d) 2-Phenyl ethanol e) Paracetamol	**Students gain an understanding of :** Constituents and refining of petroleum, cracking, knocking, octane, hydro-forming Synthesis and Industrial applications of following petrochemicals: a) Ethylene oxide b) Adipic acid

d) 2-Phenyl ethanol e) Paracetamol		c) Styrene d) 2-Phenyl ethanol e) Paracetamol

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VIDNYAN MAHAVIDYALAYA SANGOLA

COURSE OUTCOME

Name of Department: Chemistry

B.Sc. II		
NAME OF SUBJECT: Organic Chemistry		
SEM III		
COURSE NUMBER (PAPER NUMBER): P-V		
TITLE OF COURSE (NAME OF PAPER): Organic Chemistry		
COURSE CONTENT	**OBJECTIVES**	**OUTCOME**
○ **Spectroscopic Methods Ultra-Violet (UV) absorption :** Introduction to Spectroscopy, Beer – Lambert law (mathematical derivation not expected), Types of electronic transitions, Terms used in UV spectroscopy: Chromophore, Auxochrome, BathocromicHypsochromic, Hypochromic and Hyperchromic shifts, Effect of conjugation on position of UV and visible bands. Calculation of _max by Woodward-Fieser rules for conjugated dienes and enones. Applications of UV spectroscopy – Determination of structure and stereochemistry (cis and trans) spectral problems based on UV.	**To study** Introduction to Spectroscopy, Beer – Lambert law (mathematical derivation not expected), Types of electronic transitions, Terms used in UV spectroscopy: Chromophore, Auxochrome, BathocromicHypsochromic, Hypochromic and Hyperchromic shifts, Effect of conjugation on position of UV and visible bands. Calculation of _max by Woodward-Fieser rules for conjugated dienes and enones. Applications of UV spectroscopy – Determination of structure and stereochemistry (cis and	**Student understands the concepts:** Beer – Lambert law, Types of electronictransitions, Terms used in UV spectroscopy: Chromophore, Auxochrome, BathocromicHypsochromic, Hypochromic and Hyperchromic shifts, Effect of conjugation on position of UV and visible bands. **Students are able to solve** the problems related UV spectroscopy.
2. Stereochemistry (8) Geometrical isomerism : Introduction,	**To study the** **2.1. Geometrical**	**Students gain an understanding of :** Types of stereoisomerism, their examples, Enantiomers and

Geometrical isomerism in aldoximes and ketoximes, configuration of ketoximes-Beckmann transformation (Mechanism & Proof are not expected) configuration of aldoximes. **2.2. Conformational Isomerism :** Introduction, conformation of ethane and n-butane and their representation by using Saw-Horse, Fischer (dotted Wedge line) and Newmann's projection formulae. **2.3.** Conformational analysis of ethane and n-butane with the help of energy profile diagrams. **2.4.** Nomenclature – D & L, R & S, E & Z systems	**isomerism :** Introduction, Geometrical isomerism in aldoximes and ketoximes, configuration of ketoximes-Beckmann transformation (Mechanism & Proof are not expected) configuration of aldoximes. **2.2. Conformational Isomerism :** Introduction, conformation of ethane and n-butane and their representation by using Saw-Horse, Fischer (dotted Wedge line) and Newmann's projection formulae. **2.3.** Conformational analysis of ethane and n-butane with the help of energy profile diagrams. **2.4.** Nomenclature – D & L, R & S, E & Z systems	diastereoisomers. Racemic modification. Geometrical isomerism-cause of geometrical isomerism. Geometrical isomerism w.r.t. C = C Geometrical isomerism in maleic acid and fumaric acid.
3. Alcohols and Phenols (8) **3.1. Alcohols : Introduction** i. Dihydric alcohols : Nomenclature, Methods of formation of ethylene glycol from ethylene, ethylene dibromide and ethylene oxide, physical properties & chemical reactions of ethylene glycol – acidic nature, reaction with hydrogen halide, oxidation – lead acetate, HIO_4 and nitric acid, Uses of ethylene glycol. Pinacol formation, Pinacol-Pinacolone rearrangement and its mechanism. ii. Trihydric alcohols : Nomenclature, Methods of formation of glycerol – from fats and oils physical properties. Chemical reactions of glycerol –	**To study the** i. Dihydric alcohols : Nomenclature, Methods of formation of ethylene glycol from ethylene, ethylene dibromide and ethylene oxide, physical properties & chemical reactions of ethylene glycol – acidic nature, reaction with hydrogen halide, oxidation – lead acetate, HIO_4 and nitric acid, Uses of ethylene glycol. Pinacol formation, Pinacol-Pinacolone rearrangement and its mechanism. ii. Trihydric alcohols : Nomenclature, Methods of formation of glycerol – from fats and oils physical properties. Chemical reactions of glycerol – reaction with electropositive metals,	**Students gain an understanding of :** To study the acyclic aliphatic and aromatic alcohols Also the study Mono, Di, Tri- hydric alcohols Synthesis of phenols and alcohols Applications of aliphatic and aromatic alcohols

reaction with electropositive metals, reaction with hydrogen halideHCl and HI Reaction with conc. nitric acid in presence of conc. sulphuric acid. Reactions with potassium hydrogen sulphate, esterification, oxidation. Uses of glycerol. **3.2. Phenols :** Introduction, Reactions of phenol (carbolic acid) : i. Acylation and Fries rearrangement ii. Ether formation and claisen rearrangement iii. Gattermann Synthesis iv. Carboxylation – Kolbe's reaction v. Reimer – Tiemann reaction and its mechanism.	reaction with hydrogen halideHCl and HI Reaction with conc. nitric acid in presence of conc. sulphuric acid. Reactions with potassium hydrogen sulphate, esterification, oxidation. Uses of glycerol. **3.2. Phenols :** Introduction, Reactions of phenol (carbolic acid) : i. Acylation and Fries rearrangement ii. Ether formation and claisen rearrangement iii. Gattermann Synthesis iv. Carboxylation – Kolbe's reaction v. Reimer – Tiemann reaction and its mechanism.	
4. Aldehydes and Ketones Introduction, Nomenclature, structure and reactivity of the carboxyl group. Mechanism of nucleophilic additions to carbonyl group. Study of following reactions with mechanism 1) Aldol condensation (base catalysed), 2) Perkin reaction, 3) Cannizzaro's reaction, 4) Knoevenagel reaction 5) benzoin condensation.	**To study** Nomenclature, structure and reactivity of the carboxyl group. Mechanism of nucleophilic additions to carbonyl group. Study of following reactions with mechanism 1) Aldol condensation (base catalysed), 2) Perkin reaction, 3) Cannizzaro's reaction, 4) Knoevenagel reaction 5) benzoin condensation.	**Students gain an understanding of :** Nomenclature, structure and reactivity of the carboxyl group. Mechanism of nucleophilic additions to carbonyl group. Study of following reactions with mechanism 1) Aldol condensation (base catalysed), 2) Perkin reaction, 3) Cannizzaro's reaction, 4) Knoevenagel reaction 5) benzoin condensation`
5. Ethers and Epoxides **Ethers :** Introduction, Nomenclature, Methods of formation of anisole by Williamson's synthesis and from diazomethane, chemical	**To study** **5.1. Ethers :** Introduction, Nomenclature, Methods of formation of anisole by Williamson's synthesis and from diazomethane, chemical	**Students gain an understanding of :** **Ethers :** Nomenclature, Methods of formation of anisole by Williamson's synthesis and from diazomethane, chemical reactions of anisole with HI, Gravimetric estimation of $-OCH_3$ group by Ziesel's

reactions of anisole with HI, Gravimetric estimation of –OCH_3 group by Ziesel's method (Related problems are expected based on % of –OCH_3 and number of –OCH_3 groups). **5.2. Epoxides :**Introduction, Nomenclature, commercial method of preparation of ethylene oxide. Acid and base catalysed ring opening of ethylene oxide, reactions of Grignard and organolithium reagents with ethylene oxide.	reactions of anisole with HI, Gravimetric estimation of –OCH_3 group by Ziesel's method (Related problems are expected based on % of –OCH_3 and number of –OCH_3 groups). **5.2. Epoxides :**Introduction, Nomenclature, commercial method of preparation of ethylene oxide. Acid and base catalysed ring opening of ethylene oxide, reactions of Grignard and organolithium reagents with ethylene oxide.	method (Related problems are expected based on % of –OCH_3 and number of –OCH_3 groups). **Epoxides :**Introduction, Nomenclature, commercial method of preparation of ethylene oxide. Acid and base catalysed ring opening of ethylene oxide, reactions of Grignard and organolithium reagents with ethylene oxide.
6. Carboxylic acids (7) Monocarboxylic acids : Introduction. Methods of formation of Halo acids, di- and trichloroacetic acid by HVZ reaction, substitution reactions of monochloroacetic acid by nucleophiles CN^-, OH^-, I^-, and NH_3. Hydroxyacids : Malic acid and citric acid, Methods of formation of malic acid from acid and moist Ag_2O. Reactions of malic acid – action of heat, oxidation reaction and reaction with HI, uses of malic acid. Methods of formation of citric acid from glycerol. Reactions of citric acid. Acetylation with acetic anhydride reduction by HI, Action of heat at 422^0K. Uses of citric acid. Unsaturated acids : Methods of formation of acrylic acid from acrolein and by dehydration of _-hydroxyl	**To study** Monocarboxylic acids : Introduction. Methods of formation of Halo acids, di- and trichloroacetic acid by HVZ reaction, substitution reactions of monochloroacetic acid by nucleophiles CN^-, OH^-, I^-, and NH_3. Hydroxyacids : Malic acid and citric acid, Methods of formation of malic acid from acid and moist Ag_2O. Reactions of malic acid – action of heat, oxidation reaction and reaction with HI, uses of malic acid. Methods of formation of citric acid from glycerol. Reactions of citric acid. Acetylation with acetic anhydride reduction by HI, Action of heat at 422^0K. Uses of citric acid. Unsaturated acids : Methods of formation of acrylic acid from acrolein and by dehydration of _-hydroxyl	**Students gain an understanding of :** Monocarboxylic acids : Introduction. Methods of formation of Halo acids, di- and trichloroacetic acid by HVZ reaction, substitution reactions of monochloroacetic acid by nucleophiles CN^-, OH^-, I^-, and NH_3. Hydroxyacids : Malic acid and citric acid, Methods of formation of malic acid from acid and moist Ag_2O. Reactions of malic acid – action of heat, oxidation reaction and reaction with HI, uses of malic acid. Methods of formation of citric acid from glycerol. Reactions of citric acid. Acetylation with acetic anhydride reduction by HI, Action of heat at 422^0K. Uses of citric acid. Unsaturated acids : Methods of formation of acrylic acid from acrolein and by dehydration of _-hydroxyl propionic acid. Reactions of acrylic acid – Addition of H_2O reduction by Na / C_2H_5OH. Uses of acrylic acid. Methods of formation of cinnamic acid from benzaldehyde using diethyl malonate and by using acetic anhydride and sodium acetate. Reactions of cinnamic acid – bromination, oxidation. Uses of cinnamic acid. Dicarboxylic acids : Succinic and phthalic acids. Methods of formation of succinic acid

propionic acid. Reactions of acrylic acid – Addition of H_2O reduction by Na / C_2H_5OH. Uses of acrylic acid. Methods of formation of cinnamic acid from benzaldehyde using diethyl malonate and by using acetic anhydride and sodium acetate. Reactions of cinnamic acid – bromination, oxidation. Uses of cinnamic acid. **6.4.** Dicarboxylic acids : Succinic and phthalic acids. Methods of formation of succinic acid from ethylene bromide, maleic acid. Reactions of succinic acid – action of heat, action of $NaHCO_3$, C_2H_5OH in presence of acid. Uses of succinic acid. Methods of formation of phthalic acid from o-xylene and naphthalene Reactions of phthalic acid – action of heat, reaction with sodalime, NH_3. Uses of phthalic acid.	propionic acid. Reactions of acrylic acid – Addition of H_2O reduction by Na / C_2H_5OH. Uses of acrylic acid. Methods of formation of cinnamic acid from benzaldehyde using diethyl malonate and by using acetic anhydride and sodium acetate. Reactions of cinnamic acid – bromination, oxidation. Uses of cinnamic acid. **6.4.** Dicarboxylic acids : Succinic and phthalic acids. Methods of formation of succinic acid from ethylene bromide, maleic acid. Reactions of succinic acid – action of heat, action of $NaHCO_3$, C_2H_5OH in presence of acid. Uses of succinic acid. Methods of formation of phthalic acid from o-xylene and naphthalene Reactions of phthalic acid – action of heat, reaction with sodalime, NH_3. Uses of phthalic acid.	from ethylene bromide, maleic acid. Reactions of succinic acid – action of heat, action of $NaHCO_3$, C_2H_5OH in presence of acid. Uses of succinic acid. Methods of formation of phthalic acid from o-xylene and naphthalene Reactions of phthalic acid – action of heat, reaction with sodalime, NH_3. Uses of phthalic acid.
7. Diazonium Salts (4) 7.1 Diazoniumsalts : Introduction, benzene diazonium chloride – preaparation, chemical properties. i. Formation of iodo benzene ii. Sandmeyer's reaction iii. Formation of benzene iv. Formation of phenylhydrazine v. Azo coupling – synthesis of methyl orange and congo red.	**To study** 7.1 Diazoniumsalts : Introduction, benzene diazonium chloride – preaparation, chemical properties. i. Formation of iodo benzene ii. Sandmeyer's reaction iii. Formation of benzene iv. Formation of phenylhydrazine v. Azo coupling – synthesis of methyl orange and congo red.	**Student understands the concepts** 7.1 Diazoniumsalts : Introduction, benzene diazonium chloride – preaparation, chemical properties. i. Formation of iodo benzene ii. Sandmeyer's reaction iii. Formation of benzene iv. Formation of phenylhydrazine v. Azo coupling – synthesis of methyl orange and congo red.

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B.A. / B.Sc. / M.A. / M.Sc.	: **B.Sc. II**	
NAME OF SUBJECT	: Inorganic Chemistry	
SEM I / II / III / IV / V / VI	: **Sem. III**	
COURSE NUMBER (PAPER NUMBER)	: P -VI	
TITLE OF COURSE (NAME OF PAPER)	**: Inorganic Chemistry**	
COURSE CONTENT	**OBJECTIVES**	**OUTCOME**
1. Co-ordination Chemistry : 1.1 Definition and formation of co-ordinate covalent bond in BF3: NH3 and in $[NH4]^+$. 1.2 Distinction between double salt and complex salt, 1.3 Werner's theory : A. Postulates of theory, B. Applications of theory: Theory applied to cobalt amine viz; a].CoCl3.6NH3 b] CoCl3.5NH3, c] CoCl3.4NH3, d] CoCl3.3NH3 C. Limitations 1.4 Description of terms –a] ligand, b]co-ordination number, c] co-ordination sphere, d]effective atomic number, e] Geometrical isomerism and optical isomerism in co-ordination compounds for CN = 4 and CN = 6. 1.5 IUPAC nomenclature of co-ordination compounds, 1.6 Valence bond theory of transition metal complexes. A .Introduction B. Postulates of VBT/ basic concepts of VBT C. Role of transition metal in the formation of complex D. Stepwise process of formation of	Students should get knowledge about; 1) Coordinate bond and their mechanism of formation. 2) Werner's and VBT approach for the bonding and characteristics of coordinate bond. 3) Isomerism and IUPAC nomenclature of co-ordination compounds.	Students have understood about Coordinate bonding in the complex compounds along with their Isomerism and IUPAC nomenclature.

complex : Salient features. E. Applications: High spin and low spin complexes w.r.t. CN = 4 and CN = 6. F. Limitations of Valence bond theory.		
2. Chelation A brief introduction w.r.t. ligand, chelating agent, chelation and metal chelate. Structural requirements of chelate formation. Difference between metal chelate and metal complex. Classification of chelating agents (with specific illustrations of bidentate chelating agent). Applications of chelation w.r.t. chelating agents : EDTA and DMG.	Students should get knowledge about application of coordination chemistry as a chelating agents and metal chelate.	Students have understood about difference between metal complex and metal chelate. Also they understood the applications of chelating agents in our life.
3. Acids and Bases Lewis Concept : A.Definition, B.classification,C. merits and D.demerits. Hard and soft acids and bases (HSAB) : A. Classification of acids and bases as hard and soft, B. Pearson's HSAB concept, C. Acid-Base strength and hardness-softness, D. Applications and limitations of HSAB principle.	1. To develop the thinking of students for acid base concept. 2. To understand various concepts of acids and bases. 3. To help student to classify Hard and soft acids and bases	1. Students are able to distinguish between various examples. 2. Students are able to apply knowledge in various content.
4. Study of d-block elements Introduction, Position of d-block elements in periodic table, Names& electronic configuration of 1st, 2nd & 3rd three transition series. General Characteristics of 3 d-block elements w.r.t. – a) oxidation state b) colour c) Magenetic behavior (spin only formula)	1. Enable students to distinguish between properties s-block, p-block and d-block element 2. To help the students to understand properties of d-block element 3. To help the students to understand electronic configuration, name symbol atomic number of 1st ,2nd,3rd transition series elements	1. Students are able to distinguish between properties of s-block, p-block and d- block element 2. Students are able to give properties of d-block element 3. Students are able to give electronic configuration, atomic number , symbol and name of the three transition series element

d) catalytic properties and e) tendency to form complexes. 4.5. Comparison of 1st transition series with 2nd & 3rd transition series w.r.t. – a) electronic configuration b) reactivity c) stability of oxidation state d) magnetic behavior and e) stability of complexes (Brief account only)	4. To help the students to understand various properties of 3-d transition series element 5. To help the students to compare properties of three transition series.	4. Students are able to understand the characteristics of various properties of 3-d block element and students can apply those characters in various concept related to 3-d series elements such as co-ordination chemistry; chelation; acid base concept also in research as studies in metal complexes.

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B.Sc. II		
NAME OF SUBJECT: Physical Chemistry		
SEM IV		
COURSE NUMBER (PAPER NUMBER) P-VII		
TITLE OF COURSE (NAME OF PAPER): Physical Chemistry		
COURSE CONTENT	**OBJECTIVES**	
Electrochemistry 1.1. Introduction, conduction of electricity, Types of conductors :	To study 1.1. conduction of electricity, Types of conductors : electronic and electrolytic.	**Students gain in** 1.1. Conduction o conductors : electr

electronic and electrolytic. Explanation of terms : Conductance, Specific resistance, specific conductance, Equivalent conductance, Molecular conductance. Variation of specific and equivalent conductance with concentration, Equivalent conductance at infinite dilution. (Mention Onsager equation, $b\ c\ v = -\infty\ \lambda\ \lambda$from graph) Migration of ions, Hittorf's rule, Transport number, Determination of transport number by moving boundary method, factors influencing transport number: Nature of electrolyte, concentration, temperature, complex formation and Degree of hydration. Kohlrausch law, Applications of Kohlrausch law : i. Determination of relationship between ionic conductance, ionic mobility and transport number. ii. Determination of equivalent conductance at infinite dilution of weak electrolytes. iii. Determination of degree of dissociation of weak electrolyte. iv. Determination of ionic product of water. v. Determination of solubility of sparingly soluble salts. 1.6. Numerical problems.	Explanation of terms : Conductance, Specific resistance, specific conductance, Equivalent conductance, Molecular conductance. Variation of specific and equivalent conductance with concentration, Equivalent conductance at infinite dilution. (Mention Onsager equation, $b\ c\ v = -\infty\ \lambda\ \lambda$from graph) Migration of ions, Hittorf's rule, Transport number, Determination of transport number by moving boundary method, factors influencing transport number: Nature of electrolyte, concentration, temperature, complex formation and Degree of hydration. Kohlrausch law, Applications of Kohlrausch law : i. Determination of relationship between ionic conductance, ionic mobility and transport number. ii. Determination of equivalent conductance at infinite dilution of weak electrolytes. iii. Determination of degree of dissociation of weak electrolyte. iv. Determination of ionic product of water. v. Determination of solubility of sparingly soluble salts. **To solve** 1.6. Numerical problems.	Explanation o resistance, specific conductance, Molecular conduc Variation of s conductance with conductance at inf dilution. (Mention λfrom graph) Migration of number, Determin moving boundary method, factors inf Nature of electroly complex formation and Deg Kohlrausch la law : i. Determination o conductance, ionic ii. Determination o infinite dilution of iii. Determination weak electrolyte. iv. Determination v. Determination o salts. Student becomes a problems based on
2. Thermodynamics Introduction, concept of entropy, Entropy as a state function: Definition, mathematical expression, unit, physical significance of entropy. Entropy changes for reversible and irreversible processes in isolated systems. Entropy changes for an ideal gas as a function of V and T and as a function of P and T. Entropy change in mixing of gases. Entropy change in physical transformations :	**To study** concept of entropy, Entropy as a state function: Definition, mathematical expression, unit, physical significance of entropy. Entropy changes for reversible and irreversible processes in isolated systems. Entropy changes for an ideal gas as a function of V and T and as a function of P and T. Entropy change in mixing of gases. Entropy change in physical transformations :	**Students gain an** concept of ent function: Definitio unit,physical signi Entropy chang irreversible proces Entropy chang of V and T and as P and T. Entropy chang Entropy chang i. Fusion of a solid ii. Vaporization of

i. Fusion of a solid. ii. Vaporization of a liquid. iii. Transition from one crystalline form to another. Third law of thermodynamics, Absolute entropy and Evaluation of absolute entropy, use of absolute entropies: Determination of entropy changes in chemical reactions. Numerical problems.	i. Fusion of a solid. ii. Vaporization of a liquid. iii. Transition from one crystalline form to another. Third law of thermodynamics, Absolute entropy and Evaluation of absolute entropy, use of absolute entropies: Determination of entropy changes in chemical reactions. **To solve** Numerical problems.	iii. Transition from 2.6. Third law of t entropy and Evalu absolute entropies: Determination of e reactions. Students gains con problems.
Physical properties of liquids Introduction, additive and constitutive properties **Viscosity:** coefficient of viscosity, determination of viscosity by Ostwald's Viscometer **Surface tension:**Determination of surface tension by Drop –Weight method **Parachor:**Macleod equation and its modification by Sugden, applications of parachor in the determination of molecular structures as benzene and NO2 group **Dipole moment:** electrical polarization of molecules Use of dipole moment in the study of molecular structure **Refractometery:** Refractive index, Snell's law Specific and molecular refractivity, Abbe's refractometer: Principle-critical angle phenomenon-construction, working and advantages Molecular refractivity and chemical constitution	To understand basic concepts of viscosity, S.T,parachore, dipole moment refractive index, etc.	Student should able course.

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B.A. / B.Sc. / M.A. / M.Sc.	: B.Sc. II
NAME OF SUBJECT	: Inorganic Chemistry

SEM I / II / III / IV / V / VI	: Sem. IV	
COURSE NUMBER (PAPER NUMBER)	: VIII	
TITLE OF COURSE (NAME OF PAPER)	**: Analytical and Industrial Inorganic Chemistry**	
COURSE CONTENT	**OBJECTIVES**	**OUTCOME**
1. Volumetric Analysis : Introduction, Terminology :- Titrant; Titrand, standard solution; Titration Indicator; Equivalence point; End point.Primary standard ,Secondary standard. Strength of solution, volumetric analysis & their types. Acid Base Titration i) Introduction ii) Theory of Acid-Base indicator : A) Colour change Interval B) Theories-Ostwald's theory &Quinoid theory, iii) Neutralization curve and choice of indicator for following titrations : A) Strong acid and Strong Base B) Strong Acid and Weak Base C) Weak Acid and Strong Base 1.3 Complexometric titration : A) General account, B) Types of EDTA Titrations, C) Metallochromic Indicator w.r.t. Eriochrome Black-T	1. To help the students to understand various concepts of volumetric analysis 2. to help the students to understand different types of volumetric analysis 3. to help the students to understand various types of acid base reactions	1. Students are able to understand various type of volumetric analysis 2. Students are able to distinguish between types of titrations 3. Students are able to apply knowdge in various fields of chemistry
2. Gravimetric Analysis: Introduction, Terminology :- Gravimetric analysis, Saturation, Super-saturation, Sol, Gel, Coagulation or Flocculation, Coagulation or Flocculation value, Peptisation, Precipitation, Precipitate, Precipitant, Solubility, Aging or digestion, Ignition, General steps involved in gravimetry Precipitation – A) Physical nature of Precipitate: Gelatinous, Curdy and Crystalline. B) Conditions of Precipitation 2.4. Process of precipitation – A) Nucleation B) Crystal growth C)	1. To enable students to understand various concept of gravimetric analysis 2. to enable students to understand steps in gravimetric analysis 3. to help the students to understand various applications of gravimetric analysis in field of chemistry	1. Students understood various concept of gravimetric analysis 2. Students understood steps of gravimetric analysis 3. Students are able to apply gravimetric analysis in various field of chemistry

Digestion Co-precipitation and Post precipitation and their difference. Role of Organic precipitants in gravimetric analysis, Study of organic precipitants viz. A) DMG, B) Aluminon, C) 8-Hydroxyquinoline. 2.8. Advantages and disadvantages of organic precipitants.		
3. Industrial heavy Chemicals: Introduction Physicochemical Principles & manufacture of following heavy chemicals: i) Ammonia by Haber process ii) Sulphuric acid by contact process.	To help the students to understand heavy chemicals such as ammonia, sulphuric acid.	Students understood the concept of manufacturing of heavy chemicals.
4. Metallurgy: Introduction: Terminology:- Metallurgy, Mineral, Ore, Gangue, Flux, Slag. Occurrence of metals: Types of ores Steps involved in metallurgical processes: A) Concentration of ores- I. Physical methods: a) Gravity separation method, b) Magnetic separation method, c) Froth flotation process. II. Chemical Methods: a) Calcination b) Roasting B) Reduction- i) Chemical methods of reduction ii) Electrolytic reduction method for e.g. Aluminium and copper	Students should get knowledge about; The concept of Metallurgy, occurrence of metals and their separation methods.	Students understood the existence of metallic elements and the types of their compounds in the nature. They also learn the principle and methodology of separation techniques of metals.
5. Iron and Steel: Occurrence of Iron Extraction of Iron: Blast furnace Types of Iron Steel- A) Definition B) Types of Steel C) Manufacture of Steel: a) Bessemer process b) L. D. process	Students should get knowledge about; Chemistry of iron and their compound.	Students understood the occurrence of iron, their separation from source and preparation of steel from cast iron.

D) Heat treatment on Steel		

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VIDNYAN MAHAVIDYALAYA SANGOLA

COURSE OUTCOME

Name of Department: Chemistry

B.Sc. III		
NAME OF SUBJECT: Physical Chemistry		
SEM V		
COURSE NUMBER (PAPER NUMBER) P-IX		
TITLE OF COURSE (NAME OF PAPER): Analytical and Industrial Physical Chemistry		
COURSE CONTENT	**OBJECTIVES**	**OUTCOME**
Phase Equilibri Introduction Gibbs phase rule : Phase rule equation and explanation of terms involved in the equation. 1.3 Phase diagram, true and metastable equilibria. 1.4 One component systems : (i) Water system (ii) Sulphur system with explanation for polymorphism. 1.5 Two component systems : (i) Eutectic system : (Ag - Pb system); Desilverisation of lead, (ii) Formation of compound with congruent melting point ($FeCl_3$ - H_2O)a	To understand the basic knowledge about homogeneous ,heterogeneous reactions, Gibbs' phase rule one and two components systems	Student should able to apply the phase rule to various systems and should explain.
. **Photochemistry. [12]** 3.1 Introduction 3.2 Difference between thermal and photochemical processes. 3.3 Laws of photochemistry : Grotthus - Draper law,	To understand the basic knowledge about Difference between thermal and photochemical processes. 3.3 Laws of photochemistry : Grotthus - Draper law, Lambert law, Lambert - Beer's law (with derivation), Stark -	i)At the end of the course, the student will be able to explain basic concept of Quantum yield, Photosensitized reactions, Jablonski diagram ii)Student should understand the basic concepts and satisfied. Solve the problems.

Lambert law, Lambert - Beer's law (with derivation), Stark - Einstein law. Quantum yield, Reasons for high quantum yield (e.g. H_2 - Cl_2) and low quantum yield. (e.g. Decomposition of HI and HBr). Photosensitized reactions - Dissociation of H_2, Photosynthesis. Photodimerisation of anthracene. Jablonski diagram depicting various processes occurring in the excited state : Qualitative description of fluorescence and phosphorescence. Chemiluminescence. Numerical problems. ***Reference Books:***	Einstein law. 3.4 Quantum yield, Reasons for high quantum yield (e.g. H_2 - Cl_2) and low quantum yield. 5 Photosensitized reactions - Dissociation of H_2, Photosynthesis. Photodimerisation of anthracene. Jablonski diagram depicting various processes occurring in the excited state : Qualitative description of fluorescence and phosphorescence. Chemiluminescence. Numerical problems.		
Electro chemistry Introduction Thermodynamics of electrode potentials, Nernst equation for electrode and cell potentials in terms of activities. Types of electrodes : Description in terms of construction, representation, half cell reaction and emf equation for, i) Metal - metal ion electrode. ii) Amalgam electrode. iii) Metal - insoluble salt electrode. iv) Gas - electrode. v) Oxidation - Reduction electrode. 2.4 i) Reversible and Irreversible cells. ii) Chemical cells without transference. iii) Concentration cells a. Electrode concentration cell I) Reversible to cation II) Reversible to anion	**To know the basic concept of** Introduction Thermodynamics of electrode potentials, Nernst equation for electrode and cell potentials in terms of activities. Types of electrodes : Description in terms of construction, representation, half cell reaction and emf equation for, i) Metal - metal ion electrode. ii) Amalgam electrode. iii) Metal - insoluble salt electrode. iv) Gas - electrode. v) Oxidation - Reduction electrode. 2.4 i) Reversible and Irreversible cells. ii) Chemical cells without transference. iii) Concentration cells a. Electrode concentration cell I) Reversible to cation II) Reversible to anion b. Electrolyte concentration cells without transference	**Students will gain** basic concept of 2. Thermodynam Nernst equation fo cell potentials in te Types of electr construction, repre reaction and emf e i) Metal - metal io electrode. iii) Metal - insolub electrode. v) Oxidation - Red 2.4 i) Reversible a ii) Chemical cells iii) Concentration a. Electrode conce I) Reversible to ca II) Reversible to a b. Electrolyte conc transference	

b. Electrolyte concentration cells without transference Equilibrium constant from cell emf, Determination of the thermodynamic parameters such as ΔG, ΔH and ΔS. Applications of emf measurements : i) Determination of pH of solution using Hydrogen electrode. ii) Solubility and solubility product of sparingly soluble salts (based on concentration cell). 2.7 Numerical problems.	Equilibrium constant from cell emf, Determination of the thermodynamic parameters such as ΔG, ΔH and ΔS. Applications of emf measurements : i) Determination of pH of solution using Hydrogen electrode. ii) Solubility and solubility product of sparingly soluble salts (based on concentration cell). 2.7 Numerical problems.	Equilibrium co Determination of t such as ΔG, ΔH an Applications o i) Determination o electrode. ii) Solubility and s soluble salts (base 2.7 Numerical pro

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B.A. / B.Sc. / M.A. / M.Sc.	: **B.Sc. III**
NAME OF SUBJECT	: Inorganic Chemistry
SEM I / II / III / IV / V / VI	: Sem. V
COURSE NUMBER (PAPER NUMBER)	: **X**
TITLE OF COURSE (NAME OF PAPER)	**: Inorganic Chemistry**

COURSE CONTENT	OBJECTIVES	OUTCOME
Metal Ligand Bonding in Transition Metal Complexes : A) **Crystal Field Theory (CFT).** Introduction - What isCFT? Basic concept of CFT. Formation of complexes with Crystal field splitting of 'd' orbitals i. Shapes of d orbitals and their electron density region ii. Formation of octahedral Complex with Crystal field splitting of 'd' orbitals, e.g. High spin and low spin octahedral complexes of Co(III): $[CoF6]^{3-}$, $[Co(NH_3)_6]^{3+}$. iii. Formation of tetrahedral Complex with Crystal field splitting of 'd' orbitals, e.g. $[CoCl_4]^{2-}$ iv. Formation of square planer Complex with Crystal field splitting of 'd' orbitals e.g. $[Co(CN)_4]^{2-}$ Jahn - Tellar distortion. Factors affecting the Crystal - field splitting. Crystal field stabilization energy (Δ): Calculation for octahedral complexes only. Applications and limitations of CFT. **B) Molecular Orbital Theory (MOT).** 1.B.1. Introduction. Basic concept Symmetry classes of atomic orbitals Formation of octahedral complex a) Assumptions b) M.O. energy level diagram for hypothetical octahedral complex. 1.B.5. Examples: octahedral complexes with sigma bonding only such as- e.g.$[Ti(H_2O)_6]^{3+}$,	1. Enable students to understand various theories of metal ligand bonding in transition metal complex 2. To help the students to understand crystal field theory , concept of CFT, shapes of d-orbital, formation of complexes – octahedral complex and square planar complexes 3. To help the students to understand Molecular orbital theory , concept, formation of octahedral complex	1. Students understood nature of metal ligand bonding in metal complexes and the characteristics of coordinate compounds on the basis of CFT and MOT.

$[FeF_6]^{3-}$, $[Fe(CN)_6]^{3-}$, $[CoF_6]^{3-}$, $[Co(NH_3)_6]^{3+}$, $[Ni(NH_3)_6]^{2+}$ Applications and limitations of MOT. Comparison between CFT and MOT.		
Nuclear Chemistry: Nuclear reaction and energetics of nuclear reactions. Classification of nuclear reactions and Types of nuclear reactions: i) Artificial transmutation. ii) Artificial radioactivity. iii) Projectile capture reaction. iv) Projectile capture - particle emission reaction. v) Nuclear fission. vi) Nuclear fusion. Use of Uranium, Thorium and Plutonium for: a. Nuclear reactor b. Atomic Bomb. Applications of radioisotopes as tracers. i) Chemical investigation - Esterification. ii) Structural determination - Phosphorus pentachloride. iii) Analytical Chemistry - isotopic dilution method for determination of volume of blood. iv) Age determination - Dating by ^{14}C.	1. To help the students to understand nuclear reactions 2. To help the students to understand difference between chemical reactions and nuclear reactions 3. To help the students to understand various types of nuclear reactions 4. To help the students to understand applications of nuclear reactions in energy production 5. To help the students to understand applications of radioactivity in various fields	1. Students understood nuclear reactions, difference between chemical and nuclear reactions 2. Students understood various types of chemical reactions and their beneficial characteristic 3. Students understood application of nuclear reactions 4. Students can apply radioactive techniques in various fields
Bioinorganic Chemistry: 3.1. Essential and trace elements in biological process. i) Essential elements a) Macro / major elements b) Micro/trace/minor elements ii) Non-essential elements 3.2. Metalloporphyrins with special reference to haemoglobin and myoglobin. i) Structure of	1. Enable students to understand requirement of essential and trace elements in biological processes as major and minor element 2. Enable students to understand structure of hemoglobin myoglobin, function of hemoglobin, myoglobin 3. Help the students to	1. Students understood role of essential and trace elements in biological process 2. Students understood structure of hemoglobin and myoglobin 3. Students understood role of alkali and alkaline earth metal ions

Haemoglobin(Hb) ii) Structure of Myoglobin (Mb) iii) Function of Haemoglobin (Hb) and Myoglobin (Mb) as Oxygen transport from lungs to tissues iv) Function of Haemoglobin as Carry back CO_2 to lungs v) Co-operativity vi) Oxygen binding curve vii) Difference between Haemoglobin (Hb) and Myoglobin (Mb) 3.3. Role of alkali and alkaline earth metal ions with special reference to Na^+ , K^+ and Ca^{2+}. i) Role of Na^+ and K^+ ii) Role of Ca^{2+} .	understand role of alkali and alkaline earth metal	
Catalysis Introduction Classification of catalytic reactions : Homogeneous & Heterogeneous Types of catalysis Characteristics of catalytic reactions Mechanism of catalysis : i) Intermediate compound theory ii) Adsorption theory. 4.6. Industrial Applications of Catalysis.	1. To help the students to understand about catalyst 2. Enable students to understand various types of catalytic reactions 3. To help the students to understand various types of catalysis 4. To help the students to understand mechanism of catalysis 5. Enable students to understand various industrial applications of catalyst	1. Students are able to understand about catalyst 2. Students are able to understand various types of catalytic reactions 3. Students are able to understand various types of mechanism of catalysis 4. Students are able to apply catalyst in various field and various branches of chemistry and other field
Fertilizers Nutrient Functions in plant growth : Nitrogen, Phosphorous, Potassium, Calcium, Magnesium, Sulphur, Boron, Iron, Zinc, Manganese, Copper, Molybdenum, Chlorine, Role of these nutrients as : Functions, Excess supply and Deficiency. Definition and qualities of an ideal fertilizers: Classification or types	1. Enable students to understand various nutrient required for plant growth 2. Enable students to understand definition, qualities of fertilizer 3. To help the students to understand manufacturing process of various fertilizer	1. Students understood various plant nutrient 2. Students understood definition, qualities of various fertilizer 3. Students can apply these manufacturing process in analytical chemistry

of fertilizers: Manufacture of fertilizers, eg. Urea, Ammonium sulphate, Superphosphate, Triple superphosphate, Ammonium phosphate. Mixed fertilizers, Compound or complex fertilizers. Pollution caused by fertilizers:		

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B.Sc. III		
NAME OF SUBJECT: Organic Chemistry		
SEM : V		
COURSE NUMBER (PAPER NUMBER): P- XI		
TITLE OF COURSE (NAME OF PAPER): OrganicChemistry		
COURSE CONTENT	**OBJECTIVES**	
1 Spectroscopic Method. [20] **1.1. Infrared Spectroscopy :** 1.1.1 Introduction, 1.1.2 Principle of IR spectroscopy, 1.1.3 Double beam IR spectrophotometer-Schematic diagram. 1.1.4 Fundamental modes of vibration, Types of vibration Hooke's law, 1.1.7 factors affecting values of vibrational frequencies, 1.1.8 conditions for absorption of radiation and selection rule, 1.1.9 fundamental group regions of IR spectrum, 1.1.10 Functional group region, Finger print region, 1.1.11 characteristic absorption of various functional groups, 1.1.12 Applications of IR spectroscopy – Determination of structure, Identification of	**To study the:** 1.1.2 Principle of IR spectroscopy, 1.1.3 Double beam IR spectrophotometer-Schematic diagram. 1.1.4 Fundamental modes of vibration, Types of vibration Hooke's law, 1.1.7 factors affecting values of vibrational frequencies, 1.1.8 conditions for absorption of radiation and selection rule, 1.1.9 fundamental group regions of IR spectrum, 1.1.10 Functional group region, Finger print region, 1.1.11 characteristic absorption of various functional groups, 1.1.12 Applications of IR spectroscopy – Determination of structure, Identification of functional groups spectral problems based on IR	**Students gain** All spectroscop factors on IR a Applications of Determination functional grou IR **Students gain** Theory of PMR Shielding and d Chemical shift, by delta scale a TMS as referen Peak area (inte Spin - spin spli Definition of c **Students are a** Problems perta of simple organ PMR spectrosc

functional groups spectral problems based on IR **NMR Spectroscopy**. Introduction 1.2.2. Proton magnetic resonance (1H) spectroscopy (PMR). Principles of PMR spectroscopy. Magnetic and non-magnetic nuclei. 1.2.5. Theory of PMR spectroscopy - spinning nuclei, magnetic moment and magnetic field, processional motion of nuclei without mathematical details, nuclear resonance. 1.2.6 NMR - Instrument. Schematic diagram. Shielding and deshielding. Chemical shift, measurement of chemical shift, by delta scale and tau scale. TMS as reference. Advantages of TMS. Peak area (integration) Spin - spin splitting (n + 1 rule). Definition of coupling constant (J value) of first order coupling. PMR spectra of ethanol, ethyl bromide, acetaldehyde, 1, 1, 2 - tribromoethane, ethyl acetate, acetophenone ,benzaldehyde, propanoic acid and benzoic acid Problems pertaining to the structure elucidation of simple organic compounds using PMR spectroscopic data (supporting IR and UV data to be given).	**To solve** 1.6 Spectral problems based on IR. **1.2 NMR Spectroscopy** 1.2.2. Proton magnetic resonance (1H) spectroscopy (PMR). Principles of PMR spectroscopy. Magnetic and non-magnetic nuclei. 1.2.5. Theory of PMR spectroscopy - spinning nuclei, magnetic moment and magnetic field, processional motion of nuclei without mathematical details, nuclear resonance. 1.2.6 NMR - Instrument. Schematic diagram. Shielding and deshielding. Chemical shift, measurement of chemical shift, by delta scale and tau scale. TMS as reference. Advantages of TMS. Peak area (integration) Spin - spin splitting (n + 1 rule). Definition of coupling constant (J value) of first order coupling. PMR spectra of ethanol, ethyl bromide, acetaldehyde, 1, 1, 2 tribromoethane, ethyl acetate, acetophenone ,benzaldehyde, propanoic acid and benzoic acid Problems pertaining to the structure elucidation of simple organic compounds using PMR spectroscopic data (supporting IR and UV data to be given).	UV data to be g
Mass spectroscopy. Introduction. Theory of mass spectroscopy Mass spectrometer - schematic diagram Formation of ions by ionization Types of ions with examples. Applications of mass spectroscopy. i) Determination of molecular weight. ii) Determination of molecular formula.	To study, Introduction and Theory of mass spectroscopy, Instrumentation of Mass spectrometer, Formation of ions, Types of ions, Applications of mass spectroscopy	Student got unc Mass spectrosc Instrumentation Ion formation, Types of ions, Applications
2. Stereochemistry	• To understand the concept of stereochemistry	• Students able t

A) Introduction. B) Baeyer's strain theory. C) Theory of strainless rings. D) Conformation and stability of cyclohexane and monosubstitutedcyclohexanes – methyl cyclohexane. E) Locking of conformation in t-butyl cyclohexane. F) Stereoselective and stereospecific reactions : i) Stereochemistry of addition of halogens to alkenes:syn and anti addition. Example - Addition of bromine to 2-butene. (mechanism not expected) ii) Alkaline hydrolysis of 2-chlorobutane to 2-butanol(Example of SN^2 reaction)	• How calculate the angle and stability of cyclic compounds by Baeyer theory. • Effect of large groups in cyclic compounds. • Using stereochemistry, stereoselective and stereospecific reactions and stereochemical different products formation with different examples.	various types of • Students know and why there is energy (more sta • Students unde compound with compounds. • Students unde stereoselective a what is meaning products.
3. Name reactions. Mechanism and applications of following reactions : 3.1 Stobbe condensation. 3.2 Oppenauer oxidation. 3.3 MeerweinPonndorfVerley reduction. 3.4 Reformatsky reaction. 3.5 Wagner - Meerwein Rearrangement. 3.6 Hofmann rearrangement reaction. 3.7 Wittig reaction. 3.8 Related problems.	To study, Mechanism and applications of following reactions : Stobbe condensation. Oppenauer oxidation. MeerweinPonndorfVerley reduction. Reformatsky reaction. Wagner - Meerwein Rearrangement. Hofmann rearrangement reaction. Wittig reaction. Related problems.	**Students gain** Mechanism and following react Stobbe condens Oppenauer ox MeerweinPonn Reformatsky re Wagner - Meer Hofmann rearra Wittig reaction Related proble
4. Organic synthesis via Enolates Introduction - Reactive methylene group. Ethyl acetoacetate - synthesis by Claisen	**To study** 4.1 Introduction - Reactive methylene group.	**Students gain** Basic terms inv Types and subt

condensation, acidity of methylene hydrogen (salt formation), Keto-enol tautomerism, synthetic applications - Synthesis of alkyl and dialkyl derivatives, monobasic, dibasic and α- β- unsaturated acid, heterocyclic compound. 4.3 Diethyl malonate - Synthesis, acidity of methylene hydrogen (salt formation). Synthetic applications - Synthesis of alkyl and dialkyl derivatives, monobasic , dibasic acid, α- β- unsaturated acid, α-amino acid and heterocyclic compound.	Ethyl acetoacetate - synthesis by Claisen condensation, acidity of methylene hydrogen (salt formation), Keto-enol tautomerism, synthetic applications - Synthesis of alkyl and dialkyl derivatives, monobasic, dibasic and α- β- unsaturated acid, heterocyclic compound. Diethyl malonate - Synthesis, acidity of methylene hydrogen (salt formation). Synthetic applications - Synthesis of alkyl and dialkyl derivatives, monobasic , dibasic acid, α- β- unsaturated acid, α-amino acid and heterocyclic compound.	intermediates i - To study the Ethyl acetoace condensation, a hydrogen (salt Also study of c organic synthes

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B.Sc. III		
NAME OF SUBJECT: Physical Chemistry		
SEM V		
COURSE NUMBER (PAPER NUMBER) P-XII		
TITLE OF COURSE (NAME OF PAPER): Analytical and Industrial Physical Chemistry		
COURSE CONTENT	**OBJECTIVES**	**OUTCOME**
Potentiometry: 1) Introduction. 2) Detail study of calomel, quinhydrone and glass electrodes and their use in determination of ph 3) Potentiometric titrations: Classical and Analytical methods for locating end points. I) Acid –Base titrations. II) Redox Titrations. III) Precipitation titrations. 4) Advantages of Potentiometric titrations	Detail study of calomel, quinhydrone and glass electrodes and their use in determination of ph Potentiometric titrations: Classical and Analytical methods for locating end points. Types of potentiometric titrations Acid –Base, Redox and Precipitation titrations. Advantages of Potentiometric titrations	Student should able to know various types of electrodes as reference and indicator electrodes To study the end points of reactions by potentiometric methods

5) Basic circuit of direct reading potentiometer.		
Flame Photometry: 1) General Principles. 2) Instrumentation: Block diagram,Burners: Total consumption burner, liminor floe burner and Lundergarph burner, mirror, slits, mionchromators, filters and detectors. 3) Applications in qualitative and quntitative analysis. 4) Limitations of flame photometry	Principle Various components of flame photometry Burners: Total consumption burner, liminor floe burner and Lundergarph burner, mirror, slits, mionchromators, filters and detectors. Applications in qualitative and quntitative analysis. Limitations of flame photometry	The students can know the basic knowledge of flame photometry as analytical techniques
Electroplating Introduction. Electrolysis, Faraday's laws, Cathode current efficiency. Basic principles of electroplating, cleaning of articles. Electroplating of Nickel and Chromium. Anodising.	**To study** Electrolysis, Faraday's laws, Cathode current efficiency. Basic principles of electroplating, cleaning of articles. Electroplating of Nickel and Chromium. Anodising.	**Student understands the concepts:** Electrolysis, Faraday's laws, Cathode current efficiency. Basic principles of electroplating, cleaning of articles. Electroplating of Nickel and Chromium. Anodising.
1. Colorimetry. Introduction General discussion of theory of colorimetry : Lambert law, Beer's law (Derivation not expected), Terms used in Colorimetry, Application of Beer'slaw, Deviation from Beer's law. Classification of methods of 'colour' measurement or comparison, Photoelectric photometer method - single cell photo-electric colorimeter.	To make students know the information about functioning of Colorimeter,its use in measuring concentration of unknown solutions which improves their practical skills.	Students will learn functioning of Colorimeter,improving their skills in practicals by working with the machine in determining the concentration of unkown solutions.
Conductometry: 5.1 Measurement of conductance	**To study** 5.1 Measurement of conductance	**Students gain an understanding of :**

by Wheatstone bridge, Basic circuit of D.C. Wheatstone bridge, use of alternating current, conductivity water, Different types of conductivity cells, cell constant and its determination. Experimental determination of specific, equivalent and molecular conductance's. 5.2 Conductometric acid-base titrations i. Strong acid against strong base ii. Strong acid against weak base iii. Weak acid against strong base. iv. Weak acid against weak base. 5.3 Advantages of conductometric titrations	by Wheatstone bridge, Basic circuit of D.C. Wheatstone bridge, use of alternating current, conductivity water, Different types of conductivity cells, cell constant and its determination. Experimental determination of specific, equivalent and molecular conductance's. 5.2 Conductometric acid-base titrations i. Strong acid against strong base ii. Strong acid against weak base iii. Weak acid against strong base. iv. Weak acid against weak base. 5.3 Advantages of conductometric titrations	Measurement of conductance by Wheatstone bridge, Basic circuit of D.C. Wheatstone bridge, use of alternating current, conductivity water, Different types of conductivity cells, cell constant and its determination. Experimental determination of specific, equivalent and molecular conductance's. Conductometric acid-base titrations i. Strong acid against strong base ii. Strong acid against weak base iii. Weak acid against strong base. iv. Weak acid against weak base. 5.3 Advantages of conductometric titrations

Name of Department: Chemistry

B.Sc. III		
NAME OF SUBJECT: Physical Chemistry		
SEM VI		
COURSE NUMBER (PAPER NUMBER) : P-XIII		
TITLE OF COURSE (NAME OF PAPER): Physical Chemistry		
COURSE CONTENT	**OBJECTIVES**	
Spectroscopy Introduction Electromagnetic radiation. Electromagnetic spectrum, Energy level diagram. Rotational spectra of diatomic molecules : Rigid rotor model; moment of inertia (derivation not expected); energy levels of rigid rotor, selection rule; spectral intensity; distribution using population distribution (Maxwell - Boltzman distribution), determination of bond length; isotope effect. Interaction of radiation with rotating molecule. Vibrational spectra of diatomic molecules : Simple Harmonic oscillator model, Vibrational energies of diatomic molecules, Determination of force constant, overtones. Interaction of radiation with vibrating molecules. Numerical problems.	**To study the:** Electromagnetic radiation. Electromagnetic spectrum, Energy level diagram. Rotational spectra of diatomic molecules : Rigid rotor model; moment of inertia (derivation not expected); energy levels of rigid rotor, selection rule; spectral intensity; distribution using population distribution (Maxwell - Boltzman distribution), determination of bond length; isotope effect. Interaction of radiation with rotating molecule. Vibrational spectra of diatomic molecules : Simple Harmonic oscillator model, Vibrational energies of diatomic molecules, Determination of force constant, overtones. Interaction of radiation with vibrating molecules. **To solve** Numerical problems.	**Students gain the** Electromagnet Electromagnet diagram. Rotational spe Rigid rotor model not expected); ene selection rule; spe population distribu distribution), deter isotope effect. Inte rotating molecule. Vibrational spe Simple Harmonic energies of diatom force constant, ove radiation with vibr **Students are able** Numerical pro
Solution 2.1 Introduction Ideal solutions, Raoult's law, vapour pressure of ideal and non ideal solutions of miscible liquids. Vapour pressure and boiling point diagrams of miscible liquids. Type I : Systems with intermediate total vapour pressure. (i.e. System in which B.P. increases regularly - Zeotropic) Type II : Systems with a maximum in the total vapour pressure. (i.e. System with a B.P. minimum - Azeotropic)	To understand the basic concept of Normality, Molarity, Molality, Mole fraction, Introduction Ideal solutions, Raoult's law, vapour pressure of ideal and non ideal solutions of miscible liquids. Vapour pressure and boiling point diagrams of miscible liquids. Type I : Systems with intermediate total vapour pressure. (i.e. System in which B.P. increases regularly - Zeotropic) Type II : Systems with a maximum in the total vapour pressure.	**Students will gain** basic concept of N Mole fraction, Rac Raoult's law Introduction Ideal solutions of ideal and non id liquids. Vapour pressu miscible liquids. Type I : Systems w pressure. (i.e. System in whi Zeotropic) Type II : Systems

Type III :Systems with a minimum in the total vapour pressure. (i.e. System with a B.P. Maximum - Azeotropic) Distillation of miscible liquid pairs. 2.4 Solubility of partially miscible liquids. (i) Maximum solution temperature type : Phenol - water system. (ii) Minimum solution temperature type :Triethyl amine - water system. (iii) Maximum and minimum solution temperature type : Nicotine - water system.	(i.e. System with a B.P. minimum - Azeotropic) Type III :Systems with a minimum in the total vapour pressure. (i.e. System with a B.P. Maximum - Azeotropic) Distillation of miscible liquid pairs. 2.4 Solubility of partially miscible liquids. (i) Maximum solution temperature type : Phenol - water system. (ii) Minimum solution temperature type :Triethyl amine - water system. (iii) Maximum and minimum solution temperature type : Nicotine - water system.	vapour pressure. (i.e. System with a Type III :Systems vapour pressure. (i.e. System with a Distillation of mis 2.4 Solubility of p (i) Maximum solu water system. (ii) Minimum solu amine - water syst (iii) Maximum and type : Nicotine - w

B.A. / B.Sc. / M.A. / M.Sc.	: **B.Sc. III**	
NAME OF SUBJECT	: Inorganic Chemistry	
SEM I / II / III / IV / V / VI	: Sem. VI	
COURSE NUMBER (PAPER NUMBER)	**: P - XIV**	
TITLE OF COURSE (NAME OF PAPER)	**: Inorganic Chemistry**	
COURSE CONTENT	**OBJECTIVES**	**OUTCOME**
1) Study of F-block Elements Lanthanides :- I) Introduction II) Electronic configuration III) Occurrence IV) Separation of Lanthanides i) Bulk separation methods ii) Individual separation of lanthanides- Mention names of methods only(Ion exchange method in detail) 1.2 Actinides :- I) Introduction II) Electronic configuration III) General Methods of preparation – a) Neutron-capture followed by β-decay b) Accelerated projectile bombardment method	1. To help the students to understand about lanthanide and actinide 2. To help the students to understand electronic configuration, occurrence separation techniques of lanthanides 3. To help the students to understand electronic configuration, methods of preparation of trans uranic element	1. Students understand lanthanide and actinides 2. Students understand electronic configuration, separation techniques of lanthanide 3. Students understand preaparation techniques of actinide

c) Heavy-ion bombardment method 1.3 IUPAC Nomenclature of the Super Heavy Elements with atomic numbers (Z) greater than 100.		
2) Metals and Semiconductors. Introduction. Properties of metallic solids. Theories of bonding in metal. a) Free electron theory. b) Molecular orbital theory (Band theory). Classification of solids as conductor, insulators and semiconductors on the basis of band theory. Semiconductors: a) Types of semiconductors - intrinsic and extrinsic semiconductors. b) Applications of semiconductors. Superconductors : a) Ceramic superconductors - Preparation and structures of mixed oxide $YBa_2Cu_3O_{7-x}$ b) Applications of superconductors.	Students should get knowledge about; Metallic solids, bonding in metallic solids and their classification as conductor, insulator and conductor.	Students understood the preparation and conduction mechanism in semiconductor and ceramic superconductors.
3) Structural Chemistry. Structural study of following compounds. i) Diborane. ii) Borazine. iii) Xenon compounds → XeF_2, XeF_6, XeO_4 (w.r.t. VBT only.) Structural study of Oxides of Sulphur and Phosphorous: i) Oxides of Sulphur : SO_2 and SO_3 ii) Oxides of Phosphorous : P_4O_6 and P_4O_{10}	To get Knowledge of structure and bonding of some inorganic halide and oxide compounds.	Students understood the, Hybridization concept, VSEPR theory, structure and bonding in halides and oxides of Xe, S & P.
4) Corrosion and Passivity. **Corrosion :-** I. Introduction II. Types of corrosion III. Electrochemical theory of corrosion	To get knowledge of the concept of corrosion and passivity.	Students understood the Concept of corrosion and passivity, their effects, protection and applications. **[07]**

IV. Factors affecting the corrosion i) Position of metal in emf series. ii) Purity of metal. iii) Effect of moisture. iv) Effect of oxygen. v) Hydrogen over voltage. V. Methods of protection of metals from corrosion. **Passivity :-** I. Definition. II. Types of passivity. III. Oxide film theory. IV. Application of passivity.		
5. Organometallic Chemistry. Introduction - Definition, Nomenclature of organometallic compounds. Synthesis and structural study of alkyl and aryl compounds of Li, Be and Al. Mononuclear carbonyl and nature of bonding in simple metal carbonyls.	1. To help the students to understand organiometallic compounds 2. To help the students to understand synthesis of organometallic compounds	1. Students understand concept of organometallic compounds 2. Students understand synthesis of organometallic compounds

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B.Sc. III		
NAME OF SUBJECT: Organic Chemistry		
SEM VI		
COURSE NUMBER (PAPER NUMBER) P-XV		
TITLE OF COURSE (NAME OF PAPER): Organic Chemistry		
COURSE CONTENT	**OBJECTIVES**	
1 Heterocyclic compounds Introduction and classification. Pyrrole. Methods of synthesis : i) From acetylene. ii) From furan. iii) From succinamide.	To study the classification of Heterocyclic compounds. To study methods of preparation and chemical reactions of Pyrrole, Pyridine, and Quinoline.	**Students gain th** Classification of Methods of prepa Pyrrole, Pyridine,

Physical properties. Reactivity of pyrrole : i) Basic character. ii) Acidic character. iii) Electrophilic substitution with general mechanism. 1.2.4 Chemical reactions : i) Reduction. ii) Oxidation. iii) Nitration, sulphonation and halogenation. iv) Friedel Craft's reaction. v) Coupling reaction. Pyridine. Methods of synthesis. i) From acetylene and hydrogen cyanide. ii) From piperidine. Physical properties. Chemical reactions i) Basic character ii) Electrophilic substitution(nitration, sulphonationabdbromination) reactions iii) Nucleophilic substitution - General mechanism, Reactions with sodamide, sodium hydroxide and n-Butyl lithium. Quinoline Synthesis - Skraup's synthesis Physical properties. Reactions of quinoline : i) Electrophilic substitution reactions -Nitration and sulphonation. ii) Nucleophilic substitution reactions - Reactions with sodamide, alkylation and arylation. iii) Reduction.		
2. Carbohydrates Introduction. Classification and nomenclature. Monosaccharide D-glucose - Open chain structure. Chain lengthening of Aldoses - Kiliani synthesis. Chain shortening of Aldoses - Weerman's reaction. Interconversion of glucose and fructose. Configuration of D-glucose from D-arabinose.	**To study the**. Classification and nomenclature. Monosaccharide D-glucose - Open chain structure. Chain lengthening of Aldoses - Kiliani synthesis. Chain shortening of Aldoses - Weerman's reaction. Interconversion of glucose and fructose. Configuration of D-glucose from D-arabinose.	**Students gain th** Classification and Configuration of Objections agains glucose. Ring structure of size of ring by, Methylation meth Periodic acid trea Disaccharides - In - Sources, structu formulae and use

		Polysaccharides - structural formula
Objections against open chain structure of D-glucose. Muta-rotation with mechanism. Ring structure of D-glucose - Determination of size of ring by, i) Methylation method. ii) Periodic acid treatment method. iv) X - ray analysis. Disaccharides - Introduction, sucrose and lactose - Sources, structural formulae and uses. Polysaccharides - Introduction starch, - Sources, structural formulae and uses.	Objections against open chain structure of D-glucose. Muta-rotation with mechanism. Ring structure of D-glucose - Determination of size of ring by, i) Methylation method. ii) Periodic acid treatment method. iv) X - ray analysis. Disaccharides - Introduction, sucrose and lactose - Sources, structural formulae and uses. Polysaccharides - Introduction starch, - Sources, structural formulae anduses.	
3. Vitamins and Hormones General idea of vitamins, structure and synthesis of vitamin A General idea of hormones, structure and synthesis of Adrenaline and Thyroxin	To study the General idea of vitamins, structure and synthesis of vitamin A General idea of hormones, structure and synthesis of Adrenaline and Thyroxin	**Students gain th** General idea of of vitamin A General idea of h of Adrenaline and
4. Pharmaceuticals Introduction. Qualities of ideal drug. Methods of classification of drugs - Classification based on the therapeutical action. Brief idea of pencillin-G (constitution, synthesis not expected) Synthesis and uses of the following drugs : i) Antimalerials - Paludrin. ii) Antituberculars - Isoniazide and Ethambutol. iii) C. N. S. drugs - Phenobarbitone. iv) Antidiabetics - Tolbutamide. v) Antiinflammatory drugs - Ibuprofen. vi) Antibiotic - Chloromycetin.	To study the Qualities of ideal drug. Methods of classification of drugs - Classification based on the therapeutical action. Synthesis and uses of the following drugs : i) Antimalerials - Paludrin. ii) Antituberculars - Isoniazide and Ethambutol. iii) C. N. S. drugs - Phenobarbitone. iv) Antidiabetics - Tolbutamide. v) Antiinflammatory drugs - Ibuprofen. vi) Antibiotic - Chloromycetin.	**Students gain th** Qualities of idea Methods of class based on the thera Synthesis and use i) Antimalerials - ii) Antitubercular iii) C. N. S. drugs iv) Antidiabetics v) Antiinflammat vi) Antibiotic - C
5 Synthetic dyes. Introduction, Qualities of good dye. 5.2. Classification based on constitution and methods of applications. Witt's theory - Colour and constitution. Synthesis of Orange IV, Malechite green, phenolphthalein.	**To study the:** Qualities of good dye. Classification based on constitution and methods of applications. Witt's theory - Colour and constitution. Synthesis of Orange IV, Malechite green, phenolphthalein.	**Students gain th** Qualities of good Classification bas of applications. Witt's theory - C Synthesis of Oran phenolphthalein.
6 Agrochemicals. General idea of agrochemicals including	**To study the:** General idea of agrochemicals including	**Students gain th** General idea of a

pyrethroides. 6.2 Synthesis and uses of the following agrochemicals : i) Indole-3-acetic acid. ii) Monocrotophos. iii) Methoxychlor. iv) Ethophan. v) Carbaryl.	pyrethroides. Synthesis and uses of the following agrochemicals : i) Indole-3-acetic acid. ii) Monocrotophos. iii) Methoxychlor. iv) Ethophan. v) Carbaryl.	pyrethroides. Synthesis and use agrochemicals : i) Indole-3-acetic ii) Monocrotopho iii) Methoxychlor iv) Ethophan. v) Carbaryl.of TM

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B.Sc. III		
NAME OF SUBJECT: Analytical and Industrial Organic Chemistry		
SEM VI		
COURSE NUMBER (PAPER NUMBER) P-XVI		
TITLE OF COURSE (NAME OF PAPER): Analytical and Industrial Organic Chemistry		
COURSE CONTENT	**OBJECTIVES**	**OUTCOME**
1. Soaps and Detergents. [08] 1.1 Soap i) Raw materials. ii) Types of soaps. iii) Manufacture of soap - Hot process. iv) Cleansing action of soaps. 1.2 Detergents i) Raw materials. ii) Types of detergents - Cationic, anionic, amphoteric, neutral detertents. iii) Preparation of teepol and deriphat. 1.3 Comparison between soaps and detergents.	**To study the:** Soap Raw materials. Types of soaps. Manufacture of soap - Hot process. Cleansing action of soaps. Detergents Raw materials. Types of detergents - Cationic, anionic, amphoteric, neutral detertents. Preparation of teepol and deriphat. Comparison between soaps and detergents.	**Students gain the understanding of:** Soap and detergents, their raw materials, manufacturing processes, cleansing action of soap and types of detergents.
2. Synthetic polymers. [08] 2.1 Introduction. 2.2 Classification : i) According to origin, composition,	**To study the:** Classification of polymer. Process of addition polymerisation - free radical	**Students gain the understanding of:** -Polmerisation processes, Methods of

method of preparation and general physicalproperties. ii) Classification based upon structure. Process of addition polymerisation - free radical polymerisation of alkenes and Dienes. Ionic polymerisation. Ziegler - Natta polymerisation. Methods of preparation and uses of : i) Polythene. ii) Polystyrene iii) PVC. iv) Phenol formaldehyde resin. v) Urea formaldehyde resin vi) Poly urethane Natural rubber : General idea and vulcanisation. Synthetic rubbers : Synthesis and uses of - i) Polychloroprene, ii) Buna rubber - Buna N and Buna S.	polymerisation of alkenes and Dienes. Methods of preparation and uses of : i) Polythene. ii) Polystyrene iii) PVC. iv) Phenol formaldehyde resin. v) Urea formaldehyde resin vi) Poly urethane Natural rubber : General idea and vulcanisation. Synthetic rubbers : Synthesis and uses of - i) Polychloroprene, ii) Buna rubber - Buna N and Buna S.	preparation and uses of : i) Polythene. ii) Polystyrene iii) PVC. iv) Phenol formaldehyde resin. v) Urea formaldehyde resin vi) Poly urethane Natural rubber : General idea and vulcanisation. Synthetic rubbers : Synthesis and uses of - i) Polychloroprene, ii) Buna rubber - Buna N and Buna S.
3. Sugar and Alcohol Industry [09] Manufacture of raw cane sugar. Refining of raw sugar. White sugar. By-products of sugar industry. Manufacture of ethyl alcohol from molasses Rectified spirit, Denatured spirit absolute alcohol and power alcohol. By-products of alcohol industry.	**To study the:** Manufacture of raw cane sugar. Refining of raw sugar. White sugar. By-products of sugar industry. Manufacture of ethyl alcohol from molasses Rectified spirit, Denatured spirit absolute alcohol and power alcohol. By-products of alcohol industry.	**Students gain the understanding of:** Manufacture of raw cane sugar. Refining of raw sugar. White sugar. By-products of sugar industry. Manufacture of ethyl alcohol from molasses Rectified spirit, Denatured spirit absolute alcohol and power alcohol. By-products of alcohol industry.
4. Textile chemistry [Introduction, classification of fibers. Sizing: object of sizing, sizing ingredients and their functions. General idea of processes like singeing, desizing, scouring. Bleaching: i) Brief study of the outline of the process of bleaching cotton and synthetic material. Dyeing : Study of dyeing of cellulosic	**To study the:** Classification of fibers. Sizing: object of sizing, sizing ingredients and their functions. General idea of processes like singeing, desizing, scouring, Bleaching, Dyeing. .	**Students gain the understanding of:** Classification of fibers. Sizing: object of sizing, sizing ingredients and their functions. General idea of processes like singeing, desizing, scouring, Bleaching, Dyeing.

material and synthetic fibers with dyes like direct,vat, reactive and disperse dyes.		
5. Green Chemistry. 5.1 Introduction - Twelve principles of green chemistry. 5.2 Zeolites - Friedel Craft's alkylation and acylation, oxidation of benzene to phenol and benzoquinone, Reduction of benzoquinone to hydroquinone. 5.3 Biocatalytic reaction - Hydroxylation and oxidation using enzymes. 5.4 Introduction to microwave assisted reactions.	**To study the:** Twelve principles of green chemistry. Zeolites - Friedel Craft's alkylation and acylation, oxidation of benzene to phenol and benzoquinone, Reduction of benzoquinone to hydroquinone. Biocatalytic reaction - Hydroxylation and oxidation using enzymes. Introduction to microwave assisted reactions.	**Students gain the understanding of:** Twelve principles of green chemistry. Zeolites - Friedel Craft's alkylation and acylation, oxidation of benzene to phenol and benzoquinone, Reduction of benzoquinone to hydroquinone. Biocatalytic reaction - Hydroxylation and oxidation using enzymes. Introduction to microwave assisted reactions.
6. Chromatography 6.1 Introduction. 6.2 General principles. 6.3 Classification. 6.4 Study of following chromatographic techniques with reference to principle, methodology and applications. i) Paper chromatography. ii) Column chromatography. iii) Thin layer chromatography. iv) Gas chromatography	**To study the:** General principles. Classification. Study of following chromatographic techniques with reference to principle, methodologyand applications. i) Paper chromatography. ii) Column chromatography. iii) Thin layer chromatography. iv) Gas chromatography	**Students gain the understanding of:** General principles. Classification. Study of following chromatographic techniques with reference to principle, methodology and applications. i) Paper chromatography. ii) Column chromatography. iii) Thin layer chromatography. iv) Gas chromatography

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VIDNYAN MAHVIDYALAYA, SANGOLA

Name of the Course: B.A.I (Paper: Indian Economy) (Paper No. I)(Sem. I)

Syllabus	Objectives	Outcome
Unit-I Introduction: Characteristics of Indian Economy since independence Indian Population Broad Features of Indian Population Problem of over population – causes and measures Population Policy – 2000 **Unit-II Poverty and Unemployment** Poverty**:** Concept, causes and measures Unemployment: Concept, causes and measures **Unit-III Problem of Rising Prices** Meaning and causes Effects Measures **Unit-IV Agriculture** Place of agriculture in Indian Economy. Agricultural productivity – causes of low agricultural productivity, measures Features of Green Revolution, Need for second Green Revolution	• To introduce the Indian economy. • To make the students aware of the problems of Indian economy. • To study the problem of overpopulation of India. • To make the students aware of the current problem of rising prices. • To introduce the importance of the agricultural sector in Indian economy.	• Students came to know the various characteristics of Indian economy. • The students recognized the problem of rising population in India. • The students realized the basic problems like poverty, unemployment and overpopulation in India economy. • The productivity of Indian agriculture, features of green revolution etc. were studied by the students.

Name of the Course: B.A.I (Paper: Indian Economy) (Paper No. II) (Sem.II)

Syllabus	Objectives	Outcome
Unit-I Industry : 1.1 Role of industry in Indian Economy Small and Medium Enterprises- Role, problems and measures Industrial Policy of 1991 **Unit II Planning in India:** Meaning and Broad objectives. Introduction to NITI Concept of LPG model (Liberalization, Privatization, Globalization) Concept of PURA model (Providing Urban amenities to	• To introduce the role of industry in Indian economy. • To make the students aware of the planning in India, NITI Aayog and LPG model. • To study the features of economy of Maharashtra. • To make the students aware of role of agro based industries and	• Students came to know the role of industry in Indian economy. Students also realized the role of small scale industries and new economic policy. • The students recognized the objectives of Indian planning. They also identified models

Rural Area) **Unit-III Economy of Maharashtra:** Salient features of Economy of Maharashtra Agriculture- Cropping pattern, Dry land farming, Horticulture and Floriculture Agro-based industries- Role and problems Services sector-Present position and it's role **Unit-IV Cooperatives in Maharashtra:** Role of cooperatives in Economy of Maharashtra Sugar cooperatives- Role and problems Dairy cooperatives- Role and problems	service sector. • To introduce role of cooperatives in economy of Maharashtra.	of development like LPG and PURA. • The students realized the features of agricultural sector in Maharashtra. They also came to know about agro based industries and service sector in Maharashtra. • The students identified the role and problems of sugar cooperatives and dairy cooperatives in Maharashtra.

Name of the Course: B.A.II (Paper: Money, Banking & Public Finance) (Paper No. III) (Sem.III)

Syllabus	**Objectives**	**Outcome**
Unit : 1. Money Barter System- Hurdles in the Barter system Meaning, evolution of money. Types of Money Functions of Money. **Unit : 2. Value of money** Concept of Value of money. Price index- Construction and Importance Inflation – meaning, types, causes, effects and measures to control it. Deflation – meaning, causes, effects and measures to control it. **Unit : 3. Commercial Banking** Meaning, Definition, Functions, and Principles of Banking Process of Credit Creation and its Limitations. Concepts of ATM, Debit Card, Credit Card, E-Banking. Concepts of Money Market and Capital Market **Unit: 4. Reserve Bank of India:** Functions of Reserve Bank of India as a Central Bank Methods of credit control. Role of Reserve Bank of India since 1991	• To introduce the concept of money to the students. • To introduce the concept of value of money. • To make aware the students with recent trends in commercial banking inIndia. • To make familiar the students with functioning of RBI and differentmonetary measures in India.	• Students identified the evolution of money, types of money and functions of money. • The students recognized the concept of value of money and price index. • The students realized the basic concepts of inflation and deflation. • The functions and priciples of banking were introduced to students. • The students sensitized about ATM, Debit card, Credit card and E-

4.4 Monetary policy- Meaning and Objectives		banking system. • The students realized the role of RBI in banking system in India.

Name of the Course: B.A.II (Paper: Money, Banking & Public Finance) (Paper No. V) (Sem.IV)

Syllabus	Objectives	Outcome
Unit : 1. Public Finance: 1.1 Meaning and Definitions of Public Finance Distinguish between Public Finance and Private finance. Structure of Federal Finance System in India 1.4Principle of maximum Social Advantage.(Dr. Dalton's Approach) **Unit : 2. Public expenditure** Meaning and Principles of Public Expenditure. Classification of Public Expenditure Causes of growth in Public Expenditure in India. Effects of Public Expenditure **Unit: 3. Taxation:** Meaning, Canons and Classification. Approaches of Taxation- Benefit and Ability to pay approach Burden of tax- Impact, Shifting and Incidence of tax burden. Taxable Capacity – Concept, factors determining taxable Capacity. **Unit: 4. Public debt and Financial Administration** Meaning and Sources of Public Debt. Causes of growth in Public Debt of India. Effects of Public Debt. Budget: Meaning and kinds.	• To introduce the nature and scope of public finance in India. • To make the students aware concept of federal finance,. • To study the principle of maximum social advantage. • To introduce meaning, classification and causes of public expenditure in. • To introduce the taxation system in India. • To make the students aware of the concept of public debt and financial administration in India.	• Students came to know the nature and scope of public finance. • The students recognized the causes of rising public expenditure in India. • The students realized the taxation system in India. • The students identified the causes of debt and its effects. The students also introduced the concept of budget.

Name of the Course: B.A.II (Paper: Demography) (Paper No. IV) (Sem.III)

Syllabus	Objectives	Outcome
1. Population Studies a) Demography – Concepts, Definitions, Nature Scope and Importance. b) Post Independence developments of population	• To introduce the Demography • To understand the nature, scope and importance of	• The students were introduced to Demography • Students came to know the

studies in India. c) Inter – relationship between population studies and other disciplines. **2. Sources of Demography Data in India** a) Population- census b) Civil registration System. c) Demographic Surveys. d) Merits and Demerits of Sources of population data. **3. Theories of population** a) Malthusian Theory b) Optimum Population Theory c) Theory of Demographic Translation. **4. Techniques of Analysis** a) Birth and Death Rates, Crude Birth and Death rates, Age Specific Birth and Death rates, standardized Birth and Death Rates. b) Study of Fertility: Total fertility Rate. Gross Reproduction Rate, Net Reproduction rate.	Demography • To study various important sources of demographic data in India • To study basic theories in Demography • To understand the techniques of demographic analysis	development of population studies in India • Students realized the merits and demerits of demographic data in India • Students were introduced basic theories in Demography • The basic concepts of birth rate and death rate and study of fertility understood by the students

Name of the Course: B.A.II (Paper: Demography) (Paper No. VI) (Sem.IV)

Syllabus	Objectives	Outcome
1. Migration Meaning, Causes and types. **2. Population Studies and characterstics of population in India since 1951** a) Size and Growth of population b) Sex Structure (Recent Issues) c) Age Structure d) Literacy e) Occupational Structure **3. Population Policy in India** a) Evolution of population policy in India. b) Shift in policy focus from population control to family welfare and to women empowerment. c) Education, women's Autonomy and Fertility. d) Population, Health, Poverty and Environment Linkages in India. e) The New population policy. **4. Population Projection and Forecasting Techniques**	• To study the concept of migration • To understand the characteristics of population in India since 1951 • To know the population policy in India • To understand the population projection and forecasting techniques	• Students acquainted with the basic concept of migration • Students familiarized with the characteristics of population in India since 1951 • The evolution of population policy, shift in policy focus and new population policy were familiarized to students • Students came to know the time series analysis and

a) Measurement of Growth Rates : Simple and Compound growth Rate b) Time Series Analysis c) Forecasting		forecasting techniques which are used for population analysis

Name of the Course: B.A.III (Paper: Micro Economics) (Paper No. VII) (Sem.V)

Syllabus	Objectives	Outcome
Module 1 : Introduction Definition, Nature and scope of Economics Micro & Macro Economics: Meaning and Difference Choice as Economic problem, Basic Economic Problems Basic Assumptions of Economic Analysis **Module 2 : Consumer's Behavior** Concept of Utility: Meaning, Total and Marginal Utility, Cardinal utility analysis – Law of diminishing marginal utility, Law of equi-marginal utility Concept of consumer's surplus, Defects of Cardinal utility analysis Law of demand, Elasticity of demand - Types, measurement and importance. Ordinal utility analysis – Meaning and Properties of Indifference curve, indifference curve and consumer's equilibrium. **Module 3 : Theory of production and cost** Law of Supply Concept of Production function Law of variable proportions and Law of returns to scale Economies of scale, Concepts of cost and cost curves (MC/AC/TC), Concepts of Revenue (MR/AR/TR)	• As a foundation course, in this paper, student is expected to understand the behavior of an economic agent, namely a consumer, a producer, a factor owner and the price fluctuation ina market. • The approach of this paper is to study the behavior of a unit and analyze it in general, static and partial equilibrium framework. • To study ordinal and cardinal utility analysis	• Students identified the nature and scope of economics. • The students recognized basic economic problems and assumptions. • The students realized the cardinal and ordinal utility analysis. • Students understood the production function and various production function theories.

Name of the Course: B.A.III (Paper: Micro Economics) (Paper No. XII) (Sem.VI)

Syllabus	Objectives	Outcome
Module 1 : Market Structure Perfect competition - characteristics and price determination Monopoly - Characteristics, price determination - concept and	• To introduce various types of the markets. • To understand the process of price determination under	• The students understood various types of markets and their characteristics

types of price discrimination Characteristics of monopolistic competition - selling cost and product differentiation Concept of monopsony and bi-lateral monopoly **Module 2 : Factor Pricing** Marginal productivity theory of distribution, Demand and supply theory of wage determination, Causes of wage differentials Rent : Ricardian and Modern theory of Rent Interest : Classical and Keynesian theory of interest Profit : Risk, Uncertainty and Innovation theory of profit **Module 3 : Welfare Economics** Welfare Economics: Meaning and Scope Problems in measuring Economic welfare Classical welfare Economics Compensation principle	various market conditions • To study the basics of welfare economics	• The students got the knowledge of the price determination process • The problems involved in the measurement of the welfare are recognized by the students.

Name of the Course: B.A.III (Paper: Macro Economics) (Paper No. VIII) (Sem.V)

Syllabus	**Objectives**	**Outcome**
Module 1 : Macro Economics Meaning of Macro Economics Nature and Scope of Macro Economics Importance of Macro Economics Limitations of Macro Economics **Module 2 : National Income** Meaning and Different concepts of National Income, concept of circular flow of National Income Measurement of National Income Hurdles in measurement of National Income Importance of National Income Data **Module 3 : Output and Employment** Say's law of market Keynesian objection to the classical theory Outline of Keynesian theory of employment Consumption function, Average and Marginal Propensity to Consume, Keynesian Psychological Law of Consumption. Page **8** of **22** **Module 4: Demand and Supply of Money** Classical approach to demand for money, Quantity Theory and Cash balance approach Keynes' Liquidity Preference Approach Components of money supply, factors affecting money supply Control of money supply	• To introduce the concept of macro economics • To introduce to the concept of National income. • To introduce the keynsian economics i.e. consumption function, psychological law of consumption etc.	• Students identified the study of the important of macro economics • The student identified the importance of the concept of national income & also identified the measurement of national income etc. • Student identified the concept of consumption function, psychological law of consumption etc. • Students identified the concept of demand and supply of money.

Name of the Course: B.A.III (Paper: Macro Economics) (Paper No. XIII) (Sem.VI)

Syllabus	Objectives	Outcome
Module 1 : Trade Cycles Nature, phases and characteristics of trade cycle Hawtrey's monetary theory of trade cycle Schumpeter's theory of trade cycle. Control of trade cycle **Module 2 : Economic Growth** Meaning and indicators of Economic growth Sources of growth Growth models: Harrod -Domar model Neo – classical growth model of Solow **Module 3 : International Trade** Internal and international trade International trade as an engine of Economic growth Concepts and components of balance of trade & balance of payments Recardian theory of international trade **Module 4: Inflation** Meaning and Causes of inflation Effects of inflation Inflation and Economic Development Phillips Curve	• To introduce the concept of trade cycles. • To introduce the various growth models of economic development. • To introduce the importance of international trade. • To introduce the concept of inflation.	• Students identified the concept of trade cycle & its various causes. • Student knows the importance of international trade in economic development. • Student knows the various causes & effects of inflation and also understand the various measures the controls of inflation.

Name of the Course: B.A.III (Paper: History of Economic Thought) (Paper No. IX) (Sem.V)

Syllabus	Objectives	Outcome
Module 1 : Early Period Mercantilism - Main characteristics of mercantilism Causes of rise of mercantilism Physiocracy - natural order, primacy of agriculture, social classes Causes of rise of physiocracy **Module 2 : Economic Contributions** Adam Smith - naturalism and optimism, division of labour, theory of value, capital accumulation, distribution, views on trade David Ricardo – theory of value, theory of distribution, Thomas R. Malthus – theory of gluts J. B. Say: Say's Law of Market **Module 3: Friedrich List and Karl Marx** Friedrich List: Criticism on classical ideas, Theory of Economic Nationalism Theory of Protectionism, Characteristics of the	• To introduce the various economic ideas i.e. mercantilism physiocracy, classical, nationalist, socialist & early marginalists.	• Students identified how to develop the various economics ideas in various period.

policy of protection Karl Marx: Concept of scientific socialism, Dynamics of social change, Theory of value Surplus value, profit and crisis of capitalism **Module 4: Marginalists** Contributions of marginalists William Jevons Bohm Bawark Carl Menger		

Name of the Course: B.A.III (Paper: History of Economic Thought)
(Paper No. XIV) (Sem.VI)

Syllabus	**Objectives**	**Outcome**
Module 1: Alfred Marshall 1.1 Marshall as a great synthesizer Marshall's views on utility, production and distribution Marshall's theory of value. Role of Time element Marshall's views on Marginal Utility and Demand, Internal Economies and External Economies **Module 2: Keynesian Ideas** Keynesian theory of employment Effective demand Role of fiscal policy Deficit spending and public works **Module 3: Joseph Schumpeter** Process of capitalist development Thoughts on business cycle Destruction of capitalism Innovation theory of profit **Module 4: Indian Economic Thought** Kautilya: Role of government in economy, government revenue and expenditure Economic ideas of Mahatma Gandhi - village industry, use of machinery, swadeshi movement Economic ideas of Dr. Babasaheb Ambedkar- state socialism, Problem of rupee Economic ideas of Amartya Sen- social choice and capability, poverty.	• Students the identified the Neo-Classical economic ideas of Marshall, Keynes and Schumpeter • To introduced the various economic ideas of Dr.Marshall, Keynse & Schumpeter • Introduced various economic ideas of Indian economist i.e. Kautilya, Mahatma Gandhi & Dr.Babasaheb Ambedkar & Amartya Sen.	• Students Introduced the economic ideas of Dr.Marshall, Keynse & Schumpeter.

Name of the Course: B.A.III (Paper: Economics of Development)
(Paper No. X) (Sem.V)

Syllabus	**Objectives**	**Outcome**

Module 1: Economic Growth and Development Concept of economic growth and development Meaning of underdevelopment Characteristics of underdeveloped countries Obstacles to economic development **Module 2: Theories of Economic Development** Adam Smith and Recardian theory Big push theory of development W. W. Rostow's stages of economic growth Arthur Lewis : Unlimited Supply of Labour **Module 3: Sectoral View of Development** Role of agriculture in economic development, New technology and Sustainable agriculture Impact of Globalization on agricultural growth Role of industrialization in economic development Role of Service Sector in economic development **Module 4: Resources for Economic Development** Capital formation and economic development Role of human capital in economic development Institutional structure and economic development Role of state in economic development	• To introduced the concept of economic growth & development. • To introduced the theories of economic development i.e. Adam Smith, Rostow's, Arthur Lewis etc. • Introduced the knows the importance of Agricultural, Industry and Service Section in Economic Development. • Introduced the concept of resources for economic development.	• Students identified the concept of economic growth & development. • Students identified the theories of economic development. • Students identified the importance of Sectoral view of Development. • Students identified the roll of human capital in economic development.

Name of the Course: B.A.III (Paper: Economics of Development)
(Paper No. XV) (Sem.VI)

Syllabus	**Objectives**	**Outcome**
Module 1: Research Methodology Meaning and characteristics of research methodology. Concept- meaning & Types of Concept Hypothesis – meaning, types, tests for useful hypothesis Importance of Hypothesis **Module 2: Stages of Research** Selection of topic and Objectives setting Research Design –meaning and Types Characteristics of good research design Significance of research design **Module 3: Methods of Collecting Information** Data Collection – Primary and Secondary Data Questionnaire and Interview- Meaning and techniques Observations and Case Study – meaning and technique |Sources of Secondary Data **Module 4: Report Writing** Objectives of report writing Steps in report writing	• To introduced the concept of Research Methodology, various stages of research, methods of data collection and report writing.	• Students identified the importance of research and research methodology and also various stages of research. • Students identified primary & secondary data collection questionnaire, interview etc. • Students identified the importance, objectives and various steps of report writing.

Contents of report Characteristics of good report writing		

Name of the Course: B.A.III (Paper: Agricultural Economics) (Paper No. VIII) (Sem.V)

Syllabus	Objectives	Outcome
Module 1 : Rural Economy of India Characteristics of rural economy Place of agriculture in rural economy Diversification of agriculture, agriculture and allied activities Rural industrialization: Role of agro – based industries **Module 2: Land Reforms in India** Problems of Marginal and Small farmers Need for land reforms in India Review of land reforms programme in India Critical evaluation of land reforms programme in India **Module 3 : Development of Agriculture** Agricultural productivity – regional variations, causes of low productivity, remedies Linkages between agricultural and non-agricultural sector Cropping pattern in India-recent trends, factors affecting cropping pattern Irrigation in India- sources and progress **Module 4 : Technological Changes in Agriculture** Traditional and modern Technology in Agriculture Recommendations of National Commission on Farmers (2004) Use of Bio-technology New agricultural technology and employment	• To understand the rural economy of India • To study the concept of diversification of agriculture • To understand the cropping pattern in India • To study the technical changes in the agricultural sector • To study the features of green revolution	• The students were introduced the characteristics of rural economy of India • Students familiarized with concept of agricultural productivity and causes of low agricultural productivity • Students realized the traditional and modern technology in agriculture • Students came to know the factors responsible for the green revolution in India

Name of the Course: B.A.III (Paper: Agricultural Economics) (Paper No. XVI) (Sem.VI)

Syllabus	Objectives	Outcome
Module 1: Agricultural Finance Need for agricultural credit Sources of agricultural credit in India – Institutional and Non-institutional sources Role of NABARD in agricultural finance Problem of rising suicides among farmers **Module 2: Agricultural Marketing** Defects of agricultural marketing and its measures Regulated markets Co-operative marketing	• To understand the need for the agricultural credit • To know the sources of agricultural credit • To understand the defects of agricultural marketing • To study the measures to overcome the problem of defective marketing system	• The students understood the requirement of credit by agricultural sector • Students came to know the institutional and non-institutional sources of agricultural credit

2.4 Warehousing in India **Module 3: Agricultural Prices** Trends in agricultural prices Agricultural price policy in India – objectives and its evaluation Incentives in agriculture: Price and non-price incentives, input subsidies Commission for agricultural costs and prices **Module 4: New Economic policy (1991) and Indian Agriculture** Agricultural development during New Economic Policy regime Effects of New Economic Policy on Indian agriculture W.T.O. and Indian Agriculture Future prospects of Indian agriculture	• To perceive the concept of agricultural prices and to evaluate the agricultural price policy in India • To know the impact of new economic policy on Indian agriculture	• Students realized the problem of rising suicides among farmers • Students understood the agricultural marketing in India • The impact of new economic policy on agricultural sector was studied by the students

Punyashlok Ahilyadevi Holkar Solapur University, Solapur

CHOICE BASED CREDIT SYSTEM

Syllabus For

B.A. Part - I

Geography

SEMESTER I AND II

(Syllabus to be implemented from June, 2019 onwards)

Bachelor of Arts Part – I

GEOGRAPHY

Semester – I Geomorphology

Paper I : Geomorphology

Semester – II Human Geography

Paper II:Human Geography

Optional Subjects under the Faculty of Science.

YEAR OF IMPLEMENTATION: Revised Syllabus will be implemented from **June, 2019** onwards.

PREAMBLE: The Geography students of B. A. Part-I can better understand all latestconcepts inGeomorphology and Human Geography in brief but in adequate manner.

GENERAL OBJECTIVES OF THE PAPER: The objective of this course is to introduce the latest concepts in Geomorphology, Specifically in Rocks, Diastrophic movements, Denudation and land forming processes, Humanraces, Population growth, Composition of Population and Settlements.

DURATION:The course shall be a full time course.

PATTERN: Pattern of Examination will be Semester for Theory.

ELIGIBILITY FOR ADMISSION: As per eligibility criteria prescribed for each course and the merit list inqualifying examination.

MEDIUM OF INSTRUCTION: The medium of instruction shall be in English or Marathi

STRUCTURE OF COURSE:

FIRST YEAR (No. of Papers I & II)

Sr. No.	Subject or Paper	Marks
1	**Geomorphology**	**50**
2	**Human Geography**	**50**

SCHEME OF TEACHING:

The scheme of teaching and examination should be given as applicable to thecourse / paper concerned

Sr. No.	Subject or Paper	Teaching Scheme (Credits / Week)			
		Credits	Theory	Practical	Total
1	Geomorphology	04	04	--	04
2	Human Geography	04	04	--	04

SCHEME OF EXAMINATION:

Question Paper will be set in the view of the / in accordance with the entire syllabus and preferably covering each unit of syllabi of each semester.

STANDARD OF PASSING:

As per Prescribed rules and regulation for each degree / programme.

Course Structure for B. A.- I Geography Programme

Sr. No.	Semester	Name of the Course
1	Semester- I	Geomorphology
2	Semester- II	Human Geography

B.A.-I Geography
EQUIVALENCE

Sr. No.	B.A.	Semester	Old Title	P. No.	New Title
1	B.A. I	I	Geomorphology	I	Geomorphology
2	B.A. I	II	Climatology	II	Human Geography

B. A. Part – I Semester I

(w.e.f. June, 2019)

DSC- Geomorphology

Marks:50 Credits: 04

Unit Number	Title of the Unit	No. of Lecture	No. of Credits
1	**Introduction to Geomorphology** 1.1 Meaning and Definition 1.2 Nature and scope of Geomorphology 1.3 Importance of Geomorphology	15	1
2	**Earth and Earth Movements** 2.1 Interior Structure of the earth 2.2 Rocks: Types and characteristics 2.3 Plate tectonic theory 2.4 Endogenic forces: Folding and Faulting, Earthquakes and Volcanoes.	15	1
3	**Geomorphic Processes** 3.1 Weathering: Meaning and Types 3.2 Mass Wasting 3.3Cycle of Erosion by W.M. Davis	15	1
4	**Evolution of Landforms (Erosional and Depositional)**4.1 Fluvial 4.2Aeolian 4.3Glacial 4.4Coastal	15	1

Reference:

1. Clyton K., (1986), Earth Crust, AdusBook , London.
2. Davis W. M., (1909), Geographical Essay, Ginnia Co.
3. Dayal P., (1996), Text Book of Geomorphology, Shukla Book Depot, Patna.
4. Kale V.S. and Gupta A., (2001), Elements of Geomorphology, Oxford University Press, Kolkata.
5. Kale V.S. and Gupta A., (2001), Elements of Geomorphology, Oxford Univ. Press.

6. Monkhouse, (1951), Principle of Physical Geography, McGraw Hill Pub – New York.
7. Pitty A. F., (1974), Introduction to Geomorphology, Methuen London.
8. Singh Savindra, (2000), Physical Geography,PrayagPustakBhavan, 20-A, University Road,Allahabad – 211002.
9. Wooldridge S. W. and Morgan R. S., (1959), The Physical Basis of Geography and Outlineof Geomorphology, Longman Green and Co. London.

१०.सवदीए.बी. वकोळेकरपी. एस., प्राकृतिकभूगोल, निरालीप्रकाशन, पुणे

११.दातेवसौ. दाते, प्राकृतिकभूगोल

१२.प्रकाशसावंत, भूरूपशास्त्र

१३.खतीबके.ए.भूरूप शास्त्र , संजोगप्रकाशनकोल्हापूर

B. A. Part – I Semester II

(w.e.f. June, 2019)

DSC- Human Geography

Marks:50 Credits: 04

Unit Number	Title of the Unit	No. of Lecture	No. of Credits
1	**Introduction to Human Geography** 1.1 Meaning and Definition. 1.2 Nature andScope. 1.3 Branches of Human Geography 1.4 Importance of Human Geography	15	1
2	**Human Race** 2.1 Definition and concept 2.2 Basis of racial classification 2.3 Racial Classification of Griffith Taylor 2.4 Religious and Language Groups in the World.	15	1
3	**Population** 3.1 Growth of Population. 3.2 Factors Affecting the Distribution of the World Population. 3.3 Distribution of the World Population. 3.4 Demographic Transition Theory. 3.5 Age and Sex composition	15	1
4	**Human Settlements** 4.1 Rural Settlements: Types, Pattern and functions. 4.2 Urban Settlements: Functional classification. 4.3 Urbanization and World Trend of Urbanization. 4.4Problems of urban settlement	15	1

References:

- Chandna, R.C. (2010) Population Geography, Kalyani Publisher.
- Hassan, M.I. (2005) Population Geography, Rawat Publications, Jaipur

- Johnston R; Gregory D, Pratt G. et al. (2008) TheDictionary of Human Geography,Blackwell Publication.
- Singh, R.Y. : Geography of Settlement, 1998
- Chandana R.C. 1988 : Geography of Population, Kalyani Pub. Ludhayana
- Hussin M. : Human Geography 1994
- Money D.S. : Human Geography
- Perpillou A.V. : Human Geography, Longman, London- 1986
- Robinson H. : Human Geography, 1976
- खतीबके.ए.मानवीभूगोल, संजोगप्रकाशनकोल्हापूर
- सवदीए.बी. वकोळेकरपी. एस., मानवीभूगोल, निरालीप्रकाशन, पुणे

PUNYASHLOK AHILYADEVI HOLKAR SOLAPUR UNIVERSITY, SOLAPUR

पुण्यश्लोक अहिल्यादेवी होळकर
सोलापूर विद्यापीठ
।। विद्यया संपन्नता ।।
NAAC Accredited - 2015
'B' Grade (CGPA - 2.62)

Name of the Faculty: Humanities (Social Sciences)

CHOICE BASED CREDIT SYSTEM

Syllabus: Geography

Name of the Course: B. A. Part-II (Semester - III&IV)

(Syllabus to be implemented from June, 2020)

B. A. II (Sem. III & IV) Geography

CBCS Pattern Syllabus

w.e.f. June- 2020

Punyashlok Ahilyadevi Holkar Solapur University, Solapur

Choice Based Credit System (CBCS)

Subject – Geography (Optional)

Course Structure

Paper No	Name of the Course	Category	Per Week			Total Marks	UA	CA	Credit
			L	T	P				
	B. A. II Semester - III								
III	Climatology	C 3	4	-	-	50	40	10	4
IV	Geography of India	C4	4	-	-	50	40	10	4
	Introduction to Tourism Geography		4	-	-	50	40	10	4
	Resource Geography of Maharashtra - I		4	-	-	50	40	10	4
	B. A. II Semester - IV								
V	Economic Geography	C 5	4	-	-	50	40	10	4
VI	Environmental Geography	C6	4	-	-	50	40	10	4
	Tourism In India		4	-	-	50	40	10	4
	Resource Geography of Maharashtra - II		4	-	-	50	40	10	4

Punyashlok Ahilyadevi Holkar Solapur University, Solapur

B. A II Semester III

Subject – Geography

Paper No.-III (Geography C3)

Title of the Paper- Climatology

Total Lectures: 60

Objectives:

- To make the students familiar with new terms and concept ofclimatology.
- To know the constituents of atmosphere and its dynamic nature
- To know the contribution of atmosphere in the making of earth habitable.

Unit I:Atmospheric Composition and Structure 15

1.1 Climatology- Meaning and Definition

1.2 Elements of Weather and climate

1.3 Atmospheric Composition

1.4 Atmospheric Structure

Unit II:Insolation and Temperature15

2.1 Factors affecting on Insolation

2.2 Distribution of Insolation

2.3 Heat Budget

2.4 Temperature- Factors, Distribution and Inversion

Unit III: Atmospheric Pressure and Winds15

3.1 Atmospheric Pressure Belts

3.2 Planetary Winds

3.3 Forces affecting Winds

3.4 Jet Stream

Unit IV:Atmospheric Moisture and Cyclone15

4.1 Concept of Evaporation and Condensation

4.2 Types of Humidityand Precipitation

4.3 Climatic Regions(Koppen's)

4.4 Tropical Cyclones

4.5 Monsoon - Origin andMechanism

References:

1. Barry R. G. and Carleton A. M., 2001: *Synoptic and Dynamic Climatology*, Routledge,UK.
2. Barry R. G. and Corley R. J., 1998: *Atmosphere, Weather and Climate*, Routledge, NewYork.
3. Critchfield H. J., 1987: *General Climatology*, Prentice-Hall of India, NewDelhi
4. LutgensF.K.,TarbuckE.J.andTasaD.,2009:*TheAtmosphere:AnIntroductiontoMet eorology*, Prentice-Hall, Englewood Cliffs, NewJersey.
5. Oliver J. E. and Hidore J. J., 2002: *Climatology: An Atmospheric Science*, Pearson Education, New Delhi.
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7. Gupta L S(2000): JalvayuVigyan, Hindi MadhyamKaryanvayNidishalya, Delhi VishwaVidhyalaya, Delhi
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10. Singh, S (2009): JalvayuVigyan, PrayagPustakBhawan,Allahabad
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Punyashlok Ahilyadevi Holkar Solapur University, Solapur

B. A. II Semester III

Subject – Geography

Paper No.-IV (GeographyC4)

Title of the Paper- Geography of India

Total Lectures:60

Objectives:

- To synthesize students with various facts of India viz. Physiography, Climate, Soil, Vegetation and Resources
- To synthesize students with various facts of India viz. Agriculture, Industries, Population, Social and Regionalization of India

Unit I:Physical Set-up 15

1.1 Location and Physiographic divisionof India

1.2 General climatic regions

1.3 Types of Soil

1.4 Types of Natural Vegetation

Unit II: Population 15

2.1 Growth of Population

2.2 Distribution of Population

2.3 Structure of Population- Age and Sex composition

Unit III: Resources and EconomicActivities 15

3.1 Mineral Resources: distribution and production- Iron ore and Manganese

3.2 Power Resources: distribution and production- Coal and Petroleum

3.3 Agriculture production and distribution - Rice and Wheat

3.4 Industrial development - Automobile and InformationTechnology

Unit IV: Social and Regionalization of India 15

4.1 Distribution of Population by- Religion, Caste, Language and Tribes

4.2Regionalization of India- Physiographic (R. L. Singh) and Economic (Sengupta)

References:

1. Deshpande C. D., 1992: *India: A Regional Interpretation*, ICSSR, NewDelhi.
2. Johnson, B. L. C., ed. 2001. *Geographical Dictionary of India*. Vision Books, NewDelhi.
3. Mandal R. B. (ed.), 1990: *Patterns of Regional Geography – An Intenational Perspective. Vol. 3 – IndianPerspective*.
4. Sdyasuk Galina and P Sengupta (1967): *Economic Regionalisation of India*, Census ofIndia
5. Sharma, T. C. 2003: India - Economic and Commercial Geography. Vikas Publ., NewDelhi.
6. Singh R. L., 1971: *India: A Regional Geography*, National Geographical Society ofIndia.
7. Singh, Jagdish 2003: *India - A Comprehensive & Systematic Geography*, GyanodayaPrakashan, Gorakhpur.
8. Spate O. H. K. and Learmonth A. T. A., 1967: *India and Pakistan: A General and Regional Geography*,Methuen.
9. Tirtha, Ranjit 2002: *Geography of India*, RawatPubls., Jaipur & NewDelhi.
10. Pathak, C. R. 2003: *Spatial Structure and Processes of Development in India*. Regional Science Assoc., Kolkata.
11. Tiwari, R.C. (2007) Geography of India. PrayagPustakBhawan,Allahabad
12. Sharma, T.C. (2013) Economic Geography of India. Rawat Publication,Jaipur

Punyashlok Ahilyadevi Holkar Solapur University, Solapur

B. A. II Semester IV

Subject – Geography

Paper No- V (GeographyC5)

Title of the Paper- Economic Geography

Total Lectures: 60

Objectives:

- To acquaint the students with economic activities i.e. Agriculture, Manufacturing,Transport, Trade andServices.
- To acquaint the students with economic activity models.

Unit I:Introductionof Economic Geography and Economic Activity 15

1.1 Definition of Economic Geography

1.2 Classification of Economic Activity

1.2Factors Affecting location of Economic Activity

1.3 Agriculture Landuse Model- Von Thunen

1.4 Industrial Location Theory- Alfred Weber

Unit II: Primary Activities 15

2.1 Subsistence and Commercial Agriculture

2.2 Forestry

2.3 Fishing andMining

Unit III: Secondary Activities 15

3.1 Manufacturing- Cotton Textile and Iron and Steel

3.2 Concept of Manufacturing Regions

3.3 Special Economic Zones and TechnologyParks

Unit IV: Tertiary Activities 15

4.1 Transportation

4.2 Trade andServices

Reference:

1. Alexander J. W., 1963: *Economic Geography*, Prentice-Hall Inc., Englewood Cliffs, NewJersey.
2. Coe N. M., Kelly P. F. and Yeung H. W., 2007: *Economic Geography: A Contemporary Introduction*, Wiley-Blackwell.
3. Hodder B. W. and Lee Roger, 1974: *Economic Geography*, Taylor andFrancis.
4. Combes P., Mayer T. and Thisse J. F., 2008: *Economic Geography: The Integration of Regions and Nations*, Princeton UniversityPress.
5. Wheeler J. O., 1998: *Economic Geography*,Wiley..
6. Durand L., 1961: *Economic Geography*,Crowell.
7. Bagchi-Sen S. and Smith H. L., 2006: *Economic Geography: Past, Present and Future*, Taylor and Francis.
8. Willington D. E., 2008: *Economic Geography*, HusbandPress.
9. Clark, Gordon L.; Feldman, M.P. and Gertler, M.S., eds. 2000: The*Oxford*

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B. A. II Semester IV

Subject – Geography

Paper No- VI (Geography C 6)

Title of the Paper- Environmental Geography

Total Lectures: 60

Objectives:

- To acquaint students with concept of environmental geography.
- To study the relation between human and environment.
- To introduce thestudents with environmental problems, programmes and policies.

Unit I: Introduction15

1.1 Definitionof Environmental Geography

1.2 Nature of Environmental Geography

1.3 Scope of Environmental Geography

1.4 Importance of Environmental Geography

Unit II: Human and Environment Relationships 15

2.1 Historical Progression

2.2 Adaptation in differentBiomes

Unit III: Ecosystem 15

3.1 Concept of Ecosystem

3.2 Structure of Ecosystem

3.3 Functions of Ecosystem

Unit IV: Environmental Problems, Programmes and Policies 15

4.1 Environmental Problems –Tropical, Temperate and PolarEcosystems

4.2 Environmental Programmes and Policies– Global,National and Locallevels

References:

1. Chandna R. C., 2002: *Environmental Geography*, Kalyani,Ludhiana.
2. Cunninghum W. P. and Cunninghum M. A., 2004: *Principals of EnvironmentalScience: Inquiry and Applications*, Tata Macgraw Hill, NewDelhi.
3. Goudie A., 2001: *The Nature of the Environment*, Blackwell,Oxford.
4. Singh, R.B. (Eds.) (2009) Biogeography and Biodiversity. Rawat Publication,Jaipur
5. Miller G. T., 2004: *Environmental Science: Working with the Earth,*

Thomson BrooksCole, Singapore.

6. MoEF, 2006: *National Environmental Policy-2006*, Ministry of Environment andForests, Government of India.
7. Singh, R.B. and Hietala, R. (Eds.) (2014) Livelihood security in Northwestern Himalaya: Case studies from changing socio-economic environments in Himachal Pradesh, India. Advances in Geographical and Environmental Studies,Springer
8. Odum, E. P. et al, 2005: *Fundamentals of Ecology*, Ceneage LearningIndia.
9. Singh S., 1997: *Environmental Geography*, PrayagPustakBhawan.Allahabad.
10. UNEP, 2007: *Global Environment Outlook: GEO4: Environment For Development*, United Nations EnvironmentProgramme.
11. Singh, M., Singh, R.B. and Hassan, M.I. (Eds.) (2014) Climate change and biodiversity: Proceedings of IGU Rohtak Conference, Volume 1. Advances in Geographical and Environmental Studies,Springer
12. Singh, R.B. (1998) Ecological Techniques and Approaches to Vulnerable Environment, New Delhi, Oxford & IBHPub..
13. Singh, Savindra 2001. *ParyavaranBhugol*, PrayagPustakBhawan, Allahabad. (inHindi)

Punyashlok Ahilyadevi Holkar Solapur University, Solapur

B. A. II Semester III

Subject – Geography

I.D.S. (Generic Elective I**)**

Title of the Paper- Resource Geography of Maharashtra–I

Total Lectures: 60

Objectives:

1) To understand the regional approach of Maharashtra State in geographical sence
2) To examine use and misuse of various resource in Maharashtra and to analyze future prospects
3)To study various methods and approaches of conservation and management of Natural resources in Maharashtra.
4) To understand the concept of sustainable and integrated resource and is application.

Unit I: Introduction **15**

1.1 Location of Maharashtra

1.2 Physiography

1.3 Climate

1.4 Drainage Pattern

Unit II :Resources **15**

2.1 Definition and Classification of resources

2.2 Conservation and sustainable development of resources

2.3 Role of resources in regional development

Unit III :Mineral and power resources in Maharashtra **15**

Importance, Distribution and Production of

3.1 Manganese

3.2 Coal

3.3 Conventional Power Resources: Oil, Natural Gas, Hydroelectricity & Thermal power

3.4 Non- conventional Power Resource – Solar and Wind

Unit IV :Water and Soil Resources in Maharashtra **15**

4.1 Sources of irrigation and distribution

4.2 Water Management

4.3 Major soil types and their distribution

4.4 Need of conservation and sustainable development of soil resources.

References:

1. B. Arunchalm, Regional Geography of Maharashtra

2. B.D. Nag Choudhary, “Inhoduction to Enviroment Management” Inter PrindMehata House, New Delhi.

3. Brucu Mitchell “Geography and resources analysis” John willey and sons, New York.

4. C.D. Deshpande, “Geography of Maharashtra” National book Trust of India, New Delhi.

5. Cutler L, Renwick H.L. Exploitation conservation and preservation : A Geographical perspective and natural resource use, Rowmon and Allanhed, Towata.

6. Govt. of Maharashtra “Economic development of Maharashtra.” (Maharashtra Economic Development Council)

7. Karve “Maharashtra – Land and People

8. Dixit K.R., “Maharashtra in Maps”

9. Matthews O.P., “Water resources Geopgraphy and Laow, Scientific Publishers, Jodhapur.

10. Deshpande, S.H. “Economy of Maharashtra”

Punyashlok Ahilyadevi Holkar Solapur University, Solapur

B. A. II Semester IV

Subject – Geography

I.D.S. (Generic Elective II**)**

Title of the Paper- Resource Geography of Maharashtra - II

Total Lectures: 60

Objectives:

1) To understand the regional approach of Maharashtra State in geographical sence
2) To examine use and misuse of various resource in Maharashtra and to analyze future prospects
3)To study various methods and approaches of conservation and management of Natural resources in Maharashtra.
4) To understand the concept of sustainable and integrated resource and is application.

Unit I :Forest Resources in Maharashtra **15**

1.1 Importance of forest resources

1.2 Types and Distribution of forest

1.3 Deforestation causes and effects

1.4 Conservation of forest resource

Unit II: Animal Husbandry and Fisheries in Maharashtra **15**

2.1 Types of animals and their distribution

2.2 Animals production (milk, meet, skin, hide, wool, eggs)

2.3 Conservation of Animals

2.4 Types of fisheries and their distribution

2.5 Conservation of fisheries

Unit III: Human resource in Maharashtra **15**

3.1 Man as a resource

3.2 Growth of population

3.3 Distribution of population

3.4 Composition of population

3.5 Population pressure on resources in Maharashtra

Unit IV: Practical (Theory only) **15**

Resource survey

4.1 Water

4.2 Soil

4.3 Population

4.4 Animal

References:

1. B. Arunchalm, Regional Geography of Maharashtra

2. B.D. Nag Chaudhary, “Induction to Environment Management” Inter PrintMehata House, New Delhi.

3. Brucu Mitchell “Geography and resources analysis” John willey and sons, New York.

4. C.D. Deshpande, “Geography of Maharashtra” National book Trust of India, New Delhi.

5. Cutler L, Renwick H.L. Exploitation conservation and preservation : A Geographical perspective and natural resource use, Rowmon and Allanhed, Towata.

6. Govt. of Maharashtra “Economic development of Maharashtra.” (Maharashtra Economic Development Council)

7. Karve “Maharashtra – Land and People

8. Dixit K.R., “Maharashtra in Maps”

9. Matthews O.P., “Water resources Geography and Laow, Scientific Publishers, Jodhapur.

10. Deshpande, S.H. “Economy of Maharashtra”

Punyashlok Ahilyadevi Holkar Solapur University, Solapur

B. A. II Semester III

Subject – Geography

I.D.S. (Generic Elective I**)**

Title of the Paper- Introduction to Tourism Geography

Total Lectures: 60

Objectives:

1. **To acquaint the student with basic concept of Tourism Geography.**
2. **To understand the factor affecting the Tourism Geography.**
3. **To familiarize the classification, marketing, infrastructure & impact of Tourism**

Unit I: Introduction to Tourism Geography

1.1 Definition, Nature and Scope of tourism geography

1.2 Importance of tourism geography

1.3 Recent Trends in tourism geography : Ecotourism , Agro Tourism

Unit II. Factors Affecting on tourism Development

2.1 Physical Factors: Relief, Climate , Vegetation Wild Life, water Bodies

2.2 Socio Cultural Factors : Religion, Historical , Cultural and Sports

2.3 Economical Factors : Transportation, Industry , Hotel And Accommodation

Unit III. Classification of Tourism and tourism Marketing

3.1 Classification Of Tourism Based On:

Nationality: International, Domestic

Time:Long Term, Short Term, Holiday Tourism, Day Trippers

Distance:Global, Continental, Regional, and Local

Number of Tourist – Groups, Individual

Mode of Transportation – Road,Railway, Air Way And Water Way

Purpose of Travels – Recreation, Realigns, Health, Sport

3.2 Marketing of Tourism:Tourism product and services, Characteristics of Tourism Marketing.

3.3 Function of Tourism marketing:Marketing Research, Advertisement, and Sale Support PublicRelation, Tourism Publication

Unit IV

(A) Infrastructure and support service

4.1 Transportation Mode - Road , Railway , Air Way And Water Way

4.2 Agencies and guides

4.3 Accommodation type – Hotel, Motels, Dharmashala, Government Accommodation, tourist Houses, Youth Hostel, Tent, house Boat, Private Accommodation, Resort

(B)Impact of Tourism

1. Impact On Physical Environment : Air And Water Pollution, Solid Waste And Its Littering, Loss Of Bio- Diversity
2. Impact On Economy: Growth Of Economy, Employment Generation, Infrastructure Development
3. Impact On Social Environment: Crime, Cultural encroachment

References:

1	International Tourism	A.K. Bhatia
2	Tourism Development	A.K. Bhatia
3	India- A Tourism Paradise	Dev. Manoj
4	Development of Tourism and Travel Industry	DharPremnath
5	Tourism Development and Resource Conservation	NegiJagmohan
6	Tourism Development	Pearce Dongas
7	Geography of Tourism	Robinson R.
8	Tourism Marketing	Sharma K. C.
9	Geography Of Tourism and Recreation	ShetPran
10	Infrastruction of Indian Tourism	Sings Ratandeep
11	Introduction to Tourism	Dr. Nayab Z. A.

Punyashlok Ahilyadevi Holkar Solapur University, Solapur

B. A. II Semester IV

Subject – Geography

I.D.S.(Generic Elective II**)**

Title of the Paper: Tourism in India

Total Lectures: 60

Objectives:

1. To acquaint the student with basic concept of Tourism development in India.
2. To familiarize the student about Geographical, Historical, Religious and cultural Tourist Places in India.
3. To prepare the students for the Tourism planning.

Unit I: Tourism Development in India:

1.1 Historical Background

1.2 Development after Second World War

1.3 Role of Tourism in National Economy

Unit II : Geographical and Historical Places in India

2.1 **Geographical Tourist Places:-**Hill Stations, Sanctuaries and National parks, Lakes & Beaches

2.2 **Historical Places:-**Fort cities, Capital Cities

Unit III : Planning of Tourism

3.1 Concept of Tourism Planning

3.2 National Planning

3.3 Regional Planning

3.4 Local Planning

3.5 Problems of Tourism Planning

Unit IV: A) Religious and culturalTourist places in India:

4.1 Hindu Religious centers

4.2 other Religious centers

4.3 Cultural centres

B) Tourist places in Solapur District:

Religious, Historical.

Major fairs (Yatra andPandharpurwari)

References:

Sr. No.	Name of the Book	Name of the Author
1	Tourism Development	A. K. Bhatia
2	India- A Tourism Paradise	Dev. Manoj
3	Development of Tourism and Travel Industry	DharPramnath
4	Tourism in India	Gupta V.N.
5	Tourism development and Resource Conservation	NegiJagmohan
6	Tourism Development	Pearce Dongas
7	Geography of Tourism	Robinson R.
8	Tourism Policy, planning strategy	Sharma K.C.
9	Enllessful Tourism management	Shetpran
10	Principal of Indian Tourism	Singh shawni
11	Geography of Tourism and Recreation	Singh S.N.
12	Tourism Today Vol.-I	Singh Ratandeep
13	ParyatanBhugol	Shinde S.B.
14	ParyatanBhugol	Gharpure V.T.
15	Tourism in India	Dr. Nayab Z.A.

Punyashlok Ahilyadevi Holkar Solapur University, Solapur

पुण्यश्लोक अहिल्यादेवी होळकर
सोलापूर विद्यापीठ
।। विद्यया संपन्नता ।।

NAAC Accredited-2015
'B' Grade (CGPA 2.62)

Name of the Faculty: Science & Technology

CHOICE BASED CREDIT SYSTEM

Syllabus: Geography

Name of the Course: B. A. /B. Sc. Part- III (Sem. V & VI)

(Syllabus to be implemented from w.e.f. June 2021)

PunyashlokAhilyadeviHolkar Solapur University, Solapur
Choice Based Credit System (CBCS) (w.e.f. June 2021)
Revised Structure for B.A. III

Sr. No.	Code	Paper No	Name of the paper	CA	UA	Total Marks	Lectures / week	Credit
Semester V								
1	DSC 7	VII	Regional Planning and Development	10	40	50	04	04
Select Any One								
2	DSE 1A	VIII	Urban Geography	10	40	50	04	04
3	DSE 1B	VIII	Agriculture Geography	10	40	50	04	04
Select Any One								
4	DSE 2A	IX	Resource Geography	10	40	50	04	04
5	DSE 2B	IX	Population Geography	10	40	50	04	04
Semester VI								
6	DSC 8	X	Evaluation of Geographical Thought	10	40	50	04	04
Select Any One								
7	DSE 3A	XI	Geography of Health and Well being	10	40	50	04	04
8	DSE 3B	XI	Political Geography	10	40	50	04	04
Select Any One								
9	DSE 4A	XII	Hydrology and Oceanography	10	40	50	04	04
10	DSE 4B	XII	Social Geography	10	40	50	04	04
Annual								
11	DSC 9	Practical P. I	Map Making and Map Interpretation	20	80	100	10	08
12	DSC 10	Practical P. II	Advanced Tools, Techniques (Computer, Remote Sensing, GIS, GPS) & Field Work	20	80	100	10	08
Select Any One Short Term Course								
1	SEC 1	-	A Certificate Course in Land Survey	10	40	50		04
2	SEC 2	-	A Certificate Course Travel and Tourism	10	40	50		04
3	SEC3	-	A Certificate Course in QGIS	10	40	50		04

PUNYASHLOK AHILYADEVI HOLKAR SOLAPUR UNIVERSITY, SOLAPUR

Bachelor of Arts (B. A.)

B. A. Part - III

Regional Planning and Development

Syllabus to be implemented from June 2021 onwards

1. **Title :** Regional Planning and Development
2. **Year of Implementation :**Revised Syllabi will be implemented from June 2021 onwards.
3. **Preamble**: Regional Planning is the need of time to everyone. Geography subject can lead to the development of human activities through regional planning. In the process of development of geography, the changing nature of subject will make aware to the students about the recent technologies used in geography. This will further help to improve the use of geographical techniques and methods in teaching, learning and research work through regional planning.
4. **Objectives:**
   - To Familiarize the student with the types of region and types of Regional Planning and Delineation of planning region.
   - To Familiarize the student with the theory and models of regional planning
   - To get familiar with indicators of measurement of development.
5. **Course Outcomes:**

   After the completion of course, the students will have ability to:
   - The students were known the importance of regional planning.
   - The students understood the concepts of region, regionalization, regional planning & development and detailed knowledge of region.
   - The students were familiar with indicators of measurement of development.
   - Detail understanding of Growth Pole Model, Center place Theory and Growth Foci Model in Indian context.

6. **Pattern of Exam:** Semester

7. **Scheme of Teaching & Examination**

Sr. No.	Subjects/Papers	Teaching Scheme Hrs./Week				Examination scheme (Marks)		
		L	T	P	Total	Theory	Term work	Total
1	Regional Planning and Development	04	04	--	04	40	10	50

8. Equivalence in accordance with titles and contents of papers (For revised papers)

Sr. No.	Title of Old Paper	Old paper No.	Title of New paper	New Paper No.
1.	**Resource Geography**	**VII**	**Regional Planning and Development**	**DSC 7 OR VII**

NEW/REVISED SYLLABUS FOR
B. A. Part-III Geography
(Introduced from June 2021 onwards)
Semester – V

i. **DSC 7 OR Paper No. VII**
ii. Title of Paper: **Regional Planning and Development**

Unit I: Region and Regional Planning **15**

1.1. Concept of Region

1.2. Types of Region : (Formal and Functional)

1.3. Need of Regional Planning

1.4. Types of Regional Planning

Unit II. Delineation of Planning Region **15**

2.1. Choice of Region for Planning

2.2. Characteristics of Ideal Planning Region

2.3. Delineation of Planning Region

2.4. Planning Regions of India

Unit III. Theories and Models for Regional Planning **15**

3.1. Growth Pole Model of Perroux

3.2. Centre Place Theory of Walter Christaller

Unit IV.Measuring of Development. **15**

4.1. Indicators of Economic Development

4.2. Indicators of Social Development

4.3. Indicators of Environmental Development

4.4 Human Development index

References:

- Blij H.J. (Dec.1971):,Geography: Regional and Concept, Johan Wiley and Sons.
- Cloud P.I. (1998), An Introduction to Regional Geography, BlackWell Publication, Oxford and Massachusettes.
- Friedemann J.&Alonson W.(1964): Regional Development and Planning, MIT Press, Cambridge.
- Gore C.G. (1984): Regions in Question: Space Development Theory and Regional Policy, Methuen London.
- Gore C.G., Kohler G., Rich U.P. &Ziesemer T. (1996) :Quetioning Development, Essay on the Theory, Policies and Practice of Development Intervetion, Motropolis-Verlaje, Marburg.
- Peet R. (1999) :Theories of Development, Guilford Press, New York.
- Alden J. & Morgan (1974) :Regional Planning A Comprehensive view, Leonard Hill Books.
- Chand M. &Puri V. (1983): Regional Planning in India, Allied Publisher Ltd., New Delhi.
- Chandana R.C. (2000): Regional Planning & Development, Kalyani Publishers, Ludhiyana.
- Cook P. (1983): Theories of Planning & Spatial Development, Hutchinson & Com. Ltd. London.
- Glasson, John (1974): An Introduction to Regional Planning, Hutchinson Educational London.
- Misra R.P., Sundaram K.V. & Rao, etd.(1974): Regional Development Planning in India.
- Misra R.P (1992): Regional Planning, Concept Publishing Com. New Delhi.

PUNYASHLOK AHILYADEVI HOLKAR
SOLAPUR UNIVERSITY, SOLAPUR
Bachelor of Arts (B. A.)
B. A. Part - III
Urban Geography
Syllabus to be implemented from June 2021 onwards

1. **Title :** Urban Geography
2. **Year of Implementation:**Revised Syllabi will be implemented from June 2021 onwards.
3. **Preamble**: The Board of studies should briefly mention foundation, core and applied Components of the course/ Paper. The student should get into the prime objectives and expected level of study with required outcome in terms of basic and advance knowledge at examination level.
4. **Objectives:**
   - To study the basics of unban Geography.
   - To study the type of urban Settlements, site and situations.
   - To get as ideas of relationship between human activities and urban development.
   - To make the students capable for handling the present problematic situation in urban development.
   - To make students as a good urban planner and environmental conservator.
5. **Course Outcomes:**

   After the completion of course, the students will have ability to:
   - The students were known the importance of urban settlements through urban geography.
   - The students understood the types of urban Settlements, Site and situations.
   - The students were familiar with an idea of relationship between human activities and urban development.

- Detail understanding of students regarding present urban problems and students are capable to handling of present problematic situations in urban areas.
- The students are developed as a good urban planner and environmental conservator.

6. **Pattern of Exam:** Semester

7. **Scheme of Teaching & Examination**

Sr. No.	Subjects/Papers	Teaching Scheme Hrs./Week				Examination scheme (Marks)		
		L	T	P	Total	Theory	Term work	Total
1	Urban Geography	04	04	--	04	40	10	50

8. Equivalence in accordance with titles and contents of papers (For revised papers)

Sr. No.	Title of Old Paper	Old paper No.	Title of New paper	New Paper No.
1.	**Urban Geography**	**VIII**	**Urban Geography**	**DSE 1A OR VIII**

NEW/REVISED SYLLABUS FOR
B. A. Part-III Geography
(Introduced from June 2021 onwards)
Semester – V

i. **DSE 1A OR Paper No. VIII**
ii. Title of Paper: **Urban Geography**

Unit I: Introduction to Urban Geography **15**

1.1 Meaning and definition of Urban Geography

1.2 Nature and scope of Urban Geography

1.3. Approaches of Urban Geography

1.4. Significance of Urban Geography

Unit II. Patterns of Urbanization **15**

2.1 Meaning of urban settlement and Urbanization

2.2 Concept and factors of urbanization

2.3 Patterns of Urbanization in developed and developing countries

Unit III. Function, Structure and Morphology of Urban centers **15**

3.1 Functional classification of town and cities

3.2 Structure and morphology of urban centers

3.3 City Regions and C.B.D.

3.4 Models of urban Morphology; The Concentric Zone Theory, The Sector Theory and the Multi-Nuclei Theory

Unit IV. Urban Issue and Case studies **15**

4.1 Problemsof housing and growth of slums

4.2 Issuesof civic amenities (Water and Transport)

4.3 Problems of environmental pollution

4.4 Case studies of Solapur smart city and Pandharpur town (with reference to Land use and Urban Issues)

References:

- Fyfe N. R. and Kenny J. T., 2005: The Urban Geography Reader, Routledge.
- Graham S. and Marvin S., 2001: Splintering Urbanism: Networked Infrastructures, Technological Mobilities and the Urban Condition, Routledge.
- Hall T., 2006: Urban Geography, Taylor and Francis.
- Kaplan D. H., Wheeler J. O. and Holloway S. R., 2008: Urban Geography, John Wiley.
- Knox P. L. and McCarthy L., 2005: Urbanization: An Introduction to Urban Geography, Pearson Prentice Hall New York.
- Knox P. L. and Pinch S., 2006: Urban Social Geography: An Introduction, Prentice-Hall.
- Pacione M., 2009: Urban Geography: A Global Perspective, Taylor and Francis.
- Sassen S., 2001: The Global City: New York, London and Tokyo, Princeton University Press.
- Ramachandran R (1989): Urbanisation and Urban Systems of India, Oxford University Press, New Delhi
- Ramachandran, R., 1992: The Study of Urbanisation, Oxford University Press, Delhi
- Singh, R.B. (Eds.) (2001) Urban Sustainability in the Context of Global Change, Science Pub., Inc., Enfield (NH), USA and Oxford & IBH Pub., New Delhi.

- Singh, R.B. (Ed.) (2015) Urban development, challenges, risks andresilience in Asian meg

PUNYASHLOK AHILYADEVI HOLKAR
SOLAPUR UNIVERSITY, SOLAPUR
Bachelor of Arts (B. A.)

B. A. Part - III

Agriculture Geography

Syllabus to be implemented from June 2021 onwards

1. **Title :** Agriculture Geography
2. **Year of Implementation:**Revised Syllabi will be implemented from June 2021 onwards.
3. **Preamble**: Agricultural Geography is the most and comparatively developed branch of Economic Geography. The presence syllabus of this paper includes Nature and Scope of Agricultural Geography, Agricultural determinants, Land use Theory and Agricultural Practices, agricultural concepts like crop combination and productivity, impact of Green revolution and the modern technology used in agriculture. This study will be helps in making aware the students to the use of modern technologies which are used in agriculture.
4. **Objectives:**

- To help students to know the approaches to study agriculture geography.
- To study the methods of regionalization of agriculture.
- To provide in depth knowledge about agriculture geography.

5. **Course Outcomes:**

After the completion of course, the students will have ability to:

- The students were known the importance and modern techniques of Agricultural geography.
- The students understood the factors affecting on agriculture.
- The students were familiar agriculture theories, green revolution and problems associated with agriculture

6. **Pattern of Exam:** Semester

7. **Scheme of Teaching & Examination**

Sr. No.	Subjects/Papers	Teaching Scheme Hrs./Week				Examination scheme (Marks)		
		L	T	P	Total	Theory	Term work	Total
1	Agriculture Geography	04	04	--	04	40	10	50

8. Equivalence in accordance with titles and contents of papers (For revised papers)

Sr. No.	Title of Old Paper	Old paper No.	Title of New paper	New Paper No.
1.	Development of Geography	**IX**	**Agriculture Geography**	**DSE 1B OR IX**

NEW/REVISED SYLLABUS FOR
B. A. Part-III Geography
(Introduced from June 2021 onwards)
Semester – V

i. **DSE 1B Paper No. IX**
ii. Title of Paper: **Agriculture Geography**

Unit I: Introduction to agriculture Geography **15**

1.1 Definition, Nature and Scope of Agriculture Geography

1.2 Importance of Agriculture

1.3 Modern Techniques in Agriculture

Unit II. Determination of Agriculture **15**

2.1 Physical

2.2 Economical

2.3 Social

2.4 Cultural

Unit III. Agriculture Regions of India **15**

3.1 Agro-Climatic regions

3.2 Agro-Ecological regions

3.3 Crop-Combination

3.4 Crop-Diversification

Unit IV.Agricultural Land use theory **15**

4.1 Von Thunen Theory of Agricultural land use

4.2 Green and white revaluation in India

4.3 Agricultural problem and prospects in India - Physical and non-Physical

References:

1. Bayliss Smith, T.P.: The Ecology of Agricultural Systems. Cambridge University Press, London. 1987.
2. Gregor, H.P.: Geography of Agriculture. Prentice Hall, New York, 1970.
3. Grigg, D.B.: The Agricultural Systems of the World, Cambridge University Press, New York. 1974.
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5. Bhatt, M.S. (ed.) 2004: Poverty and Food Security in India Problems and Policies. Akkar Books, New Delhi.
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7. Singh Jasbir& Dhillon S.S. (2004): Agricultural Geography, Tata Mc-Graw Hill Education, New Delhi.
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B. A. Part - III

Population Geography

Syllabus to be implemented from June 2021 onwards

1. **Title :** Population Geography
2. **Year of Implementation:**Revised Syllabi will be implemented from June 2021 onwards.
3. **Preamble**: This curriculum focuses on the understanding of core and fundamental branches of the discipline. This paper is specially designed to learn the role of demography and population studies as a distinct field of human geography. It encompasses sound knowledge of key concept, different components of population. The curriculum has been carefully designed to include conceptual, basic themes, population dynamics and characteristic with contemporary issues.
4. **Objectives:**
   - To study the basics of population geography.
   - To study the population growth trends and its distribution.
   - To study the population dynamics and various theories of population.
   - To study the population compositions and its characteristics.
5. **Course Outcomes:**

   After the completion of course, the students will have ability to:
   - This paper would bring an understanding of population geography along with relevance of demographic data.

- The students would get an understanding of distribution and trends of population growth in the developed and less developed countries, along with population concepts.
- The students would get an understanding of the dynamics of population.
- An understanding of the implications of population composition in different regions of the world.
- An appreciation of the contemporary issues in the field of population studies

6. **Pattern of Exam:** Semester
7. **Scheme of Teaching & Examination**

Sr. No.	Subjects/Papers	Teaching Scheme Hrs./Week				Examination scheme (Marks)		
		L	T	P	Total	Theory	Term work	Total
1	Population Geography	04	04	--	04	40	10	50

8. Equivalence in accordance with titles and contents of papers (For revised papers)

Sr. No.	Title of Old Paper	Old paper No.	Title of New paper	New Paper No.
1.	Development of Geography	**IX**	**Population Geography**	**DSE 2A OR IX**

NEW/REVISED SYLLABUS FOR
B. A. Part-III Geography
(Introduced from June 2021 onwards)
Semester – V

i. **DSE 2A OR Paper No. IX**
ii. Title of Paper: **Population Geography**

Unit I: Introduction to Population Geography **15**

1.1 Definition of population geography

1.2 Nature and Scope of population Geography

1.3 Significance of population Geography

1.4 Sources of population data (Census, Statistical abstract, NSS)

Unit II. Population Growth and Distribution **15**

2.1 Growth of World population

2.2 Factors affecting the distribution of population

2.3 Population distribution inthe world

2.4 Theories of population Growth: Malthus Theory and Demographic Transition Theory

Unit III. Population Dynamics **15**

3.1 Concept of population Dynamics

3.2 Fertility: Causes, Effects and Measures

3.3 Mortality: Causes, Effects and Measures

3.4 Migration: Types, causes and effects, Major international migration of the world after World War II

Unit IV.Population Composition and Characteristics **15**

4.1 Age-Sex Composition Causes, Effects, Measures and Characteristics

4.2 Rural and Urban Composition Causes, Effects, Measures and Characteristics

4.3 Literacy**:** Effects and Characteristics

4.4Contemporary Issues: HIV/ AIDS,andCovid 19

References:

- Barrett H. R., 1995: Population Geography, Oliver and Boyd.
- Bhende A. and Kanitkar T., 2000: Principles of Population Studies, Himalaya Publishing House.
- Chandna R. C. and Sidhu M. S., 1980: An Introduction to Population Geography, Kalyani Publishers.
- Clarke J. I., 1965: Population Geography, Pergamon Press, Oxford.
- Jones, H. R., 2000: Population Geography, 3rd ed. Paul Chapman, London.
- Lutz W., Warren C. S. and Scherbov S., 2004: The End of the World Population Growth in the 21st Century, Earthscan
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- Wilson M. G. A., 1968: Population Geography, Nelson.
- Panda B P (1988): JanasankyaBhugol, M P Hindi GranthAcademy,Bhopal
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- Trewartha, G T (1969), A Geography of Population: world patterns, John Wiley, New York.
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- MOOCS - SWAYAM: https://swayam.gov.in/
- National Digital Library of India: https://ndl.iitkgp.ac.in/

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B. A. Part - III

Resource Geography

Syllabus to be implemented from June 2021 onwards

1. **Title :** Resource Geography
2. **Year of Implementation :**Revised Syllabi will be implemented from June 2021 onwards.
3. **Preamble**: Resource Geography is a major and developing branch of Economic Geography. The world countries are trying to make overall development with blindly utilizing different resources. The growing population exerts its pressure on present resources which generates various problems in front of countryside. The present syllabus of this paper includes Definition, Scope, concept, classification and significance of Resource Geography. It also includes major natural resources such as water, forest, energy and human resources with its distribution, utilization and problems. Newly evolved concept sustainable development is also studied with said resources.
4. **Objectives:**
   - To understand the concept and classification of Resources.
   - To examine the major resources (water, forest, energy and human) with their distribution, utilization and problems.

- To study the sustainable resource development.

5. **Course Outcomes:**

After the completion of course, the students will have ability to:

- The students were known the importance of Resources.
- The students were familiar with distribution, utilization and problems of resources like water, forest, energy and human.
- Detail understanding the sustainability of natural resource development.

6. **Pattern of Exam:** Semester

7. **Scheme of Teaching & Examination**

Sr. No.	**Subjects/Papers**	**Teaching Scheme Hrs./Week**				**Examination scheme (Marks)**		
		L	**T**	**P**	**Total**	**Theory**	**Term work**	**Total**
1	Resource Geography	04	04	--	04	40	10	50

8. Equivalence in accordance with titles and contents of papers (For revised papers)

Sr. No.	Title of Old Paper	Old paper No.	Title of New paper	New Paper No.
1.	Development of Geography	**IX**	**Resource Geography**	**DSE 2B OR IX**

NEW/REVISED SYLLABUS FOR
B. A. Part-III Geography
(Introduced from June 2021 onwards)
Semester – V

i. **DSE 2B OR Paper No. IX**
ii. Title of Paper: **Resource Geography**

Unit I: Introduction to Resource Geography **15**

1.1 Definition, Nature, and Scope of Resource Geography.

1.2 Concept and Classification of Resource.

1.3 Importance of Resource.

Unit II. Natural Resource **15**

2.1 Soil Resource – Distribution, Utilization, Problems and Conservation.

2.2 Water Resources-Distribution, Utilization, Problems and Conservation.

2.3 Forest Resource-Distribution, Production, Problems and Conservation.

Unit III. Energy Resource **15**

3.1 Conventional Resource-Distribution, Utilization, Problems and Conservation.

3.2 Non-Conventional Resource-Distribution, Utilization, Problems and Conservation.

Unit IV.Sustainable Resource development **15**

4.1 Concept of sustainable Resource Development.

4.2 Sustainable Natural Resource Development- Land, Water, Forest, Energy.

4.3 Human Resource Development

References:

1. Cutter S. N., Renwich H. L. and Renwick W., 1991: Exploitation, Conservation, Preservation: AGeographical Perspective on Natural Resources Use, John Wiley and Sons, New York.
2. Gadgil M. and Guha R., 2005: The Use and Abuse of Nature: Incorporating This Fissured Land: An Ecological History of India and Ecology and Equity, Oxford University Press. USA.
3. Holechek J. L. C., Richard A., Fisher J. T. and Valdez R., 2003: Natural Resources: Ecology, Economics and Policy, Prentice Hall, New Jersey.
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5. Klee G., 1991: Conservation of Natural Resources, Prentice Hall, Englewood.
6. Mather A. S. and Chapman K., 1995: Environmental Resources, John Wiley and Sons, New York.
7. Mitchell B., 1997: Resource and Environmental Management, Longman Harlow, England.
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B. A. Part - III

Evolution of Geographical Thought

Syllabus to be implemented from June 2021 onwards

1. **Title :** Evolution of Geographical Thought
2. **Year of Implementation:**Revised Syllabi will be implemented from June 2021 onwards.
3. **Preamble**: This paper is basically designed to cater to foundation building of the students by imparting knowledge about the pillars of geography. It encompasses the evolution of the subject right from the experiences and understanding of travelers and explorers to the progression towards establishment of the discipline geography in sciences
4. **Objectives:**
   - To study the evolution of geographic thought.
   - To evaluating the contemporary trends in geographical studies.
   - To understands the debates in the geographical studies.
   - To study the recent trends in geography
5. **Course Outcomes:**

- Students were able to visualize the basic theme, ideas and approaches of geographic knowledge with relation to historical juncture, varying schools and era of their emergence.
- Detailed knowledge about the debates in the geographical studies.
- Understanding of recent trends in Geography.

6. Pattern of Exam : Semester

7. Scheme of Teaching & Examination

Sr. No.	**Subjects/Papers**	**Teaching Scheme Hrs./Week**				**Examination scheme (Marks)**		
		L	**T**	**P**	**Total**	**Theory**	**Term work**	**Total**
1	Evolution of Geographical Thought	04	04	--	04	40	10	50

8. Equivalence in accordance with titles and contents of papers (For revised papers)

Sr. No.	Title of Old Paper	Old paper No.	Title of New paper	New Paper No.
1.	**Geography of Economic Activities**	**X**	**Evolution of Geographical Thought**	**DSC 8 OR X**

NEW/REVISED SYLLABUS FOR
B. A. Part-III Geography
(Introduced from June 2021 onwards)
Semester – VI

i. DSC 8 OR Paper No. X

ii. Title of Paper: **Evolution of Geographical Thought**

Unit I. History of Geographical Idea **15**

1.1 Ancient period – contribution of Greek, Roman and Indian Geographers

1.2 Medieval period – Arab Geographers

Unit II. Schools of Geography **15**

2.1 German School of Geography – Humboldt, Ritter &Razel

2.2 French School of Geography – Vidal -de-la- Blache

2.3 American School of Geography – Ellen Semple

2.4 British School of Geography – Mackinder

Unit III. Dichotomy in Geography **15**

3.1 Environmental Determinism Vs Possibilism

3.2 Physical Vs Human Geography

3.3 Systematic Vs Regional Geography

Unit IV. Development of Geography after World War II **15**

1.1 Quantitative revolution in Geography concept, objectives and merits

1.2 Impact of Quantitative revolution in Geography.

1.3 Perspectives in Geography: Behaviouralism, Humanism, Systems Approach, Radicalism

References:

1. Hartshorne Richard (1959) - Perspective on the nature of Geography Rand McNally& Co., New York
2. Dixit R.D. - Geography Thought: A contextual history of Idea
3. Dickinson R.E. - Makers of Modern Geography
4. Taylor Griffith - Geography of 20th Century
5. SudiptaAdhikari: History of Geographical Thought
6. Harvey David (1980) - Explanation in Geography Edward - Arnold Landon
7. Husain Majid (1984) - Evolution of Geographical Thought Rawat Publication, Jaipur
8. खतीब के . ए. व भांजे बी. एम- भूविज्ञान विकास, संजोग प्रकाशन, कोल्हापूर.

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B. A. Part - III

Geography of Health and Wellbeing

Syllabus to be implemented from June 2021 onwards

1. **Title : Geography of Health and Wellbeing**
2. **Year of Implementation :**Revised Syllabi will be implemented from June 2021 onwards.
3. **Preamble:** Geography of Health and Wellbeing considers the significance for physical and mental health of interactions between people and their environment. This branch of Geography becomes popular due to its significance. In this course the fundamental concepts and knowledge of Geography of Health and wellbeing have been included. The present syllabus of this course includes perspectives of health, pressure on environmental quality and health, exposure and health risks, health and disease patterns.
4. **Objectives:**
   - To study the awareness about the health and wellbeing.
   - To evaluating the contemporary trends in geographical studies.

- To understands the debates in the geographical studies.
- To understands the curiosity about disease and health.

5. Course Outcomes:

After the completion of course, the students will have ability to:

- Understand various geographical perspectives related to human health.
- Create awareness of human health and environment.
- The students are familiar with geographical background of diseases and their regional pattern.
- Detail understanding of pressure on environmental quality and human health.
- The students are familiar with the process of health care planning in India.
- The students are aware about impact of climate change on human health.

6. Pattern of Exam: Semester

7. Scheme of Teaching & Examination

Sr. No.	Subjects/Papers	Teaching Scheme Hrs./Week				Examination scheme (Marks)		
		L	T	P	Total	Theory	Term work	Total
1	Geography of Health and Wellbeing	04	04	--	04	40	10	50

8. Equivalence in accordance with titles and contents of papers (For revised papers)

Sr. No.	Title of Old Paper	Old paper No.	Title of New paper	New Paper No.
1.	**Political Geography**	**XI**	**Geography of Health and Wellbeing**	**DSE 3A OR XI**

NEW/REVISED SYLLABUS FOR
B. A. Part-III Geography
(Introduced from June 2021 onwards)
Semester – VI

i. DSE 3A OR Paper No. XI

ii. Title of Paper: **Geography of Health and Wellbeing**

Unit I. Perspectives on Health: **15**

1.1 Definition and scope

1.2 Linkages with environment and development

1.3 Health and Environmental trends: Population dynamics, urbanization, poverty and inequality

Unit II. Pressure on Environmental Quality and Health **15**

2.1 Human activities and its pressure on environmentand Health

2.2 Land use and agricultural development

2.3 Industrialization

2.4 Transport

Unit III. Exposure and Health Risks **15**

3.1 Air pollution

3.2 Water Pollution

3.3 Household wastes

3.4 Housing

3.5 Workplace

Unit IV. Climate Change, Health and Disease Patterns **15**

(In Environmental Context with special reference to India)

4.1 Communicable diseases and their regional pattern – AIDS and Covid 19

4.2 Lifestyle related diseases and their regional pattern – Cancer and Diabetes

4.3 Climate change and human health

4.4 Nutrition and human health

References:

1) Akhtar Rais (Ed.), 1990:Environment and Health Themes in Medical Geography, Ashish Publishing House, New Delhi.
2) Avon Joan L. and Jonathan A Patzed., 2001:Ecosystem Changes and Public Health, Baltimin, John Hopling Unit Press(ed).
3) Bradley, D., 1977: Water, Wastes and Health in Hot Climates, John Wiley Chichesten.
4) Brown T., S. Mc Lafferty, and G. Moon. 2009. A companion to health and medical geography. Chichester, UK: Wiley-Blackwell. DOI:
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11) HardhamT. andTannavM., (eds):Urban Health in Developing Countries; Progress, Projects, Earthgoan, London.
12) Moeller Dadewed., 1993: Environmental Health, Cambridge, Harvard University Press.
13) Shelar, S.K., 2012: Introduction to Medical Geography, Chandralok Pub., Kanpur.
14) Tromp, S., 1980: Biometeorology: The Impact of Weather and Climate on Humans and their Environment, Heydon and Son.

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MOOCS - SWAYAM: https://swayam.gov.in/

National Digital Library of India: https://ndl.iitkgp.ac.in/

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B. A. Part - III

Political Geography

Syllabus to be implemented from June 2021 onwards

1. **Title : Political Geography**
2. **Year of Implementation :**Revised Syllabi will be implemented from June 2021 onwards.
3. **Preamble**: This paper is an academic discipline which is designed for student to convey knowledge about political activity of people and integral geographical space, which includes physical, economic, social, cultural, and political spaces. Also concerned with the study of both the spatially uneven outcomes of political processes and the ways in which political processes are themselves affected by spatial structures.
4. **Objectives:**
   - To understand the basic concepts of politicalgeography.
   - To familiarize the students with the geographical factors which havea bearing

on the geopolitical/ administrative organization ofspace.

- To enhance awareness of multidimensional nature of geo-politicalspace.

5. **Course Outcomes:**

After the completion of course, the students will have ability to:

- Student will understand the history and development of political geography.
- Get knowledge about evaluation of state and nation.
- Get knowledge of Geo-political theories.
- Investigates problems and disputes of India with the most current research topics in political geography.

6. **Pattern of Exam:** Semester

7. **Scheme of Teaching & Examination**

Sr. No.	**Subjects/Papers**	**Teaching Scheme Hrs./Week**				**Examination scheme (Marks)**		
		L	**T**	**P**	**Total**	**Theory**	**Term work**	**Total**
1	Political Geography	04	04	--	04	40	10	50

8. Equivalence in accordance with titles and contents of papers (For revised papers)

Sr. No.	Title of Old Paper	Old paper No.	Title of New paper	New Paper No.
1.	**Political Geography**	**IX**	**Political Geography**	**DSE 3B OR XI**

NEW/REVISED SYLLABUS FOR
B. A. Part-III Geography
(Introduced from June 2021 onwards)
Semester – VI

i. **DSE 3B OR Paper No. XI**
ii. Title of Paper: **Political Geography**

Unit I. Introduction of Political Geography **15**

1.1 Definition of Political Geography

1.2 Nature and Scope of Political Geography

1.3 Historical Development of Political Geography

1.4 Significance of Political Geography

Unit II. Concepts in Political Geography **15**

2.1 Concept of State, Nation, State- Nation, Frontiers and Boundaries

2.2 Elements of State: Location, Shape, Size, Topography, Climate, Vegetation, Resources, Population andCommunication.

2.3 Concept of Geopolitics

Unit III. Theories in Political Geography 15

3.1 The Heartland Theory of H. J. Mackinder

3.2 Rim Land Theory of N. J. Spykman

Unit IV.Resource Conflicts and Politics of Displacement 15

4.1 Krishna Water Conflict (Inter State)

4.2 Ganga Water Conflict (International)

4.3 Issues of Relief, Compensation and Rehabilitation: Sardar Sarovar Projects

4.4 Issues of Relief, Compensation and Rehabilitation: Ujani Projects

References:

1. Agnew J., 2002: *Making Political Geography*,Arnold.
2. Agnew J., Mitchell K. and Toal G., 2003: *A Companion to Political Geography*,Blackwell.
3. Cox K. R., Low M. and Robinson J., 2008: *The Sage Handbook of Political Geography*, Sage Publications.
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8. Mathur H M and M MCernea (eds.) Development, Displacement and Resettlement – Focus on Asian Experience, Vikas,Delhi
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11. Verma M K (2004): Development, Displacement and Resettlement, Rawat Publications,Delhi
12. Hodder Dick, Sarah J Llyod and Keith S McLachlan (1998), *Land Locked States of Africaand Asia* (vo.2), FrankCass

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B. A. Part - III

Hydrology and Oceanography

Syllabus to be implemented from June 2021 onwards

1. **Title :** Hydrology and Oceanography
2. **Year of Implementation:**Revised Syllabi will be implemented from June 2021 onwards.
3. **Preamble**: This paper is basically designed to cater to foundation building of the students by imparting knowledge about the hydrological cycle. It encompasses the availability of water on the globe and its uses on the earth surface.
4. **Objectives:**
   - To study the basic knowledge of hydrological cycle on the globe.

- To study the importance of oceans and seas related to precipitation on the earth surface and its impact on agriculture.
- To understands the riverine basin and its impact on human settlement
- To study the marine importance and its necessity to over population in future

5. **Course Outcomes:**

After the completion of course, the students will have ability to:

- Students were able to visualize the basic theme, ideas and approaches of geographic knowledge about hydrological cycle related to formation of precipitation, infiltration, ground water recharge.
- Understanding of human interference on hydrological cycle and its impact on globally drought region, flooded area.

6. **Pattern of Exam:** Semester

7. **Scheme of Teaching & Examination**

Sr. No.	**Subjects/Papers**	**Teaching Scheme Hrs./Week**				**Examination scheme (Marks)**		
		L	**T**	**P**	**Total**	**Theory**	**Term work**	**Total**
1	Hydrology and Oceanography	04	04	--	04	40	10	50

8. Equivalence in accordance with titles and contents of papers (For revised papers)

Sr. No.	Title of Old Paper	Old paper No.	Title of New paper	New Paper No.
1.	**Applied Geography**	**XII**	**Hydrology and Oceanography**	**DSE 4A OR XII**

NEW/REVISED SYLLABUS FOR
B. A. Part-III Geography
(Introduced from June 2021 onwards)
Semester – VI

i. **DSE 4A OR Paper No. XII**
ii. Title of Paper: **Hydrology and Oceanography**

Unit I. Hydrological Cycle **15**

Systems approach in hydrology, Hydrological Cycle, human impact on the hydrological cycle; Precipitation, interception, evaporation, evapo-transpiration, infiltration, ground-water, run off and over land flow; Hydrological input and output. Water budget on globe.

Unit II. River Basin and Problems of Regional Hydrology 15

Characteristics of river drainage basins, basin surface run-off, measurement of river discharge; floods and droughts.

Unit III. Ocean Floor Topography ,Ocean Properties and Circulations 15

Ocean Floor Topography, Ocean Waves, Currents and Tides. Ocean Salinity and Temperature –Distribution and Determinants.

Unit IV.Coral Reefs and Marine Deposits 15

Types and Theories of Origin of Coral formation; Biotic and Mineral wealth in seas and oceans

References:

- Andrew. D. ward and Stanley, Trimble (2004): Environmental Hydrology, 2nd edition, Lewis Publishers, CRC Press.
- Karanth, K.R., 1988 : Ground Water: Exploration, Assessment and Development, Tata-McGraw Hill, New Delhi.
- Ramaswamy, C. (1985): Review of floods in India during the past 75 years: A Perspective. Indian National Science Academy, New Delhi.
- Rao, K.L., 1982 : India's Water Wealth 2nd edition, Orient Longman, Delhi,.
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B. A. Part - III

Social Geography

Syllabus to be implemented from June 2021 onwards

1. **Title :** Social Geography
2. **Year of Implementation:**Revised Syllabi will be implemented from June 2021 onwards.

3. **Preamble**: This curriculum focuses on the understanding of social geography of the discipline. This paper is specially designed to cater to social study of the students by imparting knowledge about the society. Social geography is the branch of human geography that is most closely related to social problems and well being, dealing with the relation of social phenomena and its spatial components. The different conceptions of social geography have been overlapping with other sub-fields of geography.

4. **Objectives:**
   - Understanding the concept, nature and scope of social geography.
   - To study the technological, occupational and migration changes of peoples in India.
   - An analysis of different social categories and their spatial distribution.
   - To understand the geographies of social welfare, well being and social problem.

5. **Course Outcomes:**

   After the completion of course, the students will have ability to:
   - In depth understanding the problems and prospects of society in India.
   - The students are fully aware about the technological, occupational and migration changes of peoples in India.
   - Detailed knowledge about the social categories and their spatial distribution.
   - Understanding concepts of social wellbeing, welfare and social problem in India.

6. **Pattern of Exam:** Semester

7. **Scheme of Teaching & Examination**

Sr. No.	**Subjects/Papers**	**Teaching Scheme Hrs./Week**				**Examination scheme (Marks)**		
		L	**T**	**P**	**Total**	**Theory**	**Term work**	**Total**
1	Social Geography	04	04	--	04	40	10	50

8. Equivalence in accordance with titles and contents of papers (For revised papers)

Sr. No.	Title of Old Paper	Old paper No.	Title of New paper	New Paper No.

1.	**Applied Geography**	**XII**	**Social Geography**	**DSE 4B OR XII**

NEW/REVISED SYLLABUS FOR
B. A. Part-III Geography
(Introduced from June 2021 onwards)
Semester – VI

i. **DSE 3A OR Paper No. XII**
ii. Title of Paper: **Social Geography**

Unit I: Introduction of Social Geography **15**

1.1 Definition of Social Geography

1.2 Nature and Scope of Social Geography

1.3 Branches of Social Geography

1.4 Approaches and Importance of Social Geography

Unit II. Peopling Process of India **15**

2.1 Concept of peopling process

2.2 Technological Changes

2.3 Occupational Changes

2.4 Migration

Unit III. Social Categories and their spatial distribution of World **15**

3.1 Tribe- (Bushman and Gond)

3.2 Race-

3.3 Religion

Unit IV.Social Welfare, Wellbeing and Social Problems in India **15**

4.1 Concept of Social Welfare and Wellbeing

4.2 Components of Social Welfare and Wellbeing – Healthcare, Housing and Education

4.3 Social Problems- Slums, Communal Conflicts and Crime

References:

1. Ahmed A., 1999: Social Geography, Rawat Publications.

2. Casino V. J. D., Jr., 2009) Social Geography: A Critical Introduction, Wiley Blackwell.

3. Cater J. and Jones T., 2000: Social Geography: An Introduction to Contemporary Issues, Hodder Arnold.

4. Holt L., 2011: Geographies of Children, Youth and Families: An International Perspective, Taylor & Francis.

5. Panelli R., 2004: Social Geographies: From Difference to Action, Sage.

6. Rachel P., Burke M., Fuller D., Gough J., Macfarlane R. and Mowl G., 2001: Introducing Social Geographies, Oxford University Press.

7. Smith D. M., 1977: Human geography: A Welfare Approach, Edward Arnold, London.

8. Smith D. M., 1994: Geography and Social Justice, Blackwell, Oxford.

9. Smith S. J., Pain R., Marston S. A., Jones J. P., 2009: The SAGE Handbook of Social Geographies, Sage Publications.

10. Sopher, David (1980): An Exploration of India, Cornell University Press, Ithasa

11. Valentine G., 2001: Social Geographies: Space and Society, Prentice Hall.

12. सामाजिक व सांस्कृतिक भूगोल – विठ्ठल घारपुरे, पिंपळापुरे बुक डीस्ट्रीबुटर

PUNYASHLOK AHILYADEVI HOLKAR SOLAPUR UNIVERSITY, SOLAPUR

Bachelor of Arts (B. A.)

B. A. Part – III Geography

(Practical Paper -I)

1.	**Title**	**:**	Map Work & Map Interpretation
2.	**Year of Implementation**	**:**	Revised Syllabi will be implemented from June 2021 onwards.

3.	**Preamble**	**:**	Practical Work is the most important part of Geography. Map is an indispensable tool in Geographical Studies & Research activities. The present syllabus of this paper includes study of maps and their types, Map Projections, S.O.I. Topomaps, I.M.D. Weather Maps, and Cartographic Techniques.
4.	**Objectives**	**:**	2. To introduce the students with the importance of map making and map Interpretation. 3. To make the students to understand map, concept of scale and concept of projection. 4. To provide training in analysis of landforms. 5. To give basic information to the students about S.O.I. maps and I.M.D. weather Reports. 6. To develop the skill of map Interpretation among the students.
5.	**Course Outcomes**	**:**	1.In depth understanding the map, concept of scale and projection. 2.Detailed knowledge about the analysis of landforms and its identification. 3.The students are deeply aware about basic information to the students about S.O.I. toposheets and I.M.D. weather reports and obtained the skills about map interpretation.
6.	**Pattern of Exam**	**:**	Annual
7.	**Scheme of Teaching & Examination**		

Sr. No.	**Subjects/Papers**	**Teaching Scheme Hrs./Week**				**Examination scheme (Marks)**		
		L	**T**	**P**	**Total**	**Practical**	**Term work**	**Total (Annual)**
1	Map Making and Map Interpretation	--	--	10	10	100	--	100

Revised Syllabus for B. A. – III
(Introduced from June 2021 Onwards)
Revised Syllabus for
B. A. (Part III) Geography
Practical Paper -I

Title of Paper - Map Making and Map Interpretation (100 Marks)

Unit – 1: Introduction to Map and Map Scales **Periods 50 Marks (15)**

1.1Map

1.1.1 Map – Definition, Elements

1.1.2 Classification of Maps: Based on Scale and Purpose

1.2 Map Scale

1.2.1 Meaning and Definition of Map Scale

1.2.2 Methods of Representation of scale - Verbal, Numerical and Graphical.

1.2.3 Scale Conversion

1.2.4 Construction of Graphical Scale – i) Simple (Plane Scale) ii) Time and Distance Scale iii) Diagonal Scale

Unit – 2. Map Projection **Periods 50 Marks (15)**

2.1. Definition, Classification of Projections:

- Based on Method of Construction: perspective and non-perspective
- Based on Developable Surface used: Conical, Cylindrical, Zenithal, Conventional.
- Based on Position of Tangent Surfaces: Polar, Equatorial (normal), Oblique.
- Based on Position of view point or light: Gnomonic, Stereographic, Orthographic

2.2. Graphical Construction of the following Projections with Properties and Use:

- Zenithal Polar Gnomonic Projection
- Zenithal Polar Equal Area Projection
- Simple Conical Projection with one standard Parallel
- Simple Conical Projection with two standard Parallel
- Cylindrical equal area projection
- Mercator's Projection and Reference to Universal Transverse Mercator (UTM) Projection

Unit – 3: Relief Profile Analysis **Period 50 Marks (15)**

3.1 Slope and Gradient

3.1.1 Types of Slope: Gentle, Steep, Even, Uneven, Convex, Concave, Terraced.

3.1.2 Methods of Relief Representation

Qualitative: - Hachures, Hill shading, Layer Tint

Quantitative: - Contours, Form lines, Spot Heights, Bench Marks, Triangulation Mark

3.1.2 Expression of Slopes: a) Gradient b) Degree c) Per Cent d) Mills

3.1.3 Representation of Relief by Contours: Hill, Mountain, Ridge, Cliff, Saddle, Plateaue, Col or Pass, Gorge, 'V' Shaped Valley, Waterfall, 'U' Shaped Valley, Cirque, Sea cliff.

3.2 Profiles- Simple profile, longitudinal profile

Unit – 4 : Topographical Maps **Periods 50 Marks (15)**

4.1 Development of Survey of India

4.2 Indexing of S.O.I. Topographical Maps

4.3 Signs, Symbols and Colors used in SOI Toposheet

4.4 Interpretation of S.O.I.'s Topographical Map (Mountain, Plateau and Plain) a) Marginal Information b) Physical environment: Relief, Drainage and Vegetation c) Cultural environment: Settlements, Transportation and Communication, Irrigation. d) Land Use

Unit 5: Weather Instruments and IMD Maps Periods 50 Marks (15)

5.1 Study of weather Instruments with reference to Principle, Mechanism, and Function a) Thermograph b) Barograph c) Dry and Wet Bulb Thermometer d) Wind vane e) Cup Anemometer f) Rain Gauge.

5.2 Sign and Symbols used in Indian Daily Weather Maps.

5.3 Isobaric Patterns: Cyclone, Anticyclone, Col, Wedge, Trough and Secondary Depression.

5.4 Interpretation of Indian Daily Weather Maps (Rainy, Winter and Summer) Marginal Information, Atmospheric Pressure, Winds, Clouds, Rainfall, other weather phenomena's, Sea Condition, Temperature departure from normal.

Unit 6 : Representation of Statistical Data Periods 50 Marks 15

6.1 Graphs and Diagrams

6.1.1 Diagrammatic Data Presentation: i) Climograph, ii) Hythergraph iii) Ergograph (Crop Calendar)

6.2 Thematic Mapping Techniques: i) Proportional Circle ii) Choropleth Map iii) Dot Map iv) Isopleths v) Star Diagram

7 Journal and Viva Voce Marks 10

Note :

1. Use of stencils, log tables, computer and calculator is allowed.
2. Journal should be completed and duly certified by practical in-charge and Head of the Department.
3. Examiners should set jointly the question paper for each batch.
4. Each batch should not more than 12 students

Reference:

- Bygoot, J: An Introduction to Mapwork and Practical Geography, University Tutorial, London 1964.
- Khan MD. Zulfequar Ahmad : Text Book of Practical Geography, Concept Publishing Company, New Delhi, 1998
- Mishra, R.P. and Ramesh A. : Fundamentals of Cartography, Concept Publishing Company, New Delhi, 2000
- Monkhouse F.J. and Wilkison, H.R.: Maps and Diagrams, Mathuen. London, 1971.
- Negi., Dr. Balbir Singh : Practical Geography, KedarNath Ram Nath, Meerut, Delhi.
- Raisz, E.: Principals of Cartography, McGraw Hill Book Com., Inc, New York, 1962.
- Robinson, A.H. and Sale, S.D.: Elements of Cartography, John Witey and Sons, Inc, New York, 1969.
- Saha, Pijushkanti and BasuPartha : Advanced Practical Geography – A Laboratory
- Manual Books and Allied (P) Ltd, Kolkata. 2010.
- Sarkar, Ashis : Practical Geography: A systematic Approach, Orient Longman limited, Calcutta, 1997.
- Singh, Gopal : Map work and Practical Geography Vikas Publishing House Pvt. Ltd. New Delhi, 1996.
- Singh, R and Kanaujia, L.R.S.: Map Work and Practical Geography, Central Book Depot, Allahabad.
- Singh, R. L. and Rana P.B. : Elements of Practical Geography, Kalyani Publishers, New Delhi – Ludhiana, 1998.
- Aher A. B., Chodhari A. P. &Bharambe S. N. Techniques of Spatial Analysis Prashant Publication Jalgaon 2015
- Maurice Yeats, An Introduction to Quantitative Analysis in Human Geography, McGraw Hill, New York, 1974.
- P. Saha and P. Basu (2006): Advanced Practical Geography, Books and Allied Publication, Kolkata, India.
- Khullar, Essentials of Practical Geography, New Academic Publishing Co, India.
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SOLAPUR UNIVERSITY, SOLAPUR
Bachelor of Arts (B. A.)
B. A. Part – III Geography
(Practical Paper -II)

1. Title : Advanced Tools, Techniques & Field Work

2. Year of Implementation : Revised Syllabi will be implemented from June 2021 onwards.

3. Preamble : Modern science & technology have gained momentum. In the process of development of science and technology, the changing nature of subject of Geography will make aware to the students about the advanced techniques such as Remote Sensing, GIS and GPS. The application of computers has revolutionized the use of methods & techniques. The present syllabus of this paper includes study of Aerial Photographs, Remote Sensing, GIS, Application of Computer and use of field work in Geography. This will further help to improve the use of advanced techniques and methods in teaching-learning and research work.

4. Objectives :

1) To introduce the students with the importance of field work and advanced Techniques in Geography.
2) To provide training in application of modern tool and techniques in Geography.
3) To enable the students to understand the use of computer for analysis of Geographical data.
4) To enhance the skill of the students in instrumental survey.
5) To give basic information to the students about Arial Photographs, Remote Sensing, GIS and GPS.

5. Course Outcomes :

1. In depth understanding the importance of field work and advanced Techniques in Geography.
2. The students are trained to implement modern tool and techniques in Geography.
3. The students are deeply aware about the basics and trained in instrumental survey.
4. The students are deeply familiar with computer, GIS, GPS and Remote Sensing.

6. Pattern of Exam : Annual

7. Scheme of Teaching & Examination

Sr. No.	Subjects/Papers	Teaching Scheme Hrs./Week				Examination scheme (Marks)		
		L	T	P	Total	Practical	Term work	Total (Annual)
1	**Advanced Tools, Techniques & Field Work**	--	--	10	10	100	--	100

Revised Syllabus for B. A. – III
(Introduced from June 2021 Onwards)
Revised Syllabus for
B. A. (Part III) Geography
Practical Paper -II

Title of Paper - Advanced Tools, Techniques In Geography (Computer, Remote Sensing, GIS, GPS) & Field Work (100 Marks)

Unite: 1 Introduction to Computer **Lectures-50 Marks-10**

1.1: **Computer Fundamentals**: Definition, Characteristics, Hardware & Software.

1.2: **Application of computer in geography**

1.2.1: Construction of Line Graphs, Bar Graphs

1.2.2: Construction of Pie Diagram and Scatter Diagram.

1.3: **Significance and application of Internet in Geographical Studies.**

Unit: 2 Remote Sensing **Lectures- 50 Marks-15**

2.1 Definition, Components and Development of Remote Sensing.

2.2 Principles of Remote Sensing: EMR, Sensors and Platforms.

2.3 Application of Remote Sensing in Geography.

2.4 Aerial photographs and Satellite imagery: Definition, types

2.5 Identification of Physical and cultural features from Aerial Photographs or Satellite Imagery.

Unit: 3 GIS and GNSS (GPS) **Lectures- 50 Marks 15**

3.1 Geographical Information System (GIS)

3.1.1 Definition and components

3.1.2 GIS Data Structure: Types (spatial and non-spatial), Raster and Vector data

3.1.3 Georeferencing, Digitization, Map Layout Preparation

3.1.4 Application of GIS in Geography: Land use or Land Cover, Urban Sprawl Analysis, Forests Monitoring

3.2 Global Navigation Satellite System (Global Positioning System)

3.2.1 Definition and components

3.2.2 Application of GPS in Geography

3.2.3 Field work through GPS: Determining latitude, longitude and altitude

3.2.4 Exercise with Google earth Program.

Unit :4 Statistical methods and techniques **Lectures- 60 Marks-15**

4.1: Geographical Data / information:

4.1.1. Spatial and Temporal

4.1.2. Individual, Discrete and Continuous Data

4.2 Analysis of data by the following statistical techniques

4.2.1 Measures of Central Tendency: Mean, Median and Mode

4.2.2 Dispersion: Mean deviation, Standard deviation and Quartile Deviation.

4.2.3 Correlation: Karl Pearson's Method

4.2.4 Analysis of Time Series: Semi-average Method and Moving average method

Unit :5 Surveying **Lectures- 60 Marks-15**

5.1 Survey: Meaning and types

5.2 Preparation of plans of the given area with the following survey method **(Any one methodamong them)**

A)Dumpy Level survey

B) Plane Table survey (Radial, Intersection, and open and closed Traverse method)

C)Abony Level Survey.

5.3 Preparation of plans by Prismatic compass survey (Radical, Intersection and open and closed Traverse method)

5.3.1 Correction of bearing.

5.4 Preparation of plans by Chain and Tape survey (Triangulation and open and closed Traverse method)

5.4.1. Cross staff surveying

Unit:6 Project work based on field work (any one from below) Marks-10

6.1 Research Methodology

6.2 Resource, Population, Agricultural, Settlement, Environmental, Industrial, Health issues, any other issues related to local area.

(Project Report must be content of following points: Introduction – Aims – Objectives - Review of the literature - Data collection – Methodology - Data Analysis – Interpretation - Findings – Suggestions – Bibliography)

Unit:7 Study Tour Marks-10

Maximum 15 days at Geographical Interest in India and preparation of Excursion report.

Unit:8 Journal and Viva Voce Marks 10

Note : 1. Use of stencils, log tables, computer and calculator is allowed.

2. Journal should be completed and duly certified by practical in-charge and Head of the Department.

3. Examiners should set jointly the question paper for each batch.

4. Each batch should not more than 12 students

5. Each department should have at least 2 computers, 1 printer, 1 scanner, 10 pairs of Aerial Photographs, 5 Pocket Stereoscopes, 2 Mirror Stereoscopes and 5 Remote Sensing Images.

Reference:

- Bygoot, J: An Introduction to Mapwork and Practical Geography, University Tutorial, London 1964.
- Khan MD. Zulfequar Ahmad : Text Book of Practical Geography, Concept Publishing Company, New Delhi, 1998
- Mishra, R.P. and Ramesh A. : Fundamentals of Cartography, Concept Publishing Company, New Delhi, 2000
- Monkhouse F.J. and Wilkison, H.R.: Maps and Diagrams, Mathuen. London, 1971.
- Negi., Dr. Balbir Singh : Practical Geography, KedarNath Ram Nath, Meerut, Delhi.
- Raisz, E.: Principals of Cartography, McGraw Hill Book Com., Inc, New York, 1962.

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- P. Saha and P. Basu (2006): Advanced Practical Geography, Books and Allied Publication, Kolkata, India.
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Bachelor of Arts (B. A.)

B. A. Part - III

SEC 01
A CERTIFICATE COURSE IN LAND SURVEY

Objectives –The course aims to achieve the following objectives:

- To introduce the students a new technology of Land Surveying.
- To acquaint the students with reading obtained with Total Station/GPS forming a database for surveying and mapping.
- To offer practical training in land surveying to the students and make them surveying experts.
- To generate job opportunities in the corporate and government sector.

Paper I Theory

Unit No.	Topic	Subtopic	No. of Periods
1.	**Introduction to Surveying**	Meaning and definition of surveying, History of survey, Types of surveying, Concept of Surveying, Uses of surveying	**05**
2.	**Scale and Contours**	Definitionandmeaning, Characteristics and properties, Methods of contour, Definition and Methods of expression of Scale, Measurement units	**05**
3.	**Introduction to S.O.I. Toposheets**	Indexing, Conventional Signs, Symbols Interpretation of SOI topographical map	**05**
4.	**Surveying**	Introduction to chain and tape, plane table and prismatic compass survey Survey instruments and its use, merits and demerits	**05**
5.	**Dumpy level Survey**	Definition and Principles, Instruments and its use, Merits and demerits	**05**
6.	**Theodolite Survey**	Definition and Principles, Horizontal & Vertical angles, Instrument and its use, Merits and demerits	**05**
7.	**Computer Cartography**	Principles of Computer Cartography, Hardware and Software, Application of Computer Cartography, Advantages and Limitation	**10**

8.	**Total Station Surveying**	Basic Terms used in Total Station Surveying, Total Station instrument components, Phases of Total Stations Survey, Sources of error for total stations, Electronic Notebook, Advantage and disadvantage	**10**

REFERENCES

- Rangwala S.C. 2011. Surveying and Leveling, Charotar Publishing HousePvt. Ltd. Anand,(GJ)
- Mishra, R.P. (1973): Elements of Cartography. Prasaranga, University of Mysore.
- S. K. Roy (2004) Fundamentals Of Surveying, PHI Learning Pvt. Ltd.
- Robinson, A.H & Sale R.D.: Elements of Cartography. Johns House & Sons, London.
- Sing R. L. (1996) : Map Work & Practical Geography, Central Book Dept. Allahabad.
- Ahmed, E-I. Rabbany 2006) :Introduction to GPS: The Global Positioning System, Artech House, Boston
- Nel, S . (2008):Global Positioning, John Wiley and Sons, Hoboken

Paper II

Paper – II (Practical)

Field Work and Laboratory Work

Unit No	Topic	Subtopic	No. of Periods
i.	**Scale and Area Measurement**	1. Conversion of units 2. Conversion and Construction of scale 3. Exercises on area measurement. 4. Interpolation of contour lines	**15**
ii.	**Modern Land Surveying Techniques**	• **<u>Total Station-</u>** Vertical and horizontal angle measurement, topographical survey (plain table and contour survey), Stake out / Demarcation/ Survey of Building Layouts / Plot Layouts / Roads / Alignments, Establish Benchmarks, Measurement of remote distance and elevation using special function of TS, Solution of trigonometric problems using COGO function on the field / Site, Calculate 2D, 3D area on the field / Site, Calculation of surface volume on the field / Site, Survey work estimation factors, procedure for download and upload data to TS, TS data formats, Preparation simple survey map using Software.	**25**
iii.	**Field trip**	Organization of field trip for Total Station	**05**
iv.	**Project work**	(Application of Total Station in specific domain area) Total Station data acquisition, Processing and Presentation Project Report : Final Reporting	**20**
v.	**Viva – voce**	Based on Project Work	**05**

REFERENCE

- Satheesh Gopi, (2007), Advanced Surveying: Total Station, GIS and Remote Sensing Pearson Education India,
- Charles D. Ghilani, Paul Richard Wolf (2008): Elementary Surveying: An Introduction to Geomatics, Prentice Hall,
- N. N. Basak (1994): Surveying and Leveling, Tata McGraw Hill Publishing Company LTD., New Delhi.

- Parkinson, B. Spilker J. : (Eds.) (1996) GPS : Theory and Applications Vol. I & II, AIAA, Washington.

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B. A. Part - III

SEC 02

A CERTIFICATE COURSE TRAVEL AND TOURISM

Objectives:

i. To introduce the fundamental concept of Travel and Tourism.

ii. To familiarize with the significance and emerging trends in tourism.

Unit No	Topic	Subtopic	No. of Periods
1	Introduction to Tourism	Meaning & definitions of tourism, traveler, excursionist, tourists - Objectives, nature & Classification of tourism & tourists. Tourism recreation & leisure inter-relationship. Growth and development of Tourism through the ages.	**10**
2	Economics of Tourism Industries	Emergence of Thomas Cook – Emergence of Travel Intermediaries- Definition - The travel Market: Business Travel - Corporate Travel - Commercial Group Travel - Institutional Travel - Leisure Travel - Family Travel - Single Resort Travel - Special Interest Travel. Types of travel agency and tour operations - Inter-relationship between Travel agency and tour operation. Indian travel agencies and tour operators - an overview.	**10**
3	Components and Forms of Tourism	Components of tourism Forms of Tourism: religious, Medical Tourism, historical, social, adventure, health, business, conferences, conventions, incentives, sports Agro and adventure tourism	**10**
4	Major tourist attractions in India	physical and political attractions of Indian subcontinents. Tourism attractions in different states and territories of India.	**10**
5	Tourism Marketing	Marketing for Hospitality and Tourism – Definition – Core Marketing Concepts – Marketing Philosophies – Selling Vs Marketing, Differences between Products and Services – Technology and Marketing – Specific features of Tourism Marketing.	**10**
		FIELD WORK CASE STUDIES Planning and Organization of tour on famous routs for 2 to 15 days.	**40**

References:

8. Dennis L &Foseter – Glencoe (2003), an Introduction to Travel & Tourism, McGrawHill
9. Ghosh Bishwanth (2000), Tourism & Travel Management, Second Revised Edition Vikas Publishing House Pvt Ltd, New Delhi.
10. Kaul R.N 91991), Dynamics of Tourism, Sterling Publishers Pvt Ltd, Volume 1,2 & 3 New Delhi,
11. PranNath Seth(1997),Successful Tourism Management, Sterling Publishers Pvt Ltd, New Delhi,
12. Praveen Sethi(1999), Tourism for the Next Millennium, Rajat Publication New Delhi.
13. Singh Anand (2005), Tourism in Ancient India, Serials Publications, New Delhi.
14. Sinha R.K (2003), Growth and Development of Modern Tourism, Dominant Publishers, New Delhi

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B. A. Part - III

SEC 03

A CERTIFICATE COURSE IN QGIS

Objectives:

- Learn the concepts of open-source software
- Understand the interface of QGIS and its plug-ins
- Learn how to fetch data into QGIS and work with table attributes
- Create maps using QGIS followed by its printing process

Unit I :Introduction of QGIS 15

Objectives, working with projection, installation of software and plugins

Unit II :Georeferencing and Digitization **20**

Toposheet Registration.

Digitization of Toposheet - point, Line and polygon

Unit III :Types of data and Analysis **15**

Vector data, raster data

Dissolving and Merging

Clipping and Union Buffering techniques

Unit IV: Layoutand map composition **20**

Map Preparation and composition,
Symbology in of QGIS.
Working with Tables(Join Tables)

Unit V:Application in Urban Planning: 20

Mapping urban landuse, transportation network, Utility-Facility mapping

References:

- A comprehensive introduction to Quantum GIS – RudigerThiede and others
- Introduction to QGIS – Scott Madry
- Learn QGIS – Andrew Cutts, Anita Graser
- www.qgis.org

Solapur University, Solapur

B.A. Part – I

History

Chhatrapati Shivaji Maharaj and His Times (1600-1707 A.D.)

Revised Syllabus (CBCS)

(w.e.f. June 2019)

Semester I

Credits – Theory- 03 and Tutorial - 01= 04 Credits Total Periods – 60

Unit – I Rise of Maratha Power 12+3=15

a) Background – Political, Social, Economic and Religious
b) Role of Shahaji Raje
c) Role of Jijabai and early activities of Chhatrapati Shivaji Maharaj

Unit – II Chhatrapati Shivaji Maharaj and Adilshahi relations 12+3=15

a) Conflict with Javali's More
b) Conflict with Afzalkhan
c) Siege of Panhala

Unit – III Chhatrapati Shivaji Maharaj and Mughal relation 12+3=15

a) Campaign of Shahistekhan
b) Surat Expeditions
c) Mirza Raja Jaysing's Expedition
d) Visit to Agra

Unit – IV Chhatrapati Shivaji Maharaja's Coronation and Karnataka Expedition

12+3=15

a) Chhatrapati Shivaji Maharaja's First Coronation
b) Chhatrapati Shivaji Maharaja's Second Coronation
c) Karnataka Expedition

List of Reference Books

1. Andre Wink, Land and Sovereignty in India : Agrarian Society and Polities under the Eighteenth Century Maratha Swarajya, Cambridge, 1986.
2. Balkrishna, Shivaji The Great, Vol. IV., Balkrishna, Kolhapur, 1940, D. B. Taraporevala, 1932, Kitab Mahal, Bombay, 1932, Arya Book Depot., Kolhapur, 1946.
3. Chitnis, K. N., Socio-Economic Aspects of Medieval India, Four Vol., R. K. Chitnis, Poona, 1979.
4. Duff James Grant, History of the Marathas.
5. Fukazawa, H., The Medieval Deccan, Oxford, Bombay, 1991.
6. James Grant - Duft. History of the Marathas.
7. Kulkarni A. R., Maharashtra in the Age of Shivaji, Deshmukh & Comp., Pune, 1969.
8. Kulkarni A. R., Medieval Maratha Country, New Delhi, 1996.
9. Pagadi Setumadhavrao, Shivaji, National Book Trust, India, 1993.
10. Ranade, M. G., Rise of Maratha Power and Other Essays, University of Bombay, 1961.
11. Sarkar Jadunath, Shivaji and His Times, Orient Blackswan, 1992.
12. आठवले सदाशिव, शिवाजी आणि शिवयुग, मेहता पब्लिशिंग हाऊस, पुणे, १९९२.
13. कुलकर्णी अ.रा., शिवकालीन महाराष्ट्र, राजहंस प्रकाशन, पुणे, १९९७.
14. पगडी सेतु माधववराव, शिवचरित्र – एक अभ्यास, शिवाजी विद्यापीठ, कोल्हापूर, २०१२.
15. पवार जयसिंगराव, शिवाजी आणि शिवकाळ, फडके प्रकाशन, कोल्हापूर, १९९३.

Solapur University, Solapur

B.A. Part – I

History

Chhatrapati Shivaji Maharaj and His Times (1600-1707 A.D.)

Revised Syllabus (CBCS)

(w.e.f. June 2019)

Semester II

Credits – Theory- 03 and Tutorial - 01=04 Credits Total Periods – 60

Unit – I	Chhatrapati Sambhaji Maharaj	12+3=15
	a) Early Life b) Conflict with Portuguese and Siddi c) Conflict with Mughal	
Unit – II	Maratha's War of Independence	12+3=15
	a) Work of Chhatrapati Rajaram Maharaj b) Work of Maharani Tarabai c) Work of Santaji Ghorpade and Dhanaji Jadhav	
Unit – III	Civil Administration	12+3=15
	a) Central Administration b) Provincial Administration c) Village Administration	
Unit – IV	Military Administration and Judicial System	12+3=15
	a) Nature and Features of Military b) Fort Administration c) Judicial System	

List of Reference Books

1. Andre Wink, Land and Sovereignty in India : Agrarian Society and Polities under the Eighteenth Century Maratha Swarajya, Cambridge, 1986.
2. Balkrishna, Shivaji The Great, Vol. IV., Balkrishna, Kolhapur, 1940, D. B. Taraporevala, 1932, Kitab Mahal, Bombay, 1932, Arya Book Depot., Kolhapur, 1946.
3. Chitnis, K. N., Socio-Economic Aspects of Medieval India, Four Vol., R. K. Chitnis, Poona, 1979.
4. Fukazawa, H., The Medieval Deccan, Oxford, Bombay, 1991.
5. Duff James Grant, History of the Marathas
6. Gute V.T., The Judicial System of Marathas: A detailed study of the judicial Institutions in Maharashtra from 1600-1818 A.D., Deccan College Postgraduate and Research Institute, 1953.
7. Kulkarni A. R., Maharashtra in the Age of Shivaji, Deshmukh & Comp., Pune, 1969.
8. Kulkarni A. R., Medieval Maratha Country, New Delhi, 1996.
9. Pagadi Setumadhavrao, Shivaji, National Book Trust, India, 1993.
10. Ranade, M. G., Rise of Maratha Power and Other Essays, University of Bombay, 1961.
11. Sarkar Jadunath, Shivaji and His Times, Orient Blackswan, 1992.
12. Sen S.N., Military System of the Marathas with brief history of Their Maritime Activies, Calcutta, 1928.
13. Sen S.N., Administrative system of the Marathas, K.P.Bagchi, 1925.
14. आठवले सदाशिव, शिवाजी आणि शिवयुग, मेहता पब्लिशिंग हाऊस, पुणे, १९९२.
15. बेंद्रे वा.सी., श्री.छत्रपती संभाजी महाराज यांचे विचिकित्सक चरित्र,
16. कुलकर्णी अ.रा., शिवकालीन महाराष्ट्र, राजहंस प्रकाशन, पुणे, १९९७.
17. गोखले कमल, शिवपुत्र संभाजी, कॉन्टीनेन्टल प्रकाशन, पुणे.
18. पगडी सेतु माधववराव, शिवचरित्र – एक अभ्यास, शिवाजी विद्यापीठ, कोल्हापूर, २०१२.
19. पगडी सेतु माधवराव, मराठयांचे स्वातंत्र्ययुध्द, १९६२.
20. पवार जयसिंगराव, शिवाजी आणि शिवकाळ, फडके प्रकाशन, कोल्हापूर, १९९३.
21. हनवते उत्तम, सेनापती धनाजी जाधव, अभिजित पब्लिकेशन, लातूर.

PUNYASHLOK AHILYADEVI HOLKAR SOLAPUR UNIVERSITY, SOLAPUR

पुण्यश्लोक अहिल्यादेवी होळकर
सोलापूर विद्यापीठ
।। विद्यया संपन्नता ।।

NAAC Accredited-2015
'B' Grade (CGPA 2.62)

Name of the Faculty-	**Humanities**
Syllabus-	**History (CBCS)**
Name of the Course-	**B.A.II**
With effect from -	**June,2020**

Objectives of the Course

***History Modern Europe (1750 – 1871 A.D.)**

To acquaint the student with the socio-economic and political development in other countries. And understand the contemporary Europe in the light of its background History. Become aware of the principles, forces, processes and problems of the recent times. Highlight the rise and growth of Nationalism as a movement in Europe and world.

***History of Indian Freedom Movement (1857 - 1950 A.D.)**

To introduce the Indian Freedom Movement in broad manner .Modern India owes a lot to the legacy of India's Freedom struggle. This course will help the students to understand the major events of India's freedom struggle, its legacy and its contribution to the making of modern India. To instil the spirit of Nationalism among students.

***History of Social Reforms in Maharashtra (1818 – 1970 A.D.)**

To acquaint the students with social change process in modern Maharashtra.To generate curiosity to detail study the work of social reformers.During the 19th and 20th centuries a series of social reform movements tool place in Maharashtra and India. This reform movement advocated in supported changes in the traditional Indian society. They propagated the values of social justice and equality. The advocated the abolition of caste system and supported the emancipation of women. This course has been framed to make the students aware of this social reform movement and their contribution in Maharashtra.

B.A.PART – II

History Paper No – III

History Modern Europe (1750 – 1871 A.D.)

Revised Syllabus (w.e.f. June 2020)

Semester – III

Credits:Theory 04 Theory Lectures45 +Tutorial 15 Total =**60**

Unit – I	**Industrial Revolution**	**14**
	A) Causes	
	B) Course	
	C) Effects	
Unit – II	**French Revolution, 1789**	**16**
	A) Causes	
	B) Course	
	C) Effects	
Unit – III	**Napoleon Bonaparte**	**16**
	A) Rise of Napoleon Bonaparte	
	B) Napoleon's Reforms	
	C) Conquests, Continued policy and Downfall	
Unit – IV	**Age of Metternich**	**14**
	A) Vienna Congress, 1815	
	B) Life and work of Metternich	
	C) Concert of Europe	

List of Reference Books –

1) Cipolla C.M. – Fontana Economic History of Europe
2) Charles Downer Hazen – Modern Europe up to 1945
3) David Thomson – Europe since Napoleon
4) Hobsbawn Eric – The Age of Revolution : Europe 1789 – 1848
5) Lefebreve George – Coming of the French Revolution
6) Peter Mathias – First Industrial Revolution
7) Rao B.V. – History of Modern Europe (1789 - 1992)
8) Soboul Albert – History of the French Revolution

9) Will Durant – The age of Napoleon

10) Wood Anthony – History of Europe 1815 – 1960

११) आठवले सदाशिव - अर्वाचीन युरोप, कॉन्टिनेंटल प्रकाशन

१२) ओतुरकर, महाजन - जगाचा संक्षिप्त इतिहास, पुणे विद्यार्थी गृह, १९७४

१३) कोलारकर श.गो. - युरोपचा इतिहास, मंगेश प्रकाशन

१४) गायकवाड, कदम, सुर्यवंशी - आधुनिक युरोपचा इतिहास, राविल पब्लिकेशन, सातारा, १९७२

१५) मार्डीकर मदन - आधुनिक युरोपचा इतिहास, विद्या बुक्स

16) तळवळकर गोविंद - बदलता युरोप, मॅजेस्टिक प्रकाशन, १९९१

17) वैदय सुमन - आधुनिक जग १८१४ - १९१४, साईनाथ प्रकाशन, नागपूर

18) शिरगावकर शरावती - आधुनिक युरोप, विद्या प्रकाशन, १९७८

B.A.PART – II

History Paper No – V

History of Modern Europe (1750 – 1871 A.D.)

Revised Syllabus (w.e.f. June 2020)

Semester – IV

Credits:Theory 04 Theory Lectures45 +Tutorial 15 Total =**60**

Unit – I	**Revolutionary Movements**	**16**
	A) French Revolution, 1830 A.D.	
	B) France between 1830 –1848 A.D.	
	C) French Revolution, 1848 A.D.	
Unit – II	**Napoleon III**	**14**
	A) Internal Policy	
	B) External policy	
	C) Evaluation of Napoleon III	
Unit – III	**Unification Movements**	**15**
	A) Unification of Italy	
	B) Unification of Germany	
Unit – IV	**Modern Concepts**	**15**
	A) Imperialism	
	B) Nationalism	
	C) Socialism	

List of Reference Books –

1) Charles Downers, Hazen – Modern Europe up to 1945
2) David Thomson – Europe since Napoleon
3) Evans J. – The Foundations of Modern state in 19th century Europe
4) Hamerow T.S. – Restoration, Revolution and Reaction : Economics and politics in Germany (1815 - 1871)
5) Hobsbawn Eric – The Age of Revolution : Europe 1789 – 1848
6) Peter Jones – The 1848 Revolution
7) Rao B.V. – History of Modern Europe (1789-1992)

8) Robert Gildea – Barricdes and borders : Europe 1800 – 1914

9) Taylor J.P. – The struggle for Mastery in Europe

10) Webster C.K. – The congress of Vienna 1814 – 15

11) Wood Anthony – History of Europe 1815 – 1960

12) आठवले सदाशिव - अर्वाचीन युरोप, कॉन्टिनेंटल प्रकाशन

१३) ओतुरकर, महाजन - जगाचा संक्षिप्त इतिहास, पुणे विद्यार्थी गृह, १९७४

१४) कुलकर्णी, फडके - आधुनिक युरोप

१५) केळकर न.चि. - गॅरिबॉल्डी

१६) कोलारकर श.गो. - युरोपचा इतिहास, मंगेश प्रकाशन

१७) गायकवाड, कदम, सुर्यवंशी - आधुनिक युरोपचा इतिहास, राविल पब्लिकेशन, सातारा, १९७२

१८) मार्डीकर मदन - आधुनिक युरोपचा इतिहास, विद्या बुक्स

१९) तळवळकर गोविंद - बदलता युरोप, मॅजेस्टिक प्रकाशन, १९९१

20) वैदय सुमन - आधुनिक जग १८१४ - १९१४, साईनाथ प्रकाशन, नागपूर

21) सावरकर वि.दा - जोसेफ मॅझिनी, स्वातंत्र्यवीर सावरकर राष्ट्रीयस्मारक ट्रस्ट

22) शिरगावकर शरावती - आधुनिक युरोप, विद्या प्रकाशन, १९७८

B.A.PART – II

History Paper No – IV

History of Indian Freedom Movement (1857 - 1950 A.D.)

Revised Syllabus (w.e.f.June2020)

Semester – III

Credits:Theory 04 Theory Lectures45 +Tutorial 15 Total =**60**

Unit – I	**Revolt of 1857**	**16**
	A) Background and causes	
	B) Course and failure	
	C) Effects	
Unit – II	**Socio – Religious Movements**	**14**
	A) BrahmoSamaj	
	B) AryaSamaj	
	C) SatyashodhakSamaj	
Unit – III	**Indian Nationalism**	**14**
	A) Rise and Development of Nationalism	
	B) Foundation of Indian National Congress	
	C) Work of Moderates	
Unit – IV	**Era of Extremist and LokmanyaTilak**	**16**
	A) Rise of Extremist	
	B) Partition of Bengal and Swadeshi Movement	
	C) Home Rule Movement	

List of Reference Books –

1) Bipin Chandra – Indias struggle for Independence, Penguin, New Delhi
2) Bipin Chandra - Frredom struggle, National Book Trust, New Delhi
3) Chaudhari S.B. – Civil Rebellion in the Indian Mutiries 1857 – 59
4) Desai A.R. – Social Background of Indian Nationalism, Popular Book Depot, Bombay
5) Dodwell H.H. (ed) – The Cambridge History of India, S.Chand, Delhi.
6) Dutt R.P. – India Today, People's Publishing House, Bombay
7) Dutt R.C. – The Economic History of India Under Early British Rule, Trubner& Co. London
8) Datta K.K. – Social History of Modern India, Macmillan, New Delhi.

9) Grover B.L.,Grover S. – Modern Indian History

10) Gopal Ram – British Rule in India

11) Heimsath Charles – Indian Nationalism and Hindu social Reform.

12) Joshi P.C. (ed) – Rebellion 1857: A Symposium, Peoples Publishing

13) Joshi V.C. (ed) – Rammohan Roy and the process of Modernisationin India.

14) Mujumdar R.C. (ed) – Struggle for freedom

15) Natrajan S. – A Century of Social Reform in India.

16) Prasad I, Subhedar – History of Modern India

17) Robert P.E. – History of British India.

18) SarkarSumit – Bibliographical survey of Social Reform Movement in the 18th and 19th century, ICHR

19) Sen S.N. – Eighteen fifty – seven, Publication Division, Delhi.

20) Seal Anil – Emergence of Indian Nationalism

21) Tarachand – History of the freedom Movement in India, Vol.I Ministry of Information and Broadcasting, New Delhi

२२) कदम य.ना. - समग्र भारताचा इतिहास, फडके प्रकाशन, कोल्हापूर

२३) कोलारकर शं.गो - आधुनिक भारत १७६० - १९५०, मंगेश प्रकाशन, नागपूर

२४) पवार जयसिंगराव - भारताच्या स्वातंत्र्य चळवळीचा इतिहास, फडके प्रकाशन, कोल्हापूर

२५) फाटक न.र. - भारतीय राष्ट्रवादाचा विकास, र.ग.जोशी, पुणे

२६) जावडेकर शं.द. - आधुनिक भारत, कॉन्टिनेंटल प्रकाशन, पुणे

२७) वैदय सुमन, कोठेकर शांता - आधुनिक भारताचा इतिहास१८५७-१९२०,साईनाथ प्रकाशन, नागपूर

२८) सरदेसाईबी.एन., नलवडे व्ही.एन. - आधुनिक भारताचा इतिहास, फडके प्रकाशन, कोल्हापूर

B.A.PART – II

History Paper No – VI

History of Indian Freedom Movement (1857 - 1950 A.D.)

Revised Syllabus (w.e.f.June2020)

Semester – IV

Credits:Theory 04 Theory Lectures45 +Tutorial 15 Total =**60**

Unit – I	**Contribution of Revolutionaries**	**14**
	A) Bengal	
	B) Maharashtra	
	C) Punjab	
Unit – II	**Gandhian Era**	**16**
	A) Non Co – operation Movement	
	B) Civil Disobedience Movement	
	C) Quit India Movement	
Unit – III	**Constitutional Developmentand Indian National Army**	**15**
	A) Morley–Minto Act, 1909 andMontford Act, 1919	
	B) Government of India Act, 1935	
	B) Subhashchandra Bose and Indian National Army	
Unit – IV	**Independence and Partition**	**15**
	A) Negotiations for independence and partition	
	B) Indian Independence Act,1947	
	C) Indian constitution : Salient features	

List of Reference Books –

1) Bipin Chandra et.al. –Indiasstuggle for Independence, Penguin, New Delhi
2) Bipin Chandra - Frredom struggle, National Book Trust, New Delhi
3) Bipin Chandra – Communalism in modern India, Vikas Publishing House, New Delhi.
4) Brown Judith – Gandhi's rise to power 1915 - 22
5) Dodwell H.H. (ed) – The Cambridge History of India, S.Chand, Delhi.
6) Dutt R.P. – India Today, People's Publishing House, Bombay
7) Dutt R.C. – The Economic History of India Under British Rule, London

8) Datta K.K. – Social History of Modern India, Macmillan, New Delhi.
9) Grover B.L., Grover S. – Modern Indian History
10) Gopal Ram – British Rule in India
11) Gopal S. – Jawaharlal Nehru: A Biography, Jonathan cape, London.
12) Mahajan V.D. – British Rule in India and After
13) कदम य.ना. - समग्र भारताचा इतिहास, फडके प्रकाशन, कोल्हापूर
14) कोलारकर शं.गो - आधुनिक भारत १७६० - १९५०, मंगेश प्रकाशन, नागपूर
15) पवार जयसिंगराव - भारताच्या स्वातंत्र्य चळवळीचा इतिहास, फडके प्रकाशन, कोल्हापूर
16) फाटक न.र. - भारतीय राष्ट्रवादाचा विकास, र.ग.जोशी, पुणे
17) जावडेकर शं.द. - आधुनिक भारत, कॉन्टिनेंटल प्रकाशन, पुणे
18) वैदय सुमन, कोठेकर शांता - आधुनिक भारताचा इतिहास१८५७-१९२०,साईनाथ प्रकाशन, नागपूर
19) सरदेसाई बी.एन., नलवडे व्ही.एन - आधुनिक भारताचा इतिहास, फडके प्रकाशन, कोल्हापूर

B.A.PART – II

Inter Disciplinary Subject

History of Social Reforms in Maharashtra (1818 – 1970 A.D.)

Revised Syllabus (w.e.f. June 2020)

Semester – III

Credits:Theory 04 Theory Lectures45+Tutorial 15 Total =**60**

Unit – I	**Maharashtra in the early 19th century**	**15**
	A) Social condition	
	B) Religious condition	
	C) Economic condition	
Unit – II	**Early Reforms in British Period**	**15**
	A) Administration	
	B) Education	
	C) Press	
Unit – III	**Early Reformers**	**14**
	A) Jagannath Shankar Sheth	
	B) GopalHariDeshmukh	
	C) BhauDaji Lad	
Unit – IV	**Life and Work of Mahatma JotibaPhule**	**16**
	A) Work for education and women	
	B) Work for untouchable and peasant	
	C) SatyashodhakSamaj and literature	

List of Reference Books –

1) कीर धनंजय - महात्मा जोतीराव फुले
2) कुलकर्णी पी.बी. - नाना शंकरशेठ यांचे चरित्र काळ व कामगिरी
3) पारिख (संपा) - लोकहितवादी समग्र वाड:मय
४) फडके य.दि - विसाव्या शतकातील महाराष्ट्र खंड१
5) फडकुले निर्मल - लोकहितवादी काळ आणि कर्तृत्व, कॉन्टिनेंटल प्रकाशन, पुणे
6) भिडे, पाटील - महाराष्ट्रातीलसमाजसुधारणेचा इतिहास, फडके प्रकाशन,
7) भोळे भा.ल. - महात्मा ज्योतिबा फुले वारसा आणि वसा, साकेत प्रकाशन,
8) नरकेहरि, फडके य.दि. - महात्मा फुले गौरव ग्रंथ, महाराष्ट्र राज्य शिक्षण विभाग, मुंबई
9) जावडेकर शं.द. - आधुनिक भारत, कॉन्टिनेंटल प्रकाशन, पुणे

B.A.PART – II

Inter Disciplinary Subject

History of Social Reforms in Maharashtra (1818 – 1970 A.D.)

Revised Syllabus (w.e.f. June 2020)

Semester – IV

Credits:Theory 04 Theory Lectures 45 +Tutorial 15 Total = **60**

Unit – I	**Life and Work of RajarshiChhatrapatiShahuMaharaj**	**16**
	A) Educational work	
	B) Social and Religious work	
	C) Economic and Political work	
Unit – II	**Social Reformers**	**14**
	A) MaharshiVitthalRamjiShinde	
	B) KarmaveerBhauraoPatil	
Unit – III	**Women Reformers**	**14**
	A) SavitribaiPhule	
	B) PanditaRamabai	
Unit – IV	**Life and Work of Dr.BabasahebAmbedkar**	**16**
	A) Social and Religious work	
	B) Educational work	
	C) Politicalwork and literature	

List of Reference Books –

1) कीर धनंजय - राजर्षी शाहू छत्रपती

2) कीर धनंजय - डॉ.बाबासाहेब आंबेडकर

3) दांडेकर गो.नि. - श्री.गाडगे महाराज

4) पवार जयसिंगराव (संपा) - राजर्षी शाहूस्मारक ग्रंथ

5) पवार दया (संपा) - डॉ.बाबासाहेब आंबेडकर गौरव ग्रंथ

6) पवार गो.मा. - महर्षी वि.रा.शिंदे समग्र वाड.मय

7) फाटक न.र. - महाराष्ट्रातीलसहा थोर पुरुष

८) फडके य.दि - विसाव्या शतकातील महाराष्ट्र खंड१ ते ४

9) भोळे भास्कर - वि.रा.शिंदे :आर्थिक, सांस्कृतिक विचार

११)भिडे, पाटील - महाराष्ट्रातीलसमाजसुधारणेचा इतिहास

१२) मोरे विलास - वि.रा.शिंदे आणि सामाजिक चळवळ

Equivalent Subject for Old Syllabus

Sr. No.	Name of the Old Paper	Name of the New Paper
1)	Modern Europe (1750 – 1871 A.D.)	History ofModern Europe(1750 – 1871 A.D.)
2)	Modern India (1857 – 1950 A.D.)	History of Indian Freedom Movement (1857 – 1950 A.D.)
3)	History of Social Reforms in Maharashtra (1818 – 1970 A.D.)IDS	History of Social Reforms in Maharashtra (1818 – 1970 A.D.)IDS

Nature of Question Paper

Time:2.00Hours **Marks: 40**

Instruction: 1) All questions are compulsory.

2) Figures to right indicate full marks.

Ques.1 Multiple choice questions (with four alternatives) (Eight) 08 Marks

Ques.2 Short answerstype questions (any Four out of Six) 12 Marks

Ques.3Any one broad answer type question. 10 Marks

A

OR

B

Ques.4 broad answer type question 10 Marks

PUNYASHLOK AHILYADEVI HOLKAR SOLAPUR UNIVERSITY, SOLAPUR

NAAC Accredited- 2015 B Grade (CGPA 2.62)

CBCS Pattern Syllabus for B.A. III History

Name of the Faculty	-	**Humanities**
Syllabus	-	**History**
Name of the Course	-	**B.A. III**
With effect from	-	**June, 2021**

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B.A. Part III

Subject - History

CBCS Pattern Syllabus (w. e. f. June 2021)

SEMESTER- V

Paper-VII	Ancient India (Pre-Historic Period to 650 A.D.)	Credits -04
Paper-VIII	Mughal India (1526 A.D.- 1707 A.D.) India	Credits -04
Paper-IX	Expansion and Downfall of the Maratha Power (1707 - 1818 A.D.)	Credits -04
Paper-X	Modern World (1870 -2000 A.D.)	Credits - 04
Paper-XI	Historical Sources, Research and Places	Credits - 04

SEMESTER- VI

Paper-XII	Ancient India (Pre-Historic Period to 650 A.D.)	Credits -04
Paper-XIII	Mughal India (1526 A.D.- 1707 A.D.) India	Credits -04
Paper-XIV	Expansion and Downfall of the Maratha Power (1707 - 1818 A.D.)	Credits -04
Paper-XV	Modern World (1870 -2000 A.D.)	Credits -04
Paper-XVI	Historical Sources, Research and Places	Credits -04

Objectives and Outcomes of the course

Paper VII and XII Ancient India (Pre-Historic Period to 650 A.D.)

Objectives:

1. To survey the sources of history of Ancient India.
2. To introduce various historical concepts of Ancient period.
3. To Introduce the major events in development of Indian society and culture
4. To get insight into the history and cultural practices of Ancient Indian religions, such as Buddhism and Jainism.
5. To study Ancient Indian art and architecture.

Outcomes:

1. Students will be able to examine institutional basis of Ancient India.
2. Identify the rulers and their administration.
3. Evaluate the legacy of Buddhism and Jainism.
4. Analyze the features of art and architecture of Ancient India.
5. Students will be able to explain our heritage through cultural aspects of Ancient India.

Paper VIII and XIII Mughal India (1526A.D.-1707A.D.)

Objectives:

1. To survey the sources of history of Mughal India.
2. To know the impact of Mughal rule on Indian polity and society.
3. The course intends to provide and understanding of the social, economic, religious bases of Medieval India.
4. To study Medieval Indian art and architecture.

Outcomes:

1. Analyze the impact of Mughal rule on Indian polity and society.
2. Assess the economy and religion of Mughal rule.
3. Students will be able to examine social, economic and religious condition in Medieval period
4. Analyze the features of art and architecture of Mughal period.

Paper IX and XIV Expansion and Downfall of the Maratha Power (1707-1818 A.D.)

Objectives:

1. To enable the students to understand the process that led to the expansion of the Maratha power.
2. To understand changed nature of Maratha polity during the Peshwa period.
3. To examine the dynamics of Maratha Confederacy.
4. To examine role of Marathas in National politics of eighteenth century India.
5. Analyze the forces that led to the downfall of the Maratha power.
6. To understand basic components of the Maratha administration system.

Outcomes:

1. Students will be able to analyze the Marathas policy of expansionism
2. Understand the role played by the Marathas in the eighteenth century polity.
3. Identify the causes of the downfall of Maratha empire.
4. Students will be able to analyze the civil administration, military administration and judicial system during the Peshwa period.

Paper X and XV Modern World (1870 - 2000 A.D.)

Objectives:

1. To help the students to know Modern World.
2. To explain various new concepts in Modern World.
3. To acquaint the student with the political and socio-economic development in other countries
   a understand the contemporary world in light of its background history.
4. To state the importance of brotherhood, peace, Co-operation and national security.
5. To examine peace keeping process in the Modern World.

Outcomes:

1. Students will understand the relations between the nations in the world.
2. Students will study the political, social and economic challenges in the Modern World.
3. Analyze the streamline the role of League of Nations and UNO.
4. Students understand the consequences of the World War l, World War II and Cold War regarding the present global crises.

Paper XI and XVI Historical Sources, Research and Places

Objectives:

1. To understand meaning and importance of History.
2. To introduce students to the nature and scope of History.
3. To introduce Evaluation of sources and basics of research.
4. To introduce historical places in Maharashtra.
5. To study importance, types and structure of forts.
6. To examine the history writing of selected historians.

Outcomes:

1. Students will be able to explain what is History? and importance of History.
2. Identify the different types of primary and secondary sources.
3. Students will be able to examine sources of History.
4. Students will understand the Museum and Historical tourism.
5. Analyze the work of Great historians.

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B.A. III Semester-V
History Paper No-VII

Ancient India (Pre-Historic Period to 650 A.D.)

CBCS Pattern Syllabus (w. e. f. June 2021)

Credits - Theory - 03 Tutorial – 01 = Total 04 Total Periods 60

Unit – I Sources of Ancient Indian History. 12+3=15

A) Archaeological Sources.

B) Literary Sources

C) Importance of Sources.

Unit – II Pre-Historic Age 12+3=15

A) Paleolithic.

B) Mesolithic.

C) Neolithic.

Unit - III Indus Valley Civilization 12+3=15

A) Discovery and Town Planning.

B) Social, Religious and Economic Conditions.

C) Decline of Indus Valley Civilization.

Unit - IV Vedic Period 12+3=15

A) Origin of Aryans.

B) Political Condition.

C) Social and Religious Condition

List of Reference Books:

1. गायधनी, राहुलकर : प्राचीन भारताचा सांस्कृतिकइतिहास.
2. देव शां. भा. देव : पुरातत्व विद्या.
3. जोशी तर्कतीर्थ लक्ष्मणशास्त्री : वैदिकसंस्कृतीचा विकास.
4. झा डी. एन., श्रीमाळी : प्राचीन भारताचा इतिहास.
5. थापर रोमीला, :प्राचीन भारताचा इतिहास.
6. भिडे गजानन : प्राचीन भारत.
7. ढवळीकर, गायकवाड, देगलूरकर, प्राचीन भारतीय इतिहास व संस्कृती.
8. भिडे, पाटील : प्राचीन भारतीय कला.
9. माटे म. श्री. : प्राचीन भारतीय कला.
10. वर्णेकर श्रीधर भास्कर : भारतीय धर्म व तत्वज्ञान
11. गोसावी र.रा : पाच भक्तियोग.
12. भिडे गजानन : प्राचीन भारतीय राजकीय व सांस्कृतिकइतिहास.
13. भिडे गजानन : प्राचीन भारतीय संस्थांचा इतिहास.
14. जोशी तर्कतीर्थ लक्ष्मणशास्त्री (संपा.) : मराठी विश्वकोश (संबंधित खंड).
15. महादेवशास्त्री जोशी (संपा.) : भारतीय संस्कृती कोश (संबंधित खंड).
16. शहा सुमतीबाई (संपा.) :पूर्णार्ध्य (जैन ज्ञानकोश.)
17. Altekar A. S. : State and Government in Ancient India.
18. Kosambi D. D. : An Introduction to the Study of Indian History.
19. Mahajan V. D. : Ancient India.
20. Mujumdar R. C. : Ancient India.
21. Possehl G. L. (ed.) :Ancient City of the Indus.
22. Sankalia H. D. : Pre-history and proto-history of india and pakistan.
23. Tripathi R.S. : History of Ancient India.

B.A. III Semester-VI

History Paper No-XII

Ancient India (Pre-Historic Period to 650 A.D.)

CBCS Pattern Syllabus (w. e. f. June 2021)

Credits - Theory - 03 Tutorial – 01 = Total 04 Total Periods 60

Unit – I India During 6th B.C. 12+3=15

A) Rise of Magadha Empire and sixteen Mahajanpadas

B) Jainism : life and Work of Vardhaman Mahavir

C) Buddhism : Life and Work of Gautam Buddha

Unit – II Mauryan Empire 12+3=15

A) Contribution of Chandragupta Maurya

B) Ashoka and his Dhamma

C) Mauaryan Administration

Unit - III Age of the Satvahanas and Guptas 12+3=15

A) Rise and Expansion of Satvahanas

B) Rise and Expansion of Guptas

C) Social, Economic and cultural condition of Gupta Period

Unit - IV Vardhan Dynasty and Vakataka Dynasty 12+3=15

A) Rise of Vardhan Dynasty

B) Contribution of Harshavardhan

C) Contribution of Vakataka

List of Reference Books :

1. गायधनी, राहुलकर : प्राचीन भारताचा सांस्कृतिकइतिहास.
2. देव शां. भा. देव : पुरातत्व विद्या.
3. जोशी तर्कतीर्थ लक्ष्मणशास्त्री : वैदिकसंस्कृतीचा विकास.
4. झा डी. एन., श्रीमाळी : प्राचीन भारताचा इतिहास.
5. थापर रोमीला, :प्राचीन भारताचा इतिहास.
6. भिडे गजानन : प्राचीन भारत.
7. ढवळीकर, गायकवाड, देगलूरकर, प्राचीन भारतीय इतिहास व संस्कृती.
8. भिडे, पाटील : प्राचीन भारतीय कला.
9. माटे म. श्री. : प्राचीन भारतीय कला.
10. वर्णेकर श्रीधर भास्कर : भारतीय धर्म व तत्वज्ञान
11. गोसावी र.रा : पाच भक्तियोग.
12. भिडे गजानन : प्राचीन भारतीय राजकीय व सांस्कृतिकइतिहास.
13. भिडे गजानन : प्राचीन भारतीय संस्थांचा इतिहास.
14. जोशी तर्कतीर्थ लक्ष्मणशास्त्री (संपा.) : मराठी विश्वकोश (संबंधित खंड).
15. महादेवशास्त्री जोशी (संपा.) : भारतीय संस्कृती कोश (संबंधित खंड).
16. शहा सुमतीबाई (संपा.) :पूर्णार्ध्य (जैन ज्ञानकोश.)
17. Altekar A. S. : State and Government in Ancient India.
18. Kosambi D. D. : An Introduction to the Study of Indian History.
19. Mahajan V. D. : Ancient India.
20. Mujumdar R. C. : Ancient India.
21. Possehl G. L. (ed.) :Ancient City of the Indus.
22. Sankalia H. D. : Pre-history and proto-history of india and pakistan.
23. Tripathi R.S. : History of Ancient India.

B.A. III Semester-V
History Paper No - VIII

Mughal India (1526A.D. - 1707A.D.)

CBCS Pattern Syllabus (w. e. f. June 2021)

Credits - Theory - 03 Tutorial – 01 = Total 04 Total Periods 60

Unit-I Literary Sources of Mughal India 12+3=15

A) Persian and Turki Sources
B) Sanskrit and Marathi Sources
C) Foreign Travel Accounts

Unit-II Foundation of Mughal Empire and Babar 12+3=15

A) Political Condition of India Early 16th Century
B) Early Life of Babar and First Battle of Panipat, 1526
C) Stability of Mughal power : Battle of Khanwa and Ghagra

Unit- III Humayun and Shershaha 12+3=15

A) Early Life and difficulties of Humayun
B) Early Life Of Shershaha
C) Conflict between Humayun and Shershah

Unit- IV Akbar 12+3=15

A) Early Life and Expansion of Mughal Empire
B) Rajput Policy
C) Religious Policy

List of Reference Books :

1. Choudhari M.I. : The State and Religion In Mughal India
2. Habib Irfan : Akbar and His India
3. Lane poole : Aurangzeb
4. Moreland W.H. : From Akbar to Aurangzeb
5. Mujumdar R.C. : The Hostory and Culture of Indian people Vol.III
6. Richards J.F. (ed) : The Mughal Empire Power,Administration& in Mughal India (The Imperial Momentary System of Mughal India
7. Sharma R.S. : The Religious Policy of the Mughal Emperor
8. Sarkar J. : A Short History of Aurangzeb
9. चौबळ ज. श्री (अनु.) : असे होते मोगल
10. दिवेकर ह. रा (अनु.) : बाबराची स्मृतीचित्रे, साहित्य अकादमी नवी दिल्ली, १९९६
11. आठवले सदाशिव : दाराशिकोह, शिवाजी व शिवयुग
12. ढवळे व बारगळ : मध्ययुगीन भारत (इ.स. १२०६ ते १७६१)
13. पगडी सेतु माधवराव : भारतीय मुसलमान शोध व बोध
१४. महाजन व्ही. डी. : मध्यकालीन भारत (इ.स. १००० ते १७६१)
15. कोलारकर शं.ो. : मध्ययुगीन भारत
16. पगडी सेतु माधवराव : मोगल - मराठे संबंध, औरंगजेब दरबाराची बातमीपत्रे खंड -३.

B.A.III Semester-VI
History Paper No - XIII

Mughal India (1526A.D.-1707A.D.)

CBCS Pattern Syllabus (w. e. f. June 2021)

Credits - Theory - 03 Tutorial – 01 = Total 04 Total Periods :: 60

Unit -I Jahangir and Shahajahan **12+3=15**

A) Life and work of Jahangir
B) Life and work of Shahajahan
C) War of Succession

Unit-II Aurangzeb **12+3=15**

A) Early Life of Aurangzeb
B) Northern and Deccan policy of Aurangzeb
C) Evaluation of Aurangzeb

Unit-III Administrative System of Mughal Empire **12+3=15**

A) Administrative System of Shershaha
B) Administrative System of Akbar

Unit-IV Architecture in Mughal Period 12+3=15

A) Period of Babar, Humayun and Shershaha
B) Period of Akbar and Jahangir
C) Period of Shahajahan and Aurangzeb

List of Reference Books :

1. Asher C.B. : Architechture of Mughal India
2. Qureihi I.H. : The Administration of the Mughal Empire
3. Srivastava A.L. :Akbar the Great The Mughal Empire
4. Tripathi R.P. : Some Aspects of Mughal Administration Rise & fall of Mughal Empire
5. Siddiqui Noman Ahmed : Land Revenue administration under Mughals
6. Mate M.S. :Marathas Architecture
7. Chitnis K.N. : Socio-Economics Aspecte of Medieval India
8. काटे पी.व्ही. : मध्ययुगीन भारताचा इतिहास
9. बिराजदार टी.के. : मोगलकालीन भारत
10. गाठाळ एस.एस. : भारताचा इतिहास
11. केशट्टीवार : मध्ययुगीन भारत
12. गायकवाड, सरदेसाई, थोरात, हनमाने : मराठेकालीन संस्था व विचार
13. सक्सेना आर.के. : मुघल शासनप्रणाली
14. गायकवाड, थोरात : मोगलकालीन भारताचा इतिहास
15. चिटणीस कृ. ना. : मध्ययुगीन भारतीय संकल्पना व संस्था खंड १, २, ३, ४

B.A. III Semester-V
History Paper No - IX

Expansion and Downfall of the Maratha Power (1707 -1818 A.D.)

CBCS Pattern Syllabus (w. e. f. June 2021)

Credits - Theory - 03 Tutorial – 01 = Total 04 Total Periods 60

Unit - I Chhatrapati Shahu Maharaj and Civil war 12+3=15

A) Release of Shahu Maharaj
B) Conflict between Chhatrapati Shahu and Maharani Tarabai
C) Work of Peshwa Balaji Vishwanath

Unit – II Peshwa Bajirao - I 12+3=15

A) Southern Expansion and Internal Affairs
B) Northern Expansion
C) Relation with Portuguese and Siddi

Unit - III Peshwa Balaji Bajirao (Nanasaheb) 12+3=15

A) Southern Expansion
B) Northern Expansion
C) Relation with Bhosale and Angre

Unit - IV Third Battle of Panipat, 1761 A.D. 12+3=15

A) Background and causes
B) Course and defeat of the Marathas
C) Effect

List of Reference Books :

1. Dighe V.G.:Peshwa Bajirao - I and Maratha Expansion, Karnataka Pub., Hou.Bombay, 1944.
2. Grant Duff : Histroy of the Marathas Vol - I, Oxford University Press, London, 1921.
3. Kishor Brij : Tarabai and Her Time, Asia Publishing House, Bombay, 1963.
4. Kulkarni A.R. : The Marathas, New Delhi, 1996.
5. Patil Shalini : Maharani Tarabai of Kolhapur, S. Chand and Company, New Delhi.
6. Sardesai G.S. : New History of Maratha Vol. - I, II & III
7. Sarkar Jadunath : Fall of Mughal Empire, Calcutta, 1949.
8. Sinha H.N. : Rise of the Peshwas, Vol. - I, Indian Press, Allahabad, 1931.
9. Srinivasan C.K. : Bajirao the First the Great Peshwa, Asia Pub. House, 1961.

१०. कुलकर्णी अ.रा., खरे ग.ह. (संपा) : मराठयांचा इतिहास खंड - २ व ३,कॉन्टिनेन्टल प्रकाशन,२०१०.

११. खोबरेकर वि.गो. : महाराष्ट्राचा इतिहास - मराठा कालखंड भाग - २, म.रा. सा स सं. मं.मुंबई, २००६.

१२. देसाई स.शं. : मराठयांच्या इतिहासाची साधने, पोतुर्गीज दप्तर, खंड -२, महाराष्ट्रराज्य साहित्य संशोधन मंडळ, मुंबई, १९७४.

१३. पगडी सेतुमाधवराम : हिंदवी स्वराज्य आणि मोगल, व्हिनस प्रकाशन, पुणे १९६६.

१४. पवार आप्पासाहेब (संपा.) : ताराबाईकालीन कागदपत्रे, शिवाजी विद्यापीठ, कोल्हापूर.

१५. पवार जयसिंगराव : मराठी साम्राज्याचा उदय आणि अस्त, मेहता पब्लिशिंग, पुणे.

१६. पवार जयसिंगराव : महाराणी ताराबाई, शिवाजी विद्यापीठ प्रकाशन, कोल्हापूर.

१७. शेजवलकर टी.एस. : पानीपत १७६१, राजहंस प्रकाशन, पुणे

१८. शेजवलकर टी.एस. : निजाम पेशवे संबंध १८ वे शतक, पुणे विद्यापीठ, पुणे.

१९. सरदेसाई गो. स. : मराठी रियासत, खंड ३ ते ८, पॉप्युलर प्रकाशन, मुंबई.

२०. सरदेसाई गो. स. : ब्रिटीश रियासत, खंड १ व २ पॉप्युलर प्रकाशन, मुंबई.

B.A. III Semester-VI
History Paper No - XIV

Expansion and Downfall of the Maratha Power (1707 - 1818 A.D.)

CBCS Pattern Syllabus (w. e. f. June 2021)

Credits - Theory - 03 Tutorial – 01 = Total 04 Total Periods : 60

Unit - I Restoration of the Maratha Power 12+3=15

A)Conflict between Peshwa Madhavrao- I and Raghunathrao
B)Work of Peshwa Madhavrao –I
C)Northern politics after Panipat battle, 1761

Unit - II Period of Barbhai 12+3=15

A) Assassination of Narayanrao and Barbhai council
B) First Anglo - Maratha war
C) Relation with Mysore and Nizam state in Period of Barbhai

Unit - III Decline of the Maratha power 12+3=15

A) Peshwa Bajirao - II
B) Second Anglo - Maratha war and Third Anglo - Maratha war
C) Causes of Downfall of the Maratha power

Unit - IV Administrative system during the Peshwa period 12+3=15

A) Civil Administration
B) Military system
C) Judicial system

List of Reference Books :

1. Grant Duff : Histroy of the Marathas Vol - I, Oxford University Press, London, 1921.
2. Gune V.T. : Judicial system of the Marathas.
3. Kulkarni A.R. : The Marathas, Books and Books, New Delhi, 1996.
4. Patil Shalini : Maharani Tarabai of Kolhapur, S.Chand and Com., NewDelhi.
5. Sardesai G.S. : New History of Maratha Vol. - I, II & III, Munshiram Manoharilal Pvt.Ltd., New Delhi, 1986.
6. Sen Surendranath : Administrative system of the Marathas.
7. Sen Surendranath : Milirary system of the Marathas.
8. Sarkar Jadunath : Fall of Mughal Empire, Calcutta, 1949.
9. Sinha H.N. : Rise of the Peshwas, Vol. - I, Indian Press, Allahabad, 1931.

१०. कुलकर्णी अ.रा., खरे ग.ह. (संपा) : मराठयांचा इतिहास खंड -२ व ३, कॉन्टिनेन्टल प्रकाशन,२०१०.

11. खोबरेकर वि.गो. : महाराष्ट्राचा इतिहास - मराठा कालखंड भाग - २, सा सं. मं. मुंबई, २००६.

१२. देसाई स.शं. : मराठयांच्या इतिहासाची साधने, पोतुर्गीज दप्तर, खंड -२, महाराष्ट्र राज्य साहित्य संशोधन मंडळ, मुंबई, १९७४.

१३. पगडी सेतुमाधवराम : हिंदवी स्वराज्य आणि मोगल, व्हिनस प्रकाशन, पुणे १९६६.

१४. पवार आप्पासाहेब (संपा.) : ताराबाईकालीन कागदपत्रे, शिवाजी विद्यापीठ, कोल्हापूर.

१५. पवार जयसिंगराव : मराठी साम्राज्याचा उदय आणि अस्त, मेहता पब्लिशिंग, पुणे

१६. पवार जयसिंगराव : महाराणी ताराबाई, शिवाजी विद्यापीठ प्रकाशन, कोल्हापूर.

१७. शेजवलकर टी.एस. : पानीपत १७६१, राजहंस प्रकाशन, पुणे

१८. शेजवलकर टी.एस. : निजाम पेशवे संबंध १८ वे शतक, पुणे विद्यापीठ, पुणे.

१९. सरदेसाई गो. स. : मराठी रियासत, खंड ३ ते ८, पॉप्युलर प्रकाशन, मुंबई.

२०. सरदेसाई गो. स. : ब्रिटीश रियासत, खंड १ व २ पॉप्युलर प्रकाशन, मुंबई.

B.A. III Semester-V
History Paper No - X

Modern World (1870 - 2000 A.D.)

CBCS Pattern Syllabus (w. e. f. June 2021)

Credits - Theory - 03 Tutorial – 01 = Total 04 Total Periods 60

Unit–I Bismark 12+3=15

A)Life of Bismark
B)Internal Policy
C)Foregion policy

Unit-II New Imperialism 12=3=15

A)Meaning and Background
B)Causes
C) Imperialism in Africa

Unit - III First world war 12+3=15

A) Causes & Course
B) Effects
C) Treaty of Versailles & League of Nations

Unit-IV Russian Revolution,1917 12+3=15

A) Causes
B) Course
C) Effects

List of Reference Books :

1.	Marriot J. A. R.	:	A History of Europe.
2.	Lipson	:	Europe in 19th and 20th Centuries.
3.	Pannikar K. M	:	Asia and Western Dominance.
4.	Gooch G.P.	:	History of Modern Europe.
5.	Ketelbey C.D	:	History of Modern times.
6.	Hazen H.G	:	Modern Europe.
7.	Wells H.G	:	The Outline of History.
8.	ओंतुरकर व पोतनीस	:	आधुनिकजगाचा इतिहास
9.	शिरसीकर व.मं.	:	आधुनिकजगाचा इतिहास
10.	कुलकर्णी व फडके,	:	आधुनिकयुरोपचा इतिहास
11.	आठवले सदाशिव	:	अर्वाचीन युरोप.
12.	गोरे ना.ग.	:	साम्राज्यशाही
13.	गोरे ना.ग.	:	अमेरिकेचा इतिहास
14.	कदम य.ना.	:	समकालीन आधुनिकजग
15.	कदम य.ना.	:	विसाव्या शतकातील जगाचा इतिहास
16.	गायकवाड, कदम, थोरात,	:	आधुनिकजग भाग - १ व भाग -२
17.	डॉ. वैद्य सुमन,	:	आधुनिकजग

B.A. III Semester-VI
History Paper No - XV

Modern World (1870 - 2000 A.D.)

CBCS Pattern Syllabus (w. e. f. June 2021)

Credits - Theory - 03 Tutorial – 01 = Total 04 Total Periods 60

Unit – I Dictatorship in Europe 12+3=15

A) Italy-Mussolini

B) Germany-Hitler

C) Turkastan-Kemal Pasha

Unit-II Second World War 12+3=15

A) Causes

B) Course

C) Effect

Unit-III Cold War 12+3=15

A) Meaning

B) Causes

C) Effect

Unit-IV United Nations 12+3=15

A) Foundation, aims and objectives

B) Organs

C) Work of United Nations (1945 to 2000)

List of Reference Books :

1. Lipson : Europe in 19th and 20th Centuries.
2. Pannikar K. M : Asia and Western Dominance.
3. Gooch G.P. : History of Modern Europe.
4. Ketelbey C.D : History of Modern times.
5. Hazen H.G : Modern Europe.
6. Wells H.G : The Outline of History.
7. Marriot J. A. R. : A History of Europe.
8. Joh Lewis Gaddis, : The cold War.
9. Odd Arne westad, : The cold War.
10. Odd Arne westad, : The Glabal cold war.
11. Robert Service, : The End of the Cold War.
12. ओंतुरकर व पोतनीस : आधुनिकजगाचा इतिहास
13. शिरसीकर व. मं. : आधुनिकजगाचा इतिहास
14. कुलकर्णी व फडके, : आधुनिकजगाचा इतिहास
15. आठवले सदाशिव : अर्वाचीन युरोप.
16. गोरे ना.ग. : साम्राज्यशाही
17. गोरे ना.ग. : अमेरिकेचा इतिहास
18. कदम य.ना. : समकालीन आधुनिकजग
19. कदम य.ना. : विसाव्या शतकातील जगाचा इतिहास
20. गायकवाड, कदम, थोरात, : आधुनिकजग भाग - १ व भाग - २
21. डॉ. वैद्य सुमन, : आधुनिकजग

B.A. III Semester-V
History Paper No - XI

Historical Sources, Research and Places

CBCS Pattern Syllabus (w. e. f. June 2021)

Credits - Theory - 03 Tutorial – 01 = Total 04 Total Periods 60

Unit-I Nature and Scope of History 12+3=15

A) Meaning and Definition

B) Nature and Scope of History

C) Kinds of History

Unit-II Sources 12+3=15

A) Importance of sources

B) Types of sources

C) Evaluation of sources

Unit -III Research Process 12+3=15

A) Auxiliary sciences

B) Importance of Research

C) Steps of Research Process

Unit-IV History Writing Process 12+3=15

A) Footnotes

B) Chronology and Index

C) Bibliography

List of Reference Books :

1. Ali Sheikh B, History : Its Theory and Method, Macmillan India Ltd., Mumbai, 1984.
2. Kothari C.R., Research Methodology : Methods and Techniques, New Delhi,2001.
3. Carr E.H., What is History, Palgrave Hampshire MacMillan & Company,London,
4. Burke Peter, History and Social Theory, Polity Press, Cambridge, 1992.
5. Jain Gopal Lal, Research Methodology : Method, Tools and Techniques, 2003.
6. Chitnis K.N., Research Methodology, Pune, 1979.
7. Mujumdar R.C., Historiography of Modern India, 1970.
8. Sarkar Sumit, Writing Social History, OUP, Delhi, 1998.
9. Biswas T.K., Museum and Education, New Delhi : New Age Intern. (P) Ltd,
10. Punja Shobita, An Illustrated Guide to Museum of India, Hong Kong, The Guidebook company Limited, 1990.
11. Satish Babu, Tourism Development in India
12. M.L. Narasaiah, Tourism Development in India

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१४. कुलकर्णी अ. रा., मराठयांचे इतिहासकार, डायमंड प्रकाशन, पुणे , २००९.

१५. कोठकर शांता, इतिहास : तंत्र आणि तत्वज्ञान, साईनाथ प्रकाशन, नागपुर, २००५.

१६. खरे ग.ह. संशोधकाचा मित्र, भा.इ.सं. मंडळ, पुणे क, १९७०.

१७. देव प्रभाकर, इतिहासाशास्त्र, अध्यापन आणि लेखनपरंपरा नाशिक, २००७.

१८. वांबूरकर जास्वंदी (संपा), इतिहासातील नवेप्रवाह, डायमंड पब्लिकेशन, पुणे २०१४

१९. सरदेसाई बी.एन., इतिहास लेखनशास्त्र, फडके प्रकाशन, कोल्हापूर, २००२.

B.A. III Semester-VI
History Paper No - XVI

Historical Sources, Research and Places

CBCS Pattern Syllabus (w. e. f. June 2021)

Credits - Theory - 03 Tutorial – 01 = Total 04 Total Periods 60

Unit-I Forts **12+3=15**

A)Importance of forts

B)Types of forts

C)Structure of fort

Unit-II Museums **12+3=15**

A)Importance and Types of Museum

B)Chhatrapati Shivaji Maharaj Museum, Mumbai

C)Town Hall Museum, Kolhapur & Raja Dinkar Kelkar Museum, Pune

Unit-III Historical Tourism **12+3=15**

A)Definition and Nature Historical Tourism

B)Importance of Tourism

C) Historical Places : Raigad, Satara, Kolhapur, Solapur

Unit-IV Historians **12+3=15**

A) V.K. Rajwade

B) G.S. Sardesai

C) V.C. Bendre

List of Reference Books :

1. Ali Sheikh B, History : Its Theory and Method, Macmillan India Ltd., Mumbai, 1984.
2. Kothari C.R., Research Methodology : Methods and Techniques, Delhi, 2001.
3. Carr E.H., What is History, Palgrave Hampshire MacMillan & Com.London, 1969.
4. Burke Peter, History and Social Theory, Polity Press, Cambridge, 1992.
5. Jain Gopal Lal, Research Methodology : Method, Tools and Techniques, 2003.
6. Chitnis K.N., Research Methodology, Pune, 1979.
7. Mujumdar R.C., Historiography of Modern India, 1970.
8. Sarkar Sumit, Writing Social History, OUP, Delhi, 1998.
9. Biswas T.K., Museum and Education, New Delhi : New Age Intern. (P) Ltd,
10. Punja Shobita, An Illustrated Guide to Museum of India, Hong Kong, The Guidebook company Limited, 1990.
11. Satish Babu, Tourism Development in India
12. M.L. Narasaiah, Tourism Development in India

१३. आठवले सदाशिव, इतिहासाचे तत्वज्ञान, प्राज्ञपाठशाळा प्रकाशन, वाई, १९६७.

१४. कुलकर्णी अ.प्ण., मराठ्यांचे इतिहासकार, डायमंड प्रकाशन, पुणे , २००९.

१४. कोठकर शांता, इतिहास : तंत्र आणि तत्वज्ञान, साईनाथ प्रकाशन, नागपुर, २००५.

१५. खरे ग.ह. संशोधकाचा मित्र, भा.इ.सं. मंडळ, पुणे क, १९७०.

१६. देव प्रभाकर, इतिहासाशास्त्र, अध्यापन आणि लेखनपरंपरा नाशिक, २००७.

१७. वांबूरकर जास्वंदी (संपा), इतिहासातील नवेप्रवाह, डायमंड पब्लिकेशन, पुणे २०१४.

१८. सरदेसाई बी.एन., इतिहास लेखनशास्त्र, फडके प्रकाशन, कोल्हापूर, २००२.

Equivalent Subject for Old Syllabus

Sr. No.	Name of the Old Paper	Name of the New Paper
1)	History of Ancient India (Pre-Historic Age to 650A.D.)	Ancient India (Pre-Historic Period to 650 A.D.)
2)	History of Mughal India (1526-1707A.D.)	Mughal India (1526 A.D.- 1707 A.D.)
3)	Growth and Decline of the Maratha Power (1707 - 1818 A.D.)	Expansion and Downfall of the Maratha Power (1707 - 1818 A.D.)
4)	History of Modern World (1870 -2000 A.D.)	Modern World (1870 -2000 A.D.)
5)	Historical Documents and Places	Historical Sources, Research and Places

प्रश्नपत्रिकेचे स्वरूप (Nature of Question Paper)

वेळ : २ तास | एकूण गुण ४०

प्रश्न १ ला योग्य पर्याय निवडा. (बहुपर्यायी ८ प्रश्न प्रत्येकी १ गुण) (८ गुण)

Choose the correct alternative (MCQ 8 Ques.)

प्रश्न २ रा थोडक्यात उत्तरे लिहा (सहा पैकी चार) (१२ गुण)

Write short answers (any four out of six)

प्रश्न ३ रा दीर्घोत्तरी प्रश्न (दोन पैकी एक) (१० गुण)

Broad answer question (any one out of two)

प्रश्न ४ था दीर्घोत्तरी प्रश्न (पर्याय नाही) (१० गुण)

Broad answer question (Compulsary)

टीप : लेखी परीक्षेसाठी ४० गुण आणि अंतर्गत निरंतर मूल्यमापन (CA) १० गुण

- १० गुणांसाठी स्वाध्या / सराव परीक्षा / गृहपाठ / मौखिकी यापैकी कोणत्याही एकाची निवड करावी.
- लेखी परीक्षा : ४० गुणांपैकी १६ गुणांना उत्तीर्ण
- निरंतर मूल्यमापन (CA) : १० गुणांपैकी ०४ गुणांना उत्तीर्ण

Punyashlok Ahilyadevi Holkar Solapur University, Solapur

BA III Sem. VI
Skill Oriented Subject

Indian History for Competitive Examinations

Credits - Theory: 3 Project/Report: 1 Total: 4 Total Periods: 60

Preamble:

Competitive examinations has become an essential part of government, semi-government and private sector jobs. Many students study with the dream of achieving success in these various examinations but most of the students do not get proper guidance. Easy study techniques and the ability to give accurate answers are not mastered. The result is failure in competitive examinations. The study units of Indian history of many competitive examinations have been placed at different levels in compulsory and optional from. Students will be able to better prepare for the history study units for various competitive examinations if develop skills like examination scope, nature of questions, suitable study methods for correct answers, self-study techniques, availability of reference books and their use as per the scope of the examination. Since this paper is to be studied in the final semester of the final year of graduation, they will acquire important skills at the right time. This skill oriented subject will be used by the students to get appointments through various competitive examinations, to work in competitive exam. Centers as well as private guides and to give lectures and speeches using lecture series, ceremonies and social media.

Objectives:

1. To aware the students about various competitive examinations
2. To facilitate the students to take up the challenges of appearing for competitive examinations.
3. To get the information about the exams conducted for the entry into jobs
4. To explain the various important events in Indian history.
5. To develop self-study techniques of history subject useful for competitive examinations.

Learning Outcomes:

1. Understand various opportunities in competitive examinations.
2. Students will be aware of the competitive examinations
3. History knowledge Utilize for professional jobs.
4. Skills will be develop for self-study of history units suitable for various competitive examinations.
5. Students knows History subject importance UPSC, MPSC, Staff selection Bank, Railway, Army, Police, Post office etc. Examination.

Chapter I. Introduction to Various Competitive Examinations. 10

1. UPSC Examinations.
2. MPSC Examinations
3. Staff selection, Bank, Railway, Army, Police, Post Office

   etc. Examinations.

Chapter II. Ancient Indian History for Various competitive exams. 10

1. UPSC Examinations. (Preliminary and mains)
2. MPSC Examinations. (Preliminary and mains)
3. Other Examinations.

Chapter III. Medieval Indian History for Various competitive exams 10

1. UPSC Examinations. (Preliminary and mains)
2. MPSC Examinations. (Preliminary and mains)
3. Other Examinations.

Chapter IV. Modern Indian History for Various competitive exams. 10

1. UPSC Examinations. (Preliminary and mains)
2. MPSC Examinations. (Preliminary and mains)
3. Other Examinations.

ProjectReport: 20

- Students should get information about reference books and periodicals on Indian history available in their nearest libraries. Among them, read the components of Indian history study which are useful for competitive examinations and submit a brief report of the work done to the concerned teacher.

OR

- Students should collect Indian history questionnaires from various competitive examinations previous question papers, sample question papers from libraries, competitive exam. Guidance centers as well as competitive examinations related websites and find out the answers to those questions and submit a brief report to concerned teacher.

Evaluation Method:

The University examination for this course will be of 40 marks. Nature of the question paper and criteria for passing will be the same as other subjects for B. A. III Sem. VI. Internal assessment is for 10 marks and a minimum of 04marks is required for passing. Students should submit a project report of at least five pages in writing to the concerned teacher for Internal Evaluation.

List of Reference:

1) www.upsc.gov.in Examination patterns and syllabus
2) www.mpsc.gov.in Examination patterns and syllabus
3) Other examination websites and direct recruitment patterns and syllabus
4) Bhide Gajananan, Pracheen Bharat (Marathi)
5) Chandra Bipan, Adhunik Bharat ka Itihas (Hindi)
6) Chandra Bipan, India After Independence 1947-2000
7) Chandra Satish, History of Medieval India
8) Dhavale, Bargal, Madhyayugin Bharat (Marathi)
9) Gathal S. S., Bharatiya Rashtriya Chalvalicha Itihas (Marathi)
10) Habib Irfan, Medieval India
11) Mujumdar R. C. Ancient India
12) Kathare Anil, Adhunik Maharashtracha Itihas (Marathi)
13) Pawar Jaishingrao, Bhartiya Swatantrya Chalvalicha Itihas
14) Pawar Jaishingrao, Marathi Samrajyacha Uday ani Asta (Marathi)
15) Sharma R. S., India's Ancient Past
16) Singhania Nitin, Indian Art and Culture
17) Saradesai, Nalawde, Adhunik Bhartacha Itihas (Marathi)
18) Thapar Romila, A History of India
19) Vaidya Suman, Kothekar, Aphonic Bhartacha Itihas (Marathi)

पुण्यश्लोक अहिल्यादेवी होळकर सोलापूर विद्यापीठ, सोलापूर

बी. ए . ३ सत्र ६ कौशल्य आधारित विषय

स्पर्धा परीक्षांसाठी भारतीय इतिहास

क्रेडिट : ३+१ =४ एकुण तासिका :६०

प्रस्तावना:

स्पर्धा परीक्षा ही शासकीय, निमशासकीय व खासगी क्षेत्रातील नोकरीसाठी अत्यावश्यक बाब बनली आहे.या विविध परीक्षांमध्ये यश संपादन करण्याचे स्वप्न उराशी बाळगून अनेक विद्यार्थी अभ्यास करत असतात परंतु बहुतांशी विद्यार्थ्यांना योग्य मार्गदर्शन मिळत नाही. अभ्यासाची सहज सुलभ तंत्रे व अचूक उत्तरे देण्याचे कौशल्य आत्मसात होत नाही. परिणामी, स्पर्धा परीक्षांमध्ये अपयश पदरी पडते. अनेक स्पर्धा परीक्षांच्या अभ्यासक्रमात इतिहास विषयातील विविध अभ्यास घटक वेगवेगळ्या स्तरांवर आवश्यक व ऐश्चिक स्वरूपात ठेवण्यात आले आहेत. सदर घटकांची परीक्षेनुरूप व्याप्ती, प्रश्नांचे स्वरूप, अचूक उत्तरांसाठी सुयोग्य अभ्यास पध्दती, स्वयंअध्ययनाची तंत्रे, संदर्भ साधनांची उपलब्धता व परीक्षेच्या आवाक्याप्रमाणे त्यांचा वापर आदि कौशल्य विकसित झाल्यास विद्यार्थ्यांना विविध स्पर्धा परीक्षांसाठी इतिहास अभ्यास घटकांची उत्तम तयारी करता येईल. पदवीच्या अंतिम वर्षातील अंतिम सत्रात प्रस्तुत अभ्यासक्रम पूर्ण करावयाचा असल्याने विद्यार्थ्यांना योग्य वेळी महत्वपूर्ण कौशल्य आत्मसात होणार आहे. विविध स्पर्धा परीक्षांच्या माध्यमातून नियुक्ती मिळविण्यासाठी , स्पर्धा परीक्षा मार्गदर्शन केंद्रात तसेच खासगी मार्गदर्शक म्हणून कार्य करण्यासाठी आणि व्याख्यानमाला, सभा, समारंभ व समाज माध्यमांतून व्याख्याने, भाषणे देऊन उत्तम वक्ता म्हणून नावलौकिक मिळविण्यासाठी या कौशल्य अधारित अभ्यासक्रमाचा विद्यार्थ्यांना निश्चित उपयोग होईल.

उद्दिष्टे :

1) विद्यार्थ्यांना विविध स्पर्धा परीक्षांची माहिती देणे.

2) विद्यार्थ्यांना स्पर्धा परीक्षेतील आव्हाने पेलण्यासाठी समर्थ बनवणे.
3) नोकरीसाठी घेण्यात येणाऱ्या परीक्षांची माहिती मिळविणे.
4) भारतीय इतिहासातील महत्वपूर्ण घटना स्पष्ट करणे.
5) स्पर्धा परीक्षांसाठी इतिहास अभ्यास घटकांच्या स्वयंअध्ययनाचे तंत्र विकसित करणे.

शिक्षण परिणाम :

1) विविध स्पर्धा परीक्षांची माहिती होईल व स्पर्धा परीक्षांमधून मिळणाऱ्या संधी समजतील.
2) विद्यार्थ्यांमध्ये स्पर्धा परीक्षांबद्दल जानीव जागृती होईल.
3) इतिहासाचे ज्ञान व्यावसायिक हेतूने व नोकरीसाठी उपयोगात आणता येईल.
4) विविध स्पर्धा परीक्षांसाठी उपयुक्त अशा इतिहास अभ्यास घटकांचे स्वयंअध्ययन करण्याचे कौशल्य विकसित होईल.
5) विद्यार्थ्यांना केंद्रीय लोकसेवा आयोग, महाराष्ट्र लोकसेवा आयोग यांच्या मार्फत घेण्यात येणाऱ्या परीक्षा व इतर परीक्षांमधील इतिहासाचे महत्त्व समजेल.

प्रकरण पहिले- विविध स्पर्धा परीक्षांची माहिती **१०**

1) केंद्रीय लोकसेवा आयोग (युपीएससी) याद्वारे घेतल्या जाणाऱ्या परीक्षा
2) महाराष्ट्र लोकसेवा आयोग (एमपीएससी) याद्वारे घेतल्या जाणाऱ्या परीक्षा
3) स्टाफ सिलेक्शन, बँक, रेल्वे, आर्मी, पोलीस, पोस्ट व इतर भरतीसाठी घेण्यात येणाऱ्या परीक्षा

प्रकरण दुसरे- विविध स्पर्धा परीक्षांसाठी प्राचीन भारताचा इतिहास **१०**

1) केंद्रीय लोकसेवा आयोगाच्या परीक्षा (पूर्व परीक्षा व मुख्य परीक्षा)
2) महाराष्ट्र लोकसेवा आयोगाच्या परीक्षा (पूर्व परीक्षा व मुख्य परीक्षा)
3) इतर परीक्षा

प्रकरण तिसरे- विविध स्पर्धा परीक्षांसाठी मध्ययुगीन भारताचा इतिहास **१०**

1) केंद्रीय लोकसेवा आयोगाच्या परीक्षा (पूर्व परीक्षा व मुख्य परीक्षा)
2) महाराष्ट्र लोकसेवा आयोगाच्या परीक्षा (पूर्व परीक्षा व मुख्य परीक्षा)
3) इतर परीक्षा

प्रकरण चौथे- विविध स्पर्धा परीक्षांसाठी आधुनिक भारताचा इतिहास **१०**

1) केंद्रीय लोकसेवा आयोगाच्या परीक्षा (पूर्व परीक्षा व मुख्य परीक्षा)
2) महाराष्ट्र लोकसेवा आयोगाच्या परीक्षा (पूर्व परीक्षा व मुख्य परीक्षा)
3) इतर परीक्षा

प्रकल्प/अहवाल: **२०**

*विद्यार्थ्यांनी आपल्या नजीकच्या ग्रंथालयात भारतीय इतिहासासंबंधी उपलब्ध असलेल्या संदर्भ ग्रंथांची व नियतकालिकांची माहिती मिळवावी. त्यातून स्पर्धा परीक्षांच्या अनुषंगाने उपयुक्त अभ्यास घटकांचे वाचन करावे. केलेल्या कार्याचा संक्षिप्त अहवाल संबंधित शिक्षकाकडे लेखी स्वरुपात सादर करावा.

किंवा

*विद्यार्थ्यांनी विविध स्पर्धा परीक्षांच्या मागील प्रश्नपत्रिका ग्रंथालये, स्पर्धा परीक्षा मार्गदर्शन केंद्रे तसेच स्पर्धा परीक्षे संबंधित संकेतस्थळांवरून उपलब्ध करून त्यातील भारतीय इतिहास अभ्यास घटकांवर विचारण्यात आलेले प्रश्न संकलित करावेत. त्या प्रश्नांची उत्तरे शोधावित आणि केलेल्या कार्याचा संक्षिप्त अहवाल संबंधित शिक्षकाकडे लेखी स्वरूपात सादर करावा.

मूल्यमापन पद्धती:

सदर अभ्यासक्रमासाठी विद्यापीठ परीक्षा ४० गुणांची असेल. प्रश्नपत्रिकेचे स्वरूप व उत्तीर्णतेचा निकष बी. ए. भाग ३ सत्र ६ साठी असणाऱ्या अन्य विषयाप्रमाणे असेल. अंतर्गत मूल्यमापन १० गुणांसाठी असून उत्तीर्णतेसाठी किमान 04 गुण मिळविणे आवश्यक आहेत. अंतर्गत मूल्यमापनासाठी विद्यार्थ्यांनी उपरोक्त सूचीत केल्याप्रमाणे किमान पाच पृष्ठांचा प्रकल्प अहवाल संबंधित शिक्षकाकडे सादर करावयाचा आहे.

PUNYASHLOK AHILYADEVI HOLKAR SOLAPUR UNIVERSITY, SOLAPUR

पुण्यश्लोक अहिल्यादेवी होळकर
सोलापूर विद्यापीठ
।। विद्यया संपन्नता ।।
NAAC Accredited - 2015
'B' Grade (CGPA - 2.62)

Name of the Faculty	**-**	**Humanities**
Syllabus	**-**	**History (CBCS)**
Name of the Course	**-**	**MA Part-I**
With effect from	**-**	**June, 2020**

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Semester – I

SEMESTER I	CODE	TITLE OF THE PAPER	SEMESTER EXAM.			L	T	P	TOTAL CREDITS
			THEORY	IA	TOTAL				
SUBJECT		**Hard Core Compulsory Papers :-**							
HCT	1.1	Historiography	**80**	**20**	**100**	**4**	**1**	**0**	**5**
HCT	1.2	Ancient India up to 650 A. D.	**80**	**20**	**100**	**4**	**1**	**0**	**5**
HCT	1.3	History of World (1900 A. D. to 1970 A. D.)	**80**	**20**	**100**	**4**	**1**	**0**	**5**
	DSE	**DSE (Discipline Specific Elective) -A - Optional (Any One) :-**							
SCT	1.1	Medieval India (1200 A. D. to 1700 A. D.)	**80**	**20**	**100**	**4**	**1**	**0**	**5**
SCT	1.2	History of Ideas.	**80**	**20**	**100**	**4**	**1**	**0**	**5**
		Soft Core - B - Optional (Any One) :-							
SCT	1.1	History of India (1757 A. D. - 1857 A. D.)	**80**	**20**	**100**	**4**	**1**	**0**	**5**
SCT	1.2	History of U. S. A. (1914 A. D. – 1990 A. D.)	**80**	**20**	**100**	**4**	**1**	**0**	**5**

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Semester – II

SEMESTER II	CODE	TITLE OF THE PAPER	SEMESTER EXAM.			L	T	P	TOTAL CREDITS
			THEORY	IA	TOTAL				
SUBJECT		**Hard Core Compulsory Papers :-**							
HCT	1.1	Historiography	**80**	**20**	**100**	**4**	**1**	**0**	**5**
HCT	1.2	Ancient India up to 650 A. D.	**80**	**20**	**100**	**4**	**1**	**0**	**5**
HCT	1.3	History of World (1900 A. D. to 1970 A. D.)	**80**	**20**	**100**	**4**	**1**	**0**	**5**
	DSE	**DSE (Discipline Specific Elective) -A - Optional (Any One) :-**							
SCT	1.1	Medieval India (1200 A. D. to 1700 A. D.)	**80**	**20**	**100**	**4**	**1**	**0**	**5**
SCT	1.2	History of Ideas.	**80**	**20**	**100**	**4**	**1**	**0**	**5**
		Soft Core - B - Optional (Any One) :-							
SCT	1.1	History of India (1757 A. D. - 1857 A. D.)	**80**	**20**	**100**	**4**	**1**	**0**	**5**
SCT	1.2	History of U. S. A. (1914 A. D. – 1990 A. D.)	**80**	**20**	**100**	**4**	**1**	**0**	**5**

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Objective Of The Course

1) Produce written work that incorporates consideration of the relevant historiography along with theory that informs it.
2) Construct original historical arguments based on primary source material research.
3) Demonstrate a superior quality of wrting both in terms of mechanics and in developing an argument effectively.
4) Develop an ability to convey verbally their thesis research and relevant historiography and theory.
5) Demonstrate the significance of historical topics with reference to broader historical context, historiographical trends, or contemporary relevance.
6) Construct original historical arguments using a blend of primary and secondary source material.
7) Convey a board understanding of historical material suitable for teaching .

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Semester – I

- **Hard Core Compulsory Papers :-**

  HCT-Paper –1.1 – Historiography.

  HCT-Paper – 1.2 – Ancient India up to 650 A. D.

  HCT-Paper – 1.3 – History of World (1900 A. D. to 1970 A. D.)

- **DSE (Discipline Specific Elective) -A- Optional (Any One) :-**

  SCT- Paper – 1.1 –Medieval India (1200 A. D. to 1700 A. D.)

  SCT- Paper – 1.2- History of Ideas.

- **Soft Core - B - Optional (Any One) :-**

  SCT - Paper – 1.1 – History of India (1757 A. D. to 1857 A. D.)

  SCT - Paper – 1.2 – History of U. S. A. (1914 A. D. – 1990 A. D.)

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Semester – II

- **Hard Core Compulsory Papers :-**

  HCT-Paper –1.1 – Historiography.

  HCT-Paper – 1.2 –Ancient India up to 650 A. D.

  HCT-Paper – 1.3 – History of World (1900 A. D. to 1970 A. D.)

- **DSEC(Discipline Specific Elective) -A- Optional (Any One) :-**

  SCT - Paper – 1.1 –Medieval India (1200 A. D. to 1700 A. D.)

  SCT - Paper – 1.2 - History of Ideas.

- **SCT- (Soft Core)- B - Optional (Any One) :-**

  SCT - Paper – 1.1 – History of India (1757 A. D. to 1857 A. D.)

  SCT - Paper – 1.2 – History of U. S. A. (1914 A. D. – 1990 A. D.))

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Hard Core Compulsory Paper

HCT – 1.1 - HISTORIOGRAPHY.

Semester – I

UNIT – I :- Meaning and Definitions of History, Nature and Scope of History.

UNIT – II :-

1) Kinds of History.
2) Auxiliary Science.

UNIT – III :-

1) Causation, Theory and Laws of History.
2) Interpretation of History : Marxist and Hegel.

UNIT – IV : Sources

1) Primary & Secondary Sources.
2) Sources of Modern Technique.

LIST OF REFERENCE BOOKS

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2) Marwik, Arthur, : The Nature of History, London, 1970.
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28) Holden furber, : Bombay Presidency in the Mid 18th Century.

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30) Habib Irfan, : Essays in Indian History, New Delhi, 1995.

31) Mill James, : History of British India, New Delhi, 1972.

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Hard Core Compulsory Paper

HCT – 1.1 - HISTORIOGRAPHY.

Semester – II

UNIT – I :- Chronology and Period.

1) Chronology
2) Period.

UNIT – II :- Theories and Themes of History.

1) Cyclical Theory, Sociological Theory, Ecological Theory.
2) Indian Themes : Labour and Peasant, Varna, Jati, Religion and Culture.

UNIT – III :- Rewriting of History.

1) Medieval Period : Arab, Persian, Indian.
2) Modern Period : Rajwade, Khare and Pagadi's approach to writing history and subaltern approach.

UNIT – IV :- Eminent Historians.

1) Arnold Toyanbee.
2) G. S. Sardesai.
3) Romila Thapar
4) Irfan Habib.
5) Sir Jadunath Sarkar.

LIST OF REFERENCE BOOKS

1) Carr, E. H., : What is History, Penguin Books, New York, 1964.
2) Marwik, Arthur, : The Nature of History, London, 1970.
3) Collingwood, R. G., : The Idea of History, Oxford, 1961.
4) Walsh, W. H., : An Introduction to the Philosophy of History, London, 1963.
5) Dray William., : Philosophy of History, New Delhi, 1964.
6) Seignobos and Langlois, : Introduction To the Study of History, 1966.

7) B., Sheik Ali., : History : Its Theory and Method, Madras, 1978.

8) Renier, C. J., : History : Its Purpose and Method, Boston, 1963.

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11) Sen, S. P., : Historians and Historiography in Modern India, Institute of Historical Studies, Calcutta, 1973.

12) Webster, J.C.E., : An Introduction to History, Delhi, 1977.

13) Elton, G. R., : The Concept of History, Collins, 1970.

14) Sharma, T. R. : The Concept of History, Hyderabad, 1978.

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16) Mohan Robert Paul, : Philosophy of History : An Introduction, New York, 1958.

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18) Tikekar, S. R., : On Historiography, Bombay, 1964.

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Hard Core Compulsory Paper

HCT -1.2 - ANCIENT INDIA UP TO 650 A. D.

Semester – I

UNIT – I :- Sources

1) Literary Sources.
2) Archaeological Sources.

UNIT – II :- Stone Age:

1) Palaeolithic.
2) Mesolithic.
3) Neolithic.

UNIT – III :- Indus Civilization

1) Invention and characteristic of Indus Civilization.
2) Social, Economical and Religious Life.
3) Decline of Indus Civilization.

UNIT – IV :- Aryans Culture

1) Origin of Aryans.
2) Polity and Religious Life.
3) Social and Economic Condition.

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Hard Core Compulsory Paper

HCT – 1.2 - ANCIENT INDIA UP TO 650 A. D.

Semester – II

UNIT – I :- Religious Movement

1) Jainism.
2) Buddhism

UNIT – II :- Mauryan Period

1) Mauryan Empire.
2) Administration.
3) Ashoka and his Dhamma.

UNIT – III :- Post Mauryan Period

1) Shungas.
2) Kanvas.
3) Satavahans.
4) Kushanas.

UNIT – IV :- Gupta Period

1) Gupta Empire
2) Literature, Trade, Art and Architecture.
3) Vardhan Dynasty.

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Hard Core Compulsory Paper

HCT – 1.3 - HISTORY OF WORLD (1900 A.D. - 1970 A.D.)

Semester – I

UNIT – I :- Concepts of Modern World.

1) Imperialism.
2) Socialism.
3) Nationalism.
4) Communism.

UNIT – II :-First World War.

1) Causes, Course and Effects.
2) League of Nations.

UNIT – III :- Rise of Dictatorship.

1) Italy
2) Germany
3) Turkasthan.

UNIT – IV :- Second World War.

1) Causes, Course and Effects.
2) Origin Nature and Effects of U.N.O.

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3) Suxena, N. S. : 20th Century World History, Anmol Publication, New Delhi-51.
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Publications, New Delhi.

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Hard Core Compulsory Paper

HCT – 1.3 - HISTORY OF WORLD (1900 A.D. - 1970 A.D.)

Semester – II

UNIT – I :- Age of Communist Revolution

1) Russian Revolution (1917) : Causes, Course and Effects.
2) Chinese Revolution (1949) : Causes, Course and Effects.

UNIT – II :- Cold War

Concept, Causes and Effects.

UNIT – III :- Non-Aligned Movement.

Nature, Development and Evaluation.

UNIT – IV :- Age of Progress

1) Science and Technology, Communication and Information.
2) Cultural Revolution, Civil Rights Movement.

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1) Greville, A. A., : History of the World in the 20th Century, Harper Collins Publisher, 77-85, Fulham Place Road.
2) Knapp, H. C., Fisher, : The Modern World, (SBW Publishers), New Delhi.
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DSE (Discipline Specific Elective) -A- Optional (Any One)

SCT- 1.1 - MEDIEVAL INDIA (1200 A.D. - 1700 A.D.)

Semester – I

UNIT – I :- Sources

1) Archaeological Sources.

2) Literacy Sources.

A) Indian

B) Foreign

C) Oral Sources

UNIT – II :- Society

1) Society.

2) Position of Women.

3) Hindu & Muslim Fairs.

UNIT – III :- Education System in Medieval India.

1) Hindu

2) Islamic

UNIT – IV :- Agrarian System

1) Land Grants.

2) Agricultural Production.

3) Land Revenue System.

LIST OF REFERENCE BOOKS

1) Ali, M. Athar, : Mughal Nobility under the Aurangazed, (Mumbai, Asia, 1970).

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17) Dr. Kolarkar, S. G., : Medieval Indian History – 1206-1707 (Shri. Mangesh Publication, 1994) (Marathi)
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DSE (Discipline Specific Elective) -A- Optional (Any One)

SCT- 1.1 - MEDIEVAL INDIA (1200 A.D. - 1700 A.D.)

Semester – II

UNIT – I :- Religious and Cultural Movements.

1) Sufism.
2) Bhakti.
3) Shaivsm.
4) Sikhism.

UNIT – II :- Administration – Civil and Military

1) Allaudin Khilji.
2) Shershah Suri.
3) Akbar the Great.

UNIT – III :- Trade and Commerce

1) **Internal Local Trade and Bazaars.**
2) Internal Trade and Foreign Trade.
3) Main Trade Routes.
4) Banking System and Currency

UNIT – IV :- Art and Architecture.

LIST OF REFERENCE BOOKS

1) Ali, M. Athar, : Mughal Nobility under the Aurangazed, (Mumbai, Asia, 1970).
2) Arasaratnam, S. Martime, : India in the Seventeenth Century (Delhi, OUP, 1994).
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DSE (Discipline Specific Elective) A - Optional (Any One)

SCT – 1.2 - HISTORY OF IDEAS

Semester – I

UNIT – I :- Political Ideas.

1) Ideas of Polity – Monarchy, Oligarchy and Presto Republicanism.
   - A) Ancient
   - B) Medieval
2) Rights and duties of subject, Legitimacy of Political Power.
   - A) Texts
   - B) Practice

UNIT – II :- Colonialism & the emergence of new Political Ideas.

1) Liberalism, Democracy
2) Utilitarian
3) Positivism

UNIT – III :- New Trends.

1) Nationalism & Socialism
2) Communalism & Secularism

UNIT – IV :- Social Ideas.

1) Formation of early ideas in hierarchy
2) Regionalization & Justification of hierarchy
3) Varna
4) Jati
5) Family
6) Women

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1) Bashan, A. L., : The Wonder That Was India, Sidgwick & Jackson, 1953, Rupa and Com. Bombay, 1971, Fontana, Calcutta, 1971.

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DSE (Discipline Specific Elective) A - Optional (Any One)

SCT – 1.2 -- HISTORY OF IDEAS

Semester – II

UNIT – I :- Movements during the colonial period.

1) Satya Shodhak Samaj.
2) Shree Narayana Movement.
3) Self Respects Movement.
4) Social Basis of Nationalism.

UNIT – II :- Religious and Philosophical Ideas : Formation of Religious Ideas in early India

1) Vedas, Upnishads and Vedanta.
2) Six Schools of Indian Philosophy.
3) Jainism.
4) Buddhism.
5) Ideas of dissent and protest heterodox sects.

UNIT – III :- Forms of Religious thought and Cultural Synthesis.

1) Bhakti Movement : Shaivism and Vaishnavism.
2) Regional Development.
3) Sufism.
4) Sikhism.

UNIT – IV :- Reform and Revivalism.

1) Brahmo Samaj, Prarthana Samaj, Arya Samaj.
2) Devband and Aligarh Movement.
3) Singh Sabha Movement.
4) Ideas of Religious Universalism and fundamentalism in Modern India.

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1) Bashan, A. L., : The Wonder That Was India, Sidgwick & Jackson, 1953, Rupa and Com. Bombay, 1971, Fontana, Calcutta, 1971.

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Soft Core - B - Optional (Any One)

SCT – 1.1 - HISTORY OF INDIA (1757 A. D. - 1857 A. D.)

Semester – I

UNIT – I :- Rise of British Power

1) Introduction.
2) Battle of Plassey.
3) Battle of Baksar.
4) Duel System of Robert Clive.

UNIT – II :- India in mid 18th Century

1) Economy.
2) Society and Culture.

UNIT – III :- Role of British Governor in Modern India

1) Worran Henstings.
2) Lord Cornwallis.
3) Lord Wellesly.
4) Lord William Bentinck

UNIT – IV :- Educational Development and Press

1) Development of Education before the British Period.
2) Christian Missionaries and British Educational Policy.
3) British Policy towards the Press.

LIST OF REFERENCE BOOKS

1) Bayty, C. A., : Indian society and Making of the British Empire, New Cambridge.
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Soft Core - B - Optional (Any One)

SCT – 1.1 - HISTORY OF INDIA (1757 A. D. - 1857 A. D.)

Semester – II

UNIT – I :- Social Policies and Social Change

1) Indian Society and British Understanding.
2) Orientalist, Evangelical and Utilitarian.
3) Ideas of Changes.
4) Social Reforms and Emerging Social Classes.

UNIT – II :- Rural Economic Organization

1) Land Revenue System.
2) Communication of Agriculture.
3) Role of Peasant and Agriculture Labour.

UNIT – III :- Urban Economic Organization

1) Industrial Product and deindustrialization.
2) Rise of Inland Market Urban Centers.
3) Communication.

UNIT – IV :- Revolt of 1857

1) Natures and Scope.
2) Causes and Course.
3) Effect
4) Failure.

LIST OF REFERENCE BOOKS

1) Bayty, C. A., : Indian society and Making of the British Empire, New Cambridge.
2) History of India, Cambridge Universities Press, 1987.

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Soft Core - B - Optional (Any One)

SCT – 1.2 - HISTORY OF U. S. A. (1914 A. D. – 1990 A. D.)

Semester – I

UNIT – I :- Emergence of U.S.A. as an imperial power.

1) Role of American in Ist World War.
2) Economic Depressions and the new Deal
3) Role of America in IInd World War.

UNIT – II :- America After IInd World War.

1) President Truman and his period.
2) Internal Policy.
3) Foreign Policy : Marshall Plan, the Korean Crises, China and India.

UNIT – III :- President Eisenhower.

1) Internal Policy.
2) Foreign Policy : India and China Latin America, Middle East

UNIT – IV :- President Kennedy.

1) Internal Policy.
2) Foreign Policy : Defense, Latin America, Middle East, China and India.

LIST OF REFERENCE BOOKS

1) Beard, Charles, : An Economic Interpretation of the Constitution of the United State (Free Press, 1986).
2) Boyer, Paul, Harvard Sitkoff, Naney woloch ct al., Enduring Vision : A History of The American People, Vol. 1st and 2nd.
3) Brown, Dec., : An Indian History of the American West, Bury My Heart at

Wounded Knee (WSP, 1984).

4) Faulkner, U., : Economic History of the United States of America.

5) Foner, Eric, : America's Black Past.

6) Franklin, John Hope, From Slavery to Greedom (Knopf, 1979).

7) Hicks, John D., : The Federal Union : A History of USA Since 1865.

8) Hofstadter, Richard,

9) The Age of Reform, From Bryan to FDR (Random, 1960).

10) Kaushik, R. P., : Significant Themes in American History (Delhi, Ajanta, 1983).

11) Kristol, Irving, Gordon Wood at al., America's Continuing Revolution (Am. Enterprises, 1975).

12) Nash, Gary, (ed.), Retracing the Past (Harp C., 1985).

13) Praff, W., : A History of the United States Foreign Policy.

14) Setters, Charles, Henry May and Neil Macmillan, : A Synopsis of American History, 2 vols. (Delhi, Macmillan, 1990).

15) Shihan, Donald, : The Making of American History : The emergence of Nation, Vols. I & II.

16) Tripathi, Dwijendra and S. C., Tiwari, : Themes and Perspectives in American History.

17) Turner, Frederick Jackson, : The Frontier American History (Krieger, 1976).

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Soft Core - B - Optional (Any One)

SCT – 1.2 - HISTORY OF U. S. A. (1914 A. D. – 1990 A. D.)

Semester – II

UNIT – I :- President Nixon.

1) Internal Policy.
2) Foreign Policy : Middle East, China and India, Latin America.

UNIT – II :- Foreign Policy of America between 1970 – 1990.

1) President Jimee Carter.
2) President Ronald Reagan
3) President George Bush.

UNIT – III :- America Economy and Society.

1) Major Industries.
2) Society Values and Problems.

UNIT – IV :- Role of America in Globalization and its effects on World.

LIST OF REFERENCE BOOKS

1) Beard, Charles, : An Economic Interpretation of the Constitution of the United State (Free Press, 1986).
2) Boyer, Paul, Harvard Sitkoff, Naney woloch ct al., Enduring Vision : A History of The American People, Vol. 1st and 2nd.
3) Brown, Dec., : An Indian History of the American West, Bury My Heart at Wounded Knee (WSP, 1984).
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5) Foner, Eric, : America's Black Past.

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7) Hicks, John D., : The Federal Union : A History of USA Since 1865.

8) Hofstadter, Richard,

9) The Age of Reform, From Bryan to FDR (Random, 1960).

10) Kaushik, R. P., : Significant Themes in American History (Delhi, Ajanta, 1983).

11) Kristol, Irving, Gordon Wood at al., America's Continuing Revolution (Am. Enterprises, 1975).

12) Nash, Gary, (ed.), Retracing the Past (Harp C., 1985).

13) Praff, W., : A History of the United States Foreign Policy.

14) Setters, Charles, Henry May and Neil Macmillan, : A Synopsis of American History, 2 vols. (Delhi, Macmillan, 1990).

15) Shihan, Donald, : The Making of American History : The emergence of Nation, Vols. I & II.

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PUNYASHLOK AHILYADEVI HOLKAR SOLAPUR UNIVERSITY, SOLAPUR

पुण्यश्लोक अहिल्यादेवी होळकर
सोलापूर विद्यापीठ
।। विद्यया संपन्नता ।।
NAAC Accredited - 2015
'B' Grade (CGPA - 2.62)

Name of the Faculty : Humanities

Syllabus : History

Name of the Course : M.A.II (CBCS)

With effect from : June, 2021

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1. Preamble: History is an important subject which is useful to understand the developments in our country as well as in other parts of world. It is essential for every citizen to have knowledge about culture, society, economy and political developments in his/her own country. We have farmed this syllabus with a view to acquainting the students with history and culture of our country as well as the developments in other important countries of the world. The syllabus has been farmed with a view to understand recent trends in history and interdisciplinary subjects along with the introduction of semester and credit system.

2. Objectives of the Course:

1. Students shall be able to demonstrate thinking skills by analyzing, synthesizing and evaluating historical information from multiple sources.
2. The syllabus is aimed to create a comprehensive understanding to history, which will help to students to prepare for competitive examinations such as NET,SET and MPSC and UPSC examinations.
3. Students will employ a full range to techniques and methods used to gain historical knowledge.
4. Some papers have been prepared with a view to acquainting students with the Thoughts of Mahatma Phule and Dr. Babasaheb Ambedkar, History of Maharashtra and the History of Marathas, which are important areas of research.
5. Students shall be able to the methodology of historical research. They will learn the basics of historical research and its presentation. They will also have a clear understanding of the nature of the evidence collected from primary and secondary sources. Moreover, the research students will understand the use of digital technologies in historical research and presentation.

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Outcomes of the course :-

1) Grasp the details about different sources and various trands in Maratha History.
2) Identify the Agraian system and Maratha policy under Maratha.
3) Grasp the details of Traditional Industries social Institutions and Bhakti movement during Maratha period.
4) Identify the reforrns movements in Maharashtra.
5) Understand about the Development of Modern Maharashtra.
6) Know the relationship of history with its allied discplines.
7) Undestand about the Research process in Historical research.
8) Understand the issues in representing women in history.
9) Analyse and compare the customary and legal status of women in Ancient, Medieval and colonial India.
10) Understand and Explain the causes and course of the Russian Revolution.
11) Explain the rise of USSR as a world power
12) Identify the strategies of British for Imperial control.
13) Grasp the details of freedom movement under the Mahatma Gandhi's leadership
14) Understand various phases of the national movement.
15) Grasp the details thoughts of Mahatma phule and Dr. Babasaheb Ambedkar.

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Semester- III

SEMESTER III	CODE	TITLE OF THE PAPER	SEMESTER EXAM.			L	T	P	Total Credits
			Theory	IA	Total				
SUBJECT		**Hard Core Compulsory Papers**							
HCT	3.1	Maratha History (1600 A.D. – 1818 A.D.) (Polity and Economy)	**80**	**20**	**100**	**4**	**1**	**0**	**5**
HCT	3.2	Modern Maharashtra (1818 A.D. – 1990 A.D.)	**80**	**20**	**100**	**4**	**1**	**0**	**5**
HCT	3.3	Research Methodology	**80**	**20**	**100**	**4**	**1**	**0**	**5**
		DSE (Discipline Specific Elective) -A - Optional (Any One) :-							
DSE	3.1	Women In Indian History	**80**	**20**	**100**	**4**	**1**	**0**	**5**
DSE	3.2	The Thoughts Of Mahatma Phule And Dr. Babasaheb Ambedkar (Mahatma Phule)	**80**	**20**	**100**		**1**	**0**	**E**
		Genesis Elective - B - (Any One) :-							
GET	3.1	History of India (1858 A. D. - 1964 A. D.)	**80**	**20**	**100**	**4**	**1**	**0**	**5**
GET	3.2	History OF US.S.R. (1917 A. D.-1977 A. D.)	**80**	**20**	**100**	**4**	**1**	**0**	**5**
		Total	**400**	**100**	**500**	**20**	**05**	**00**	**25**

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Semester- IV

SEMESTER IV	CODE	TITLE OF THE PAPER	SEMESTER EXAM.			L	T	P	Total Credit s
			Theor y	IA	Total				
SUBJECT		**Hard Core Compulsory Papers**							
HCT	4.1	Maratha History (1600 A.D. – 1818 A.D.) (Social and Cultural)	**80**	**20**	**100**	**4**	**1**	**0**	**5**
HCT	4.2	Modern Maharashtra (1818 A.D. – 1990 A.D.)	**80**	**20**	**100**	**4**	**1**	**0**	**5**
HCT	4.3	Dissertation	**80**	**20**	**100**	**4**	**1**	**0**	**5**
		DSE (Discipline Specific Elective) -A - Optional (Any One)							
DSE	4.1	Women In Indian History	**80**	**20**	**100**	**4**	**1**	**0**	**5**
DSE	4.2	The Thoughts Of Mahatma Phule And Dr. Babasaheb Ambedkar (Dr. Babasaheb Ambedkar)	**80**	**20**	**100**	**4**	**1**	**0**	**5**
		Soft Core - B - Optional (Any One) :-							
SCT	4.1	History of India (1858 A. D. - 1964 A. D.)	**80**	**20**	**100**	**4**	**1**	**0**	**5**
SCT	4.2	History OF US.S.R. (1917 A. D.-1977 A. D.)	**80**	**20**	**100**	**4**	**1**	**0**	**5**
		Total	**400**	**100**	**500**	**20**	**05**	**00**	**25**

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Semester – III

- **Hard Core Compulsory Papers :-**

  HCT-Paper –3.1 – Maratha History (1600 A.D. – 1818 A.D.)
  (Polity and Economy)

  HCT-Paper –3.2 – Modern Maharashtra (1818 A. D. –1990 A. D.)

  HCT-Paper – 3.3 – Research Methodology

- **(Discipline Specific Elective) -A- Optional (Any One) :-**

  DSE- Paper – 3.1 –Women in Indian History

  DSE- Paper – 3.2 - The Thoughts of Mahatma Phule and
  Dr. Babasaheb Ambedkar (Mahatma Phule).

- **Genesis Elective - B - Optional (Any One) :-**

  GET - Paper – 3.1 – History of India (1858 A. D. – 1964 A. D.)

  GET - Paper – 3.2 – History OF US.S.R. (1917 A. D.-1977 A. D.)

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Semester – IV

- **Hard Core Compulsory Papers :-**

  HCT-Paper –4.1 – Maratha History (1600 A.D. – 1818 A.D.)
  (Social and cultural)

  HCT-Paper – 4.2 – Modern Maharashtra (1818 A. D. –1990 A. D.)

  HCT-Paper – 4.3 – Dissertation

- **(Discipline Specific Elective) -A- Optional (Any One) :-**

  DSE- Paper – 4.1 –Women in Indian History

  DSE- Paper – 4.2 - The Thoughts of Mahatma Phule and
  Dr. Babasaheb Ambedkar (Dr. Babasaheb Ambedkar).

- **Soft Core - B - Optional (Any One) :-**

  SCT - Paper – 4.1 – History of India (1858 A. D. – 1964 A. D.)

  SCT - Paper – 4.2 – History OF US.S.R. (1917 A. D.-1977 A. D.)

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HCT-Paper –3.1 – Maratha History (1600 A.D. – 1818 A.D.) (Polity and Economy)

SEMESTER – III

Unit – I **Sources and Historiography**

a) Sources : Literary, Foreign, Archival and Miscellaneous

b) Different Approaches in Maratha History

Unit – II **Maratha Polity**

a) Kingship

b) Transfer to Power : Chhatrapati, Peshwa and Karbhari

c) Maratha Confederacy

d) Administration : Civil, Military and Judicial

Unit – III **Agrarian System**

a) Kinds of Land

b) Land Survey and Assessment

c) Crops and Irrigation

d) Land Revenue and Officials

e) Famine

Unit – IV **Industry, Trade and commerce**

a) Major and Minor Industries

b) Trade routes and commercial centers

c) Currency and Banking

List of Reference Books

1) Kulkarni A. R., Maharashtra in the Age of Shivaji, Deshmukh & Comp., Pune,1969.

2) Kulkarni A. R., Medieval Maratha Country, New Delhi, 1996.

3) Fukazawa, H., TheMedieval Deccan, Oxford,Bombay,1991.

4) Desai, S. V., Social Life in Maharashtra under the Peshwas, Popular, Bombay, 1980.

5) Mahajan, T. T., Industry Trade and Commerce during PeshwaPeriod, Pointer Publisher, Jaipur,1989.

6) Kadam,V.S.,MarathaConfederacy,MunshiramManoharlal,New Delhi, 1993.

7) Chitnis,K.N.,Socio-EconomicAspectsofMedievalIndia,R.K. Chitnis, Poona,1979.

8) Ranade, M. G., Rise of Maratha Power and Other Essays, Bombay University of Bombay, 1961.

9) Dr. Balkrishna, Shivaji The Great, Vol. IV., Balkrishna, Kolhapur, 1940, D. B. Taraporevala, 1932, Kitab Mahal, Bombay,1932,Arya Book Depot., Kolhapur, 1946.

10) Andre Wink, Land and Sovereignty in India : Agrarian Society and Polities under the Eighteenth Century Maratha Swarajya,Cambridge, 1986.

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HCT-Paper –4.1 – Maratha History (1600 A.D.–1818 A.D.)
(Social and Cultural)

SEMESTER – IV

Unit – I **Marathas and Marathi Language**

a) Origin and characteristics

b) Growth of Marathi language

c) Development of Marathi Literary

Unit – II **Social Institutions**

a) Caste, Untouchability and Slavery

b) Position of Women

c) Balutedar and Watandar

Unit – III **Bhakti Movement**

a) Bhakti culture in Maharashtra

b) Work of Marathi Saints

c) Maharashtra Dharma – Concept, Rise and Spread

Unit – IV **Art in Maratha Period**

a) Maratha Architecture

b) Maratha Music

c) Maratha Paintings

List of Reference Books

1) Kulkarni A. R., Maharashtra in the Age of Shivaji, Deshmukh & Comp., Pune,1969.

2) Kulkarni A. R., Medieval Maratha Country, New Delhi, 1996.

3) Fukazawa, H., TheMedieval Deccan, Oxford,Bombay,1991.

4) Desai, S. V., Social Life in Maharashtra under the Peshwas, Popular, Bombay, 1980.

5) Mahajan, T. T., Industry Trade and Commerce during PeshwaPeriod, Pointer Publisher, Jaipur,1989.

6) Kadam,V.S.,MarathaConfederacy,MunshiramManoharlal,New Delhi, 1993.

7) Chitnis,K.N.,Socio-EconomicAspectsofMedievalIndia,R.K. Chitnis, Poona,1979.

8) Ranade, M. G., Rise of Maratha Power and Other Essays, Bombay University of Bombay, 1961.

9) Dr. Balkrishna, Shivaji The Great, Vol. IV., Balkrishna, Kolhapur, 1940, D. B. Taraporevala, 1932, Kitab Mahal, Bombay,1932,Arya Book Depot., Kolhapur, 1946.

10) Andre Wink, Land and Sovereignty in India : Agrarian Society and Polities under the Eighteenth Century Maratha Swarajya,Cambridge, 1986.

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HCT-Paper – 3.2. Modern Maharashtra (1818 A.D. – 1990 A.D.)

SEMESTER – III

Unit – I **British Administration**

a) Reconstruction of British Administration

b) Policy of Elphinstone

c) New Administrative and function

d) Land Revenue system- Rayatwari and Mahalwari

Unit – II **Uprising in the 19th Century at Maharashtra**

a) Ramoshi, Koli and Bhils

b) Outbreak of 1857 and Maharashtra- Satara, Kolhapur Peth ,Nashik, Nagpur, Sawantwadi, Mumbai, etc.

Unit – III **Reform Movements**

a) Emancipation of women

b) Backward caste Movements

c) Non Brahmin Movements

d) Leftist Movements

Unit – IV **Awaking of Maharashtra**

a) Economic Awareness- Mahatma Phule, Dadabhai Nauroji, Justice M. G. Ranade, Dr. Babasaheb Ambedkar.

b) Farmer Movements

c) Labor Movements

List of Reference Books

1) Kumar Ravindra, Western India in the 19th Century, London, 1968.

2) Ballhatchet K., Social Policy and Social Changes in Western India, (1818 – 1830), London, 1957.

3) Verma Sushama, Mountstuart Elphinstone in Maharashtra (1811 – 1827) K. P. Begchi and Company, 1981.

4) Baden – Powell B. B., Land Systems of the British, 3 Vols., Oxford, 1892.

5) Desai S. V., Social Life in Maharashtra under the Peshwa, Bombay, 1980.

6) Frankel Fracine and Rao M. S. A., Dominance and State Power in Modern India : Decline of a Social Order, Vol. II, Delhi, 1989 – 1990.

7) Gore M. S., Non-Brahmin Movement in Maharashtra, New Delhi, 1989.

8) Gordon Johnson, Provincial Polities and Indian Nationalism : Bombay and the Indian National Congress, 1880 – 1915, Cambridge, 1973.

9) Masselos James C., Towards Nationalism : Group Affiliations and Polities of Public of Public Associations in 19th Century, Western India, Bombay, 1974.

10) Rosalind O'Hanlon, Caste, Conflict and Ideology : Mahatma Jotirao Phule and Low Caste Protest in19th Century, Western India, Cambridge University Press, 1985.

11) Christine Dobbin, Urban Leadership in Western India : Polities and Communities in Bombay City 1840 – 1885, Oxford University Press, 1972.

12) Phadke Y. D., Women in Maharashtra, Maharashtra Information Centre, Government of Maharashtra, New Delhi, 1989.

13) Israel, Milton and Wagle N. K. (Eds.), Religion and Society in Maharashtra, Toronto, 1987.

14) Kulkarni A. R. and Wagle N. K. (Eds.), Region, Nationality and Religion, Popular Prakashan, Mumbai, 1999.

15) Wagle N. K. (Ed.), Writers, Editors and Reformers: Social and Political Transformation of Maharashtra, Manohar, New Delhi, 1999.

16) Sunthankar, B. R., 19th Century History of Maharashtra, Vol. I (1818 – 1857), Shubhada Saraswal, Pune, 1988.

17) Sirsikar, V. M., Polities of Maharashtra.

18) Omvedt Gail M., Cultural Revolt in a Colonial Society, Scientific Socialist Education Trust, Bombay, 1976.

19) Bhosale Arun, Chousalkar Ashok and Tarodi Lakshminarayan (Eds.), Freedom Movement in Princely States of Maharashtra, Shivaji University, Kolhapur, 2001.

20) Rodrigues Livi, Rural Political Protest in Western India, Oxford University Press, Delhi, 1998.

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HCT-Paper – 4.2. Modern Maharashtra (1818 A.D. – 1990 A.D.)

SEMESTER – IV

Unit – I **Formation of Present Maharashtra State**

Unit – II **Agrarian System of Maharashtra**

a) Agricultural development

b) Government Famine Policy

c) Agricultural development of Banking System.

Unit – III **Economic Development**

a) Industries

b) Trades

c) Communication and Transportation System

Unit – IV **Maharashtra during- 1961 to 1990**

a) Education and Technology

b) Village Industry and Co-operative Movement

c) Political Development

List of Reference Books

1) Kumar Ravindra, Western India in the 19th Century, London, 1968.

2) Ballhatchet K., Social Policy and Social Changes in Western India, (1818 – 1830), London, 1957.

3) Verma Sushama, Mountstuart Elphinstone in Maharashtra (1811 – 1827) K. P. Begchi and Company, 1981.

4) Baden – Powell B. B., Land Systems of the British, 3 Vols., Oxford, 1892.

5) Desai S. V., Social Life in Maharashtra under the Peshwa, Bombay, 1980.

6) Frankel Fracine and Rao M. S. A., Dominance and State Power in Modern India : Decline of a Social Order, Vol. II, Delhi, 1989 – 1990.

7) Gore M. S., Non-Brahmin Movement in Maharashtra, New Delhi, 1989.

8) Gordon Johnson, Provincial Polities and Indian Nationalism : Bombay and the Indian National Congress, 1880 – 1915, Cambridge, 1973.

9) Masselos James C., Towards Nationalism : Group Affiliations and Polities of Public of Public Associations in 19th Century, Western India, Bombay, 1974.

10) Rosalind O'Hanlon, Caste, Conflict and Ideology : Mahatma Jotirao Phule and Low Caste Protest in19th Century, Western India, Cambridge University Press, 1985.

11) Christine Dobbin, Urban Leadership in Western India : Polities and Communities in Bombay City 1840 – 1885, Oxford University Press, 1972.

12) Phadke Y. D., Women in Maharashtra, Maharashtra Information Centre, Government of Maharashtra, New Delhi, 1989.

13) Israel, Milton and Wagle N. K. (Eds.), Religion and Society in Maharashtra, Toronto, 1987.

14) Kulkarni A. R. and Wagle N. K. (Eds.), Region, Nationality and Religion, Popular Prakashan, Mumbai, 1999.

15) Wagle N. K. (Ed.), Writers, Editors and Reformers : Social and Political Transformation of Maharashtra, Manohar, New Delhi, 1999.

16) Sunthankar, B. R., 19th Century History of Maharashtra, Vol. I (1818 – 1857), Shubhada Saraswal, Pune, 1988.

17) Sirsikar, V. M., Polities of Maharashtra.

18) Omvedt Gail M., Cultural Revolt in a Colonial Society, Scientific Socialist Education Trust, Bombay, 1976.

19) Bhosale Arun, Chousalkar Ashok and Tarodi Lakshminarayan (Eds.), Freedom Movement in Princely States of Maharashtra, Shivaji University, Kolhapur, 2001.

20) Rodrigues Livi, Rural Political Protest in Western India, Oxford UniversityPress,Delhi,1998

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HCT 3.3 Research Methodology (Compulsory Paper)

Semester-III

Unit -1 Research Methodology

A) Meaning and Objectives of Research Methodology.
B) Types of Research
C) Significance of research

Unit -2 Nature of Historical Sources, Data Collection and analysis.

A) Types of Sources- Primary, Secondary and oral.
B) Analysis of sources- External and Internal criticism
C) Collection of data- Archives, Library, Government sources, E-sources, Media- Newspapers, Magazines, Radio, TV, Internet.

Unit-3 Research Process in History

A) Formulation of problems and selection of Research topic.
B) Formulation of objectives and Hypothesis.
C) Data collection and analysis.
D) Examination of documents and interpretation.
E) Report writing and preparation of foot notes, Bibliography, Reference, Observation and Indexing

Unit-4 Report Writing

A) Objectives of Report writing.
B) Steps of Report Writing
C) Essentials of Ideal Report.

List of Reference Book

1) Baily K.D., Methods of Social Research, Free press, New York, 1982.
2) Bose Pradip Kumar, Research Methodology, New Delhi, ICSSR, 1995.
3) Kothari C.R., Research Methodology, Vikas publishing house, New Delhi, 2010.
4) Ackoft R.L., The Design of Social Research, 1960-61.
5) Max Webar, The Methodology of Social Sciences, Glanko, 1949.
6) B. Shaikh Ali, History, Its Theory and Method.
7) Agrawal, Important Guidelines on Research Methodology.
8) Puch Keith, The Introduction to social Research, London, Sage, 1986.
9) आगलावे प्रदीप , संशोधन पद्धतीशात्र व तंत्रे , विद्या प्रकाशन , नागपूर २०००.
10) देव प्रभाकर, इतिहास एक शास्त्र , कल्पना प्रकाशन, नांदेड,२००२.
11) कोठेकर शांता , इतिहास तंत्र आणि तत्त्वज्ञान , श्री साईनाथ प्रकाशन, नागपूर,२००५
12) बोधनकर सुधीर व इतर , सामाजिक संशोधन पद्धती, श्री साईनाथ प्रकाशन, नागपूर,२०१४
13) नाडगोंड़े गुरुनाथ, सामाजिक संशोधन पद्धती, फडके प्रकाशन कोल्हापूर,२००९.
14) भांडारकर पु. ल. सामाजिक संशोधन पद्धती, दत्तसंन प्रकाशन , नागपूर १९७६.

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HCT-4.3 Dissertation- (Compulsory paper)

Semester- IV

All the students should prepare the project Report/Dissertation only one of the following areas with the consideration of research supervisor at the P.G. center

NB: Research should be based on Primary/ Secondary data.

1. Ancient History
2. Medieval History
3. Modern History
4. World History
5. Local History
6. Subaltern History
7. Gender Issues
8. Issues in Human Rights
9. Environmental/ Sustainable Development
10. Any related topic to History

List of Reference Book

1) Baily K.D., Methods of Social Research, Free press, New York, 1982.
2) Bose Pradip Kumar, Research Methodology, New Delhi, ICSSR, 1995.
3) Kothari C.R., Research Methodology, Vikas publishing house, New Delhi, 2010.
4) Ackoft R.L., The Design of Social Research, 1960-61.
5) Max Webar, The Methodology of Social Sciences, Glanko, 1949.
6) B. Shaikh Ali, History, Its Theory and Method.
7) Agrawal, Important Guidelines on Research Methodology.
8) Puch Keith, The Introduction to social Research, London, Sage, 1986.

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SCT- Paper – 3.1 –Women in Indian History

SEMESTER – III

Unit – I Sources:

a) Archival : Government Files, Official Reports, Private Papers

b) Non Archival : Sacred, Non-sacred Texts, Epigraphy, Diaries, Memoirs, Autobiographies, Fiction, Songs, Folklore, Photographs, Paintings and Oral History

Unit – II Feminism

a) Definition

b) Origin and Evolution

c) Survey of Approaches

i) Liberal ii) Marxist iii) Radical iv) Post Modern

Unit – III Religion and Women

a) Brahminical Tradition

b) Jainism

c) Buddhism

d) Islam

e) Sikhism

f) Christianity

Unit – IV Customary and Legal Status

a) Ancient India

b) Medieval India

c) Colonial India

d) Post-Independence

e) Tribal Society

List of Reference Books

1) Altekar A. S., Position of Women in Hindu Civilization, Motilal Banarasidas Publication, New Delhi, 1959.
2) B. Asisha Lemu, Fatima Heeren, Women in Islam, 1977 (Aligarh).
3) Bagachi Jasodhara, Indian Women, Sangam Book, Hudrabad, 1977.
4) C. Swarajya Laxmi, Women at Work, Discovery Publishing House, New Delhi, 1999.
5) Dr. Odeyar S. B., The Role of Marathi Women in the struggler for India's Freedom Unpublished Thesis, Shivaji University, 1989.
6) Dr. N. Sarswati Nanaiah, The Position of Women during Vijay Nagar Period, Mysore, 1992.
7) Geraldine Forbes, Women in Modern India, Cambridge University Press, 1998.
8) M. d. Renavikar, Women and Religion.
9) Mukharjee I/a., Social Status of North Indian Women.
10) Muyundr R. C., Bharatiya Vidhya Bhavan, Bombay, Vol. – VI, VIII, IX.
11) Muniza Rafia Khan, Social – Legal Status of Muslim Women, 1993.
12) Nagar Usha, Education of Girls in India, New Delhi, 2000.
13) Raj Kumar (Ed.), Women and Law, New Delhi, 2000.
14) Sangavi Kumkum Vaid Sudesh, Women and Culture, Mumbai, 1994.
15) Sarkar J. N., Studies in Mughal India, Calcutta, 1919.
16) Shaha A. M., B. S. Baviskar, E. A., Ramaswary (Ed.), Women in India Society, 1996.
17) Sushila Agrawal (Ed.), Status of Women, Jaipur, 1988.
18) Swami Madhavandana & Mujundar R. C., Great Women in India, Kolkatta, 1953.
19) Tambe Anagha, Social History of Maharashtra from Gener and Cast, Pune, 1998.
20) Tarali Baig, Women of India, Delhi, 1990.

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SCT- Paper – 4.1 –Women in Indian History

SEMESTER – IV

Unit – I **Women and Work:**

a) Household
b) Agriculture
c) Industry, Formal and Informal Sectors
d) Profession
e) Wages
f) Property Right

Unit – II **Education and Women**

a) Ancient India
b) Medieval India
c) Colonial India
d) Post-Independence

Unit – III **Women's Participation in Freedom Movement and Politics**

a) Gandhian Satyagraha
b) Revolutionary Movements
c) Peasant and Workers Movements
d) State Legislatures and Parliament
e) Dalit Movements

Unit – IV **Women's Social Organization**

a) Colonial – Local, Provincial, National
b) Post-Independence

List of Reference Books

1) Altekar A. S., Position of Women in Hindu Civilization, Motilal Banarasidas Publication, New Delhi, 1959.
2) B. Asisha Lemu, Fatima Heeren, Women in Islam, 1977 (Aligarh).
3) Bagachi Jasodhara, Indian Women, Sangam Book, Hudrabad, 1977.
4) C. Swarajya Laxmi, Women at Work, Discovery Publishing House, New Delhi, 1999.
5) Dr. Odeyar S. B., The Role of Marathi Women in the struggler for India's Freedom Unpublished Thesis, Shivaji University, 1989.
6) Dr. N. Sarswati Nanaiah, The Position of Women during Vijay Nagar Period, Mysore, 1992.
7) Geraldine Forbes, Women in Modern India, Cambridge University Press, 1998.
8) M. d. Renavikar, Women and Religion.
9) Mukharjee I/a., Social Status of North Indian Women.
10) Muyundr R. C., Bharatiya Vidhya Bhavan, Bombay, Vol. – VI, VIII, IX.
11) Muniza Rafia Khan, Social – Legal Status of Muslim Women, 1993.
12) Nagar Usha, Education of Girls in India, New Delhi, 2000.
13) Raj Kumar (Ed.), Women and Law, New Delhi, 2000.
14) Sangavi Kumkum Vaid Sudesh, Women and Culture, Mumbai, 1994.
15) Sarkar J. N., Studies in Mughal India, Calcutta, 1919.
16) Shaha A. M., B. S. Baviskar, E. A., Ramaswary (Ed.), Women in India Society, 1996.
17) Sushila Agrawal (Ed.), Status of Women, Jaipur, 1988.
18) Swami Madhavandana & Mujundar R. C., Great Women in India, Kolkatta, 1953.
19) Tambe Anagha, Social History of Maharashtra from Gener and Cast, Pune, 1998.
20) Tarali Baig, Women of India, Delhi,

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SCT- Paper – 3.2 The Thoughts Of Mahatma Phule and Dr. Babasaheb Ambedkar (Mahatma Phule)

SEMESTER – III

Unit – I **Educational Thoughts of Mahatma Phule**

a) Traditional Education System

b) Education in Bombay Presidency

c) Education and Social Change

Unit – II **Religious Thoughts of Mahatma Phule**

a) Religious condition at the eve of 19th Century

b) Formation of Satyashodhak Samaj and its activities

c) Religious Philosophy

Unit – III **Social Thoughts of Mahatma Phule**

a) Social condition in 19th Century

b) Caste System

c) Condition of Women

Unit – IV **Economic Thoughts of Mahatma Phule**

a) Colonial Economy

b) Structure and Policies

c) Economic Impact of British Policies

List of Reference Books

1. Dr.B.R.Ambedkar,AnnihilationofCaste,Writing&Speeches.

2. GhuryeG.J.,Caste&RaceinIndia.

3 GailOmveht,CulturalRevoltinColonialSocie)

4 पाटील शरद. दास शूद्रांची गुलामगि

5 नरके हरी , महात्मा फुले: शोधाच्या नव्या वाटा .

6 फडके य.दि. : आंबेडकरी चळवळ.

7 साळुंखे आ. ह. : वैदिक धर्म सूत्रे आणि बहुजनांची गुलामगिरी.

8 फडके य.दि. : विसाव्या शतकातील महाराष्ट्र खंड १ ते ८.

9 चव्हाण दिलीप : डॉ. आंबेडकर आणि भारतीय शिक्षणातील जाती संघर्ष .

10 आंबेडकर बी. आर. : भारताचे संविधान .

11 आंबेडकर बी. आर. : बुद्ध आणि त्याचा धम्म.

12 आंबेडकर बी. आर. : प्राचीन भारतीय व्यापार .

13 फडके य.दि. : (संपादन) महात्मा फुले समग्र वाङःमय .

14 कीर धनंजय , डॉ. बाबासाहेब आंबेडकर.

15 खैरमोडे चांगदेव, डॉ. भीमराव रामजी आंबेडकर खंड १ ते १२

16 मुन वसंत , हरी नरके (संपादक) डॉ. बाबासाहेब आंबेडकर यांचे लेखन आणि भाषणे

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SCT- Paper – 4.2 The Thoughts Of Mahatma Phule and Dr. Babasaheb Ambedkar

(Dr. Babasaheb Ambedkar)

SEMESTER – IV

Unit – I **Educational Thoughts of Dr. Babasaheb Ambedkar**

a) Caste and Education

b) Educational Reforms in India under Colonialism and the issue of Dalit Education

c) Early Activities of Dalit Education V. R. Shinde, Shahu Maharaj

Unit – II **Social Thoughts of Dr. Babasaheb Ambedkar**

a) Social basis of Untouchability

b) Understanding Caste and Class

c) Law and Social Change

Unit – III **Dr. Babasaheb Ambedkar's Historiography**

a) Situating Dr. Babasaheb Ambedkar's Historiography

b) Dr. Babasaheb Ambedkar's Historical Method

c) Method of Social History

Unit – IV **Dr. Babasaheb Ambedkar's struggle for Women's emancipation**

a) Women and Social History of India

b) Women's Reforms : Social and Economic issues

c) Economic impact of British Policies

List of Reference Books

3. Dr.B.R.Ambedkar,AnnihilationofCaste,Writing&Speeches.

4. GhuryeG.J.,Caste&RaceinIndia.

3 GailOmveht,CulturalRevoltinColonialSocie)

4 पाटील शरद. दास शूद्रांची गुलामगि

5 नरके हरी , महात्मा फुले: शोधाच्या नव्या वाटा .

6 फडके य.दि. : आंबेडकरी चळवळ.

7 साळुंखे आ. ह. : वैदिक धर्म सूत्रे आणि बहुजनांची गुलामगिरी.

8 फडके य.दि. : विसाव्या शतकातील महाराष्ट्र खंड १ ते ८.

9 चव्हाण दिलीप : डॉ. आंबेडकर आणि भारतीय शिक्षणातील जाती संघर्ष .

10 आंबेडकर बी. आर. : भारताचे संविधान .

11 आंबेडकर बी. आर. : बुद्ध आणि त्याचा धम्म.

12 आंबेडकर बी. आर. : प्राचीन भारतीय व्यापार .

13 फडके य.दि. : (संपादन) महात्मा फुले समग्र वाङःमय .

14 कीर धनंजय , डॉ. बाबासाहेब आंबेडकर.

15 खैरमोडे चांगदेव, डॉ. भीमराव रामजी आंबेडकर खंड १ ते १२

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GET - Paper – 3.1 History of India (1858 A. D. – 1964 A. D.)

SEMESTER – III

Unit – I **Strategies of Imperial Control**

a) British Government and its control over, Indian Administration – Central, Provincial & District.

b) India and its Neighbors – Afghanistan, Tibet, Nepal, Burma, Persia and the Persian Gulf.

Unit – II **Economic Impact of British Rule**

a) Social and Economic origins of commercialization and effects.

b) Agricultural output.

c) Rise of Modern Industry and Capitalist Class, State and Industrial Growth.

d) Trends in Population and National Income.

Unit – III Society in Pre Independence Era

a) Social Composition : Ethnic Groups – Tribes Class and Community

b) Colonial Intervention and Social Changes – Reforms Movements, Modern Education, Rise of Middle Classes and Caste Movements.

c) Women : Status, Property Rights, Reform Legislation and Political Participation

Unit – IV Rise of Indian Nationalism

a) Origin and Growth of National Consciousness

b) Formation of Indian National Congress and Moderate Policy

c) Extremist era and Lokmanya Tilak

List of Reference Books

1) Robart P. E. : History of British India (Oxford).

2) Bhattacharya Dhiraja : A Concise History of the Modern Economic, 1750- 1950, New Delhi, 1979.

3) Narayan Brij : Economic Life in India, Delhi, 1923.

4) Datta K. K. : A Survey of Socio-economic Condition in India.

5) Sarakar Sumit : Modern India, 1885-1947.

6) Chandra Bipan : Ideologies and Politics in Modern India.

7) Mujumadar R. C. (Ed.) : History of Indian Freedom Struggle, Bhartiy Vidyabhavan Series, Vol. XI, Mumbai.

8) Singh G. N. : Land Marks in National and Constitutional Development of India, S. Chanda & Company, New Delhi.

9) Raychaudhari S. C. : Socio-economic and Cultural History of Modern India, Surjit Pub. 1983.

10) Sharma S. R. : Making of Modern India.

11) Desai A. R. : Social Background of Indian Nationalism, Popular Bombay 1960.

12) Agrawal R. C. : Constitutional Development of India and National Movement, S. Chandra New Delhi.

13) Chandra Bipan & Others : Freedom Struggle New Delhi, 1972.

14) Chopra P. N., Puri B. N., Das M. N. : A Social, Cultural and Economic History of India.

15) Gopal S. : British Policy in India (1965).

16) Joshi G. N. : Indian Administration, London, 1937.

17) Datta R. C. : India Early British Rule.

18) Patvardhan V. A. : Bhartya Sansthanatil Wilinikarnachi Katha, 1940.

19) Grower : History of Modern India, New Delhi (Marathi).

20) Waidhy Suman & Kothekar Shanta : History of Modern India, Vol. I to IV, Nagapur, 1966 (Marathi).

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GET - Paper – 4.1 History of India (1858 A. D. – 1964 A. D.)

SEMESTER – IV

Unit – I **Struggle for Freedom**

a) Non-cooperation Movement
b) Revolutionary and Leftist Movements
c) Civil Disobedience Movement
d) Quit India Movement
e) Subhashchandra Bose and Indian National Army

Unit – II **Partition of India and Transfer of Power**

a) Rise of Communal Politics : Vahabi Movement, Aligarh Movement
b) Muslim League and Demand of Pakistan
c) Krips Plan, Vevell Plan, Rajaji Plan, Montbatten Plan
d) Interiam Government, Partition, Independence Act.

Unit – III **Independent India**

a) Visions of New India – Education, Health, Science and Technology
b) Integration of princely states
c) Beginning of planned era
d) Agriculture and Industrial Policy
e) Making of Indian Constitution and the role of Dr. Babasaheb Ambedkar

Unit – IV **India's Foreign Policy**

a) India and UNO
b) Nehru and Non – Aligned Movement
c) Indo – China Relation
d) Indo – Pak Relation

List of Reference Books

2) Robart P. E. : History of British India (Oxford).

3) Bhattacharya Dhiraja : A Concise History of the Modern Economic, 1750- 1950, New Delhi, 1979.

4) Narayan Brij : Economic Life in India, Delhi, 1923.

5) Datta K. K. : A Survey of Socio-economic Condition in India.

6) Sarakar Sumit : Modern India, 1885-1947.

7) Chandra Bipan : Ideologies and Politics in Modern India.

8) Mujumadar R. C. (Ed.) : History of Indian Freedom Struggle, Bhartiy Vidyabhavan Series, Vol. XI, Mumbai.

9) Singh G. N. : Land Marks in National and Constitutional Development of India, S. Chanda & Company, New Delhi.

10) Raychaudhari S. C. : Socio-economic and Cultural History of Modern India, Surjit Pub. 1983.

11) Sharma S. R. : Making of Modern India.

12) Desai A. R. : Social Background of Indian Nationalism, Popular Bombay 1960.

13) Agrawal R. C. : Constitutional Development of India and National Movement, S. Chandra New Delhi.

14) Chandra Bipan & Others : Freedom Struggle New Delhi, 1972.

15) Chopra P. N., Puri B. N., Das M. N. : A Social, Cultural and Economic History of India.

16) Gopal S. : British Policy in India (1965).

17) Joshi G. N. : Indian Administration, London, 1937.

18) Datta R. C. : India Early British Rule.

19) Patvardhan V. A. : Bhartya Sansthanatil Wilinikarnachi Katha, 1940.

20) Grower : History of Modern India, New Delhi (Marathi).

21) Waidhy Suman & Kothekar Shanta : History of Modern India, Vol. I to IV, Nagapur, 1966 (Marathi).

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GET - Paper –3.2 – History OF US.S.R. (1917 A. D.-1977 A. D.)

SEMESTER – III

Unit – I *Russian Revolution of 1917*

a) Background

b) Causes

c) Effects

Unit – II *Lenin*

a) New Economic Policy

Unit – III *Stalin*

a) Struggle for Power between Stalin & Trotsky

b) Five Years Plan

c) Constitution of 1935 – 1936

d) Rise of Russia as a Great Power, Stalinism

Unit – IV *A) Condition of the U.S.S.R. in 1945*

B) Communist Party and Government

a) Early Developments

b) New Constitution

c) Changes Since 1977

List of Reference Books

1) A Short History of Russia, 2nd Edition, New York, 1969 – Clarkson J.
2) Short History of U. S. S. R., Progress Publishers, Moscow.
3) War Years, Alexander Worth Russia.
4) A History of Russia and the Soviet Union, David Maekenzie.
5) The Bolshevik Revolution, E. H. Carr.
6) Russia 1917 – 1964 – Westwood.
7) Rigby T. H. (Ed.), Stalin, 1966.
8) C. Robert Tucker (Ed.), Stalinism, New York, 1977.
9) Russia : A Short History, 2nd Edition, New York, 1969, Florinski, M. T.
10) Soviet Russian Literature Since Stalin, New York, 1978.
11) Khrushchev, Nikitas, The Crimes of Stalin Era, New York, 1962.
12) Brezhenev Leonid I, The Virgin Lands, New York, 1979.
13) J. Herbert Ellison, The Sino – Soviet Conflict, Washington, 1982.
14) Edmonds, Robin, Soviet Foreign Policy, 1962 – 73, London, 1975.
15) Edmonds, Robin, Soviet Foreign Policy, The Breznew Years, New York, 1983.
16) Payne, Samuel B. J., The Soviet Union and SALT, Cambridge, M. I. T., 1980.
17) London, Kurt (Ed.), The Soviet Union in World Politics Bounder, 1980.
18) G. Werner, Hahn, The Politics of Soviet Agriculture, 1960 – 70, Baltimore, 1972.

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SCT - Paper –4.2 – History OF US.S.R. (1917 A. D.-1977 A. D.)

SEMESTER – IV

Unit – I Leadership

a) Lazar Kaganovich (1953 – 1955)
b) Nikita Khrushehev (1955– 1964)
c) Alcksei Kosygyn (1964 - 1977)
d) Lconid Brezhnev (1964 - 1977)

Unit – II Foreign Policy of Russia

a) China
b) Cuba
c) India
d) Vietnam
e) U. S. A.

Unit – III Economy

a) Planning : Suneey of aims and achievements
b) Agriculture : Condition of Peasants

Unit – IV Progress in Science and Technology

List of Reference Books

1) A Short History of Russia, 2nd Edition, New York, 1969 – Clarkson J.
2) Short History of U. S. S. R., Progress Publishers, Moscow.
3) War Years, Alexander Worth Russia.
4) A History of Russia and the Soviet Union, David Maekenzie.
5) The Bolshevik Revolution, E. H. Carr.
6) Russia 1917 – 1964 – Westwood.
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8) C. Robert Tucker (Ed.), Stalinism, New York, 1977.
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10) Soviet Russian Literature Since Stalin, New York, 1978.
11) Khrushchev, Nikitas, The Crimes of Stalin Era, New York, 1962.
12) Brezhenev Leonid I, The Virgin Lands, New York, 1979.
13) J. Herbert Ellison, The Sino – Soviet Conflict, Washington, 1982.
14) Edmonds, Robin, Soviet Foreign Policy, 1962 – 73, London, 1975.
15) Edmonds, Robin, Soviet Foreign Policy, The Breznew Years, New York, 1983.
16) Payne, Samuel B. J., The Soviet Union and SALT, Cambridge, M. I. T., 1980.
17) London, Kurt (Ed.), The Soviet Union in World Politics Bounder, 1980.
18) G. Werner, Hahn, The Politics of Soviet Agriculture, 1960 – 70, Baltimore, 1972.

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M.A.II, Sem-IV, History
Skill Oriented Subject
Historical Application in Tourism

Credit- Theory – 03 Project/Report-01,

Total – 04, Total periods – 60

Preamble :-

This course is planned to introduce students to the study of Historical Tourism and Museums as an auxiliary subject of History. To provide professional knowledge for the feild of History. To provide professional knowledge for the feild of Historical tourism and museums. It gives theoretical and practical konwledge of historical monuments and sites. To motivated the students for conservation and preservation of Historical places, museums and historical sites.

Objective of the course :-

1) Students will develop an informed familiarity with multiple cultures.
2) Students will employ a fullrage of technigues and methods used to gain historical knowledge.
3) Students will develop an ability to convey verbally their historical knowledge.
4) To facilitate the students to take up the challenges of appearing for jobs.
5) To provide professional knowledge for the field of Tourism and Museum.
6) To explain the various important Historical places.

Outcomes of the course :-

1) Grasp about the importance of museums in understanding of historical legacy properly.
2) Understand about the historical tourism and it’s importance in grasping historical facts.
3) History knowledge Utilize for professional jobs.
4) Skill will be develop for History tourism Guide.
5) The students will understend the concept of the tourism and learn the basic principles of Museum.

Historical Application in Tourism

Unit-I - Tourism

a) Definition and Nature of Tourism 10 periode

b) Types of Tourism – Domestic, Regional, National and International

c) Motivation of Tourism – Pleasure, Education, Culture, Social, Religious, Health and History.

Unit-II - Economic Importance of Tourism

a) Guide 10 periods

b) Traveling and Lodging

c) Catering and Marketing

Unit-III - Museum.

a) Definition and Importance of museum 10 periods

b) Types of museum

c) Important museum – Chh Shivaji Maharaj Museum, Mumbai,
Salarjang Museum, Hydrabad.

Unit- IV - Important Monuments, Religious Centers and History sites
10 periods

a) Temple – Siddheshwar Temple (Solapur), Sun Temple (Konark)
Stup Of sanchi, Golden Temple (Amrutsar)

b) Forts – Raigad, Redfort (Delhi)

c) Caves – Ajanta, Ellora.(Maharashtra)

d) Need of Conservation and Preservation in Historical monuments and sites.

Projectwork / Report writing :- 20 periods

Students should be visit any historical place and collect information and submit brief report of the work done to the concerned teacher.

Evaluation Method :-

The University examination for this course will be of 80 marks. Nature of question paper and criteria for passing will be the same as other subjects for M.A.II sem - IV. Internal assessment is for 20 marks and a minimum of 08 marks is requierd for passing students should submit a project report of at least fire pages in writing to the concerned teacher for Internal Eraluation.

List of Reference Books

1) Chris Cooper and Fletcher, Tourism : Principles and Practices.

2) S. Wahab, Tourism Marketing.

3) James W. Morrison, Travel Agent and Tourism.

4) John Bakewell, The Complete Traveler,

5) Edword D. Mill's, Design for Holiday's and Tourism.

6) A. K. Bhatia, Tourism : Principles.

7) Dougles Pierce, Tourism Today : a Geographical Analysis.

8) Mujumdar R. C. (Gen. Ed.) for Arts Architecture Culture, Bhrartiya Vidya Bhavan's All Volumes on Indian History, Mumbai, 1988

Equivalent Subject for Old Syllabus

Sr. No.	Name of the Old Paper	Name of the New Paper
1	History of the Marathas (1600 to 1818 AD)	Maratha History (1600 to 1818 AD)
2	History of Modern Maharashtra (1818 to 1990 AD)	Modern Maharashtra (1818 to 1990 AD)
3	History of India (1858 to 1964 AD)	History of India (1858 to 1964 AD)
4	Women in Indian History	Women in Indian History
5	The thoughts of Mahatma Phule and Dr. Babasaheb Ambedkar	The thoughts of Mahatma Phule and Dr. Babasaheb Ambedkar
6	History OF US.S.R. (1917 A. D.-1977 A. D.)	History OF US.S.R. (1917 A. D.-1977 A. D.)

Vidnyan Mahavidyalaya Sangola

COURSE OUTCOMES

Name of Department: Mathematics

B.A. / B.Sc. / M.A. / M.Sc.	B.Sc.I
NAME OF SUBJECT	MATHEMATICS
SEM I / II / III / IV / V / VI	SEM I
COURSE NUMBER (PAPER NUMBER)	PAPER I
TITLE OF COURSE (NAME OF PAPER)	ALGEBRA

COURSE CONTENT	OBJECTIVES	OUTCOME
Matrices Symmetric and Skew symmetric, Elementary transformations, Rank of a Matrix(Echelon and Normal form), Characteristic equation of a matrix, Cayley Hamilton theorem and its use in finding the inverse of a matrix.	To introduce to student about types of matrices, rank of a matrix	The Students are able to use techniques for solving matrices.
Linear Equations Applications of matrices to a system of linear (both homogeneous and non-homogeneous) equations. Eigen values and Eigen vectors.	To introduce to student about solution of simultaneous equations, Eigen values and Eigen vectors.	The Students are able to use matrices techniques for solving system of linear equations, Eigen values and Eigen vectors.
Complex Number Modulus and Argument of a ComplexNumber, DeMoivre's theorem and itsapplications, Roots of Unity, Roots ofComplex Numbers.	To introduce to student about complex numbers, DeMoivre's theorem and its applications roots of unity and roots of complex number.	The Students are able to use techniques for solving complex roots of unity.
Transcendental Functions Circular Functions and their inverses and Hyperbolic function of a complex variable with their inverses.	To introduce to student about circular functions and their inverses, hyperbolic functions of a complex number.	The student can understood the transcendental functions

Vidnyan Mahavidyalaya Sangola

COURSE OUTCOMES

Name of Department: Mathematics

B.A. / B.Sc. / M.A. / M.Sc.	B.Sc.I
NAME OF SUBJECT	MATHEMATICS
SEM I / II / III / IV / V / VI	SEM I
COURSE NUMBER (PAPER NUMBER)	PAPER II
TITLE OF COURSE (NAME OF PAPER)	CALCULUS

COURSE CONTENT	OBJECTIVES	OUTCOME
Differentiation Indeterminate forms and L' Hospital's Rule, Successive differentiations, nth derivatives of standard functions, Leibnitz rule. Taylor's theorem and Maclaurin's Theorem (Only Statements). Series expansions of e^{x}, cos x, sin x, $(1+x)$, log(1+x).	To introduce to student about Indeterminate forms of limit , L' Hospital's Rule, Successive differentiations, nth derivatives of standard functions, Leibnitz rule. Taylor's theorem and Maclaurin's Theorem.	The Students can express the power series expansion of a given function and evaluate limits.
Function of two variables Limit and Continuity of functions of two variables, Partial derivative, partial derivative of higher orders, Homogeneous functions, Euler's theorem on Homogeneous functions.	To introduce to student about limits and continuity of two variables, partial derivatives and its higher orders , homogeneous functions, Euler's theorem.	The Students will able to solve limits, partial derivatives of functions of two variables.
Reduction formulae $\int_0^{\frac{\pi}{2}} sin^n x\, dx$, $\int_0^{\frac{\pi}{2}} cos^n x\, dx$, $\int_0^{\frac{\pi}{2}} sin^n x\, cos^m x\, dx$	To introduce to student about integration of sineand cosine formulae for higher degree	The Students are able to use techniques for solving integration of sine and cosine
Vector Calculus Scalar point function, Vector point function , Directional derivative, Gradient , divergence and Curl and its properties.	To introduce to student about vector differentiation with vector differential operator.	The Students will able to use different vector differential operator.

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COURSE OUTCOMES

Name of Department: Mathematics

B.A. / B.Sc. / M.A. / M.Sc.	B.Sc.I
NAME OF SUBJECT	MATHEMATICS
SEM I / II / III / IV / V / VI	SEM II
COURSE NUMBER (PAPER NUMBER)	PAPER III
TITLE OF COURSE (NAME OF PAPER)	GEOMETRY

COURSE CONTENT	OBJECTIVES	OUTCOME
Change of Axis Translations, Rotations, Invariants, Identifications of conics from general form of second degree equations, Polar Coordinates, Conversion formulae.	To introduce to student about change of axis.	The student will understand the change of axis.
Plane General equation of plane, Normal equation, Intercept form Angle between two planes, Plane through three points, Plane through a given point, Sides of a plane, Distance of a point from a plane, Family of planes.	To introduce to student about plane.	The student will understand the plane.
Sphere Centre radius form, General form , Diameter form, Equation of Tangent Plane and condition for tangency, Family of spheres $S+\lambda S'=0$, $S+\lambda P=0$.	To introduce to student about sphere.	The student will understand the sphere.

Vidnyan Mahavidyalaya Sangola

COURSE OUTCOMES

Name of Department: Mathematics

B.A. / B.Sc. / M.A. / M.Sc.	B.Sc.I
NAME OF SUBJECT	MATHEMATICS
SEM I / II / III / IV / V / VI	SEM II
COURSE NUMBER (PAPER NUMBER)	PAPER IV
TITLE OF COURSE (NAME OF PAPER)	DIFFERENTIAL EQUATION

COURSE CONTENT	OBJECTIVES	OUTCOME
Differential Equations of first order and first degree:[Part-I] Variables separable, Homogeneous, non- homogeneous differential equations.	To introduce to student about some method to find solutions of first order and first degree.	The Students will able to solve first order and first degree.
Differential Equations of first order and first degree: [Part-II] Exact differential equations. Necessary and sufficient condition for exactness, Integrating factor with four rules, Linear differential equations of the form: $\frac{dy}{dx} + Py = Q$ Bernoulli's Equation $\frac{dy}{dx} + Py = Qy^n$	To introduce to student about some method to find solutions of first order and first degree.	The Students will able to solve first order and first degree.
Linear Differential Equations With Constant Coefficients :[Part-I] Complementary function and particular integral, General solution of f(D) y=X, Solution of f(D)y=0 for non-repeated , repeated, real and complex root.	To introduce to student about some method to find solutions of Linear differential equations with constant coefficients.	The Students will able to use techniques for solving Linear differential equations with constant coefficients
Linear Differential Equations With Constant Coefficients : [Part-II] Solution of f(D)y=X , where X is of the form e^{ax}, sin(ax), cos(ax), x^m, , e^{ax}, V, xV	To introduce to student about some method to find solutions of Linear differential equations with constant coefficients.	The Students will able to use techniques for solving Linear differential equations with constant coefficients.

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COURSE OUTCOMES

Name of Department: Mathematics

B.A. / B.Sc. / M.A. / M.Sc.	B.Sc.II
Name Of Subject	Mathematics
SEM I / II / III / IV / V / VI	Sem III
Course Number (Paper Number)	Paper V
Title of Course (Name of Paper)	Differential Calculus

COURSE CONTENT	OBJECTIVES	OUTCOME
Tangents and Normals: Equations of tangents and Normals, Angle of intersection of two curves, Length oftangent, normal, subtangent, subnormal at any point of a curve, Pedal equations or p, requations (Cartesian form), Angle betweenradius vector and tangent, Length of the perpendicular from pole to the tangent, Length of polar subtangent and polar sub- normal, Pedal equations (polar form)	To introduce a students how to find area between arc and angle of intersection between two curve	Students are able to understand and find area between arc and angle of intersection between two curves.
Curvature : Definition of Curvature ,Length of arc as a function, Radius of curvature, Cartesian Equation, Parametric Equations, Polar Equations, Pedal Equations.	To introduce a students about curvature, how to solve examples of curvature	Students are able to understand application of curvature.
Jacobians: Definition of a Jacobian, Jacobian of a function of function, Jacobian of implicit function, Condition of dependent functions (statement only).	To introduce a students Jacobian and implicit function	Students are able to use the technique of jacobian
Maxima and Minima: Definiton of Maximum value and minimum value of a function of one, two variables, Necessary condition for extreme values(Statements only), sufficient condition for extreme values (Statements only), Use of second order derivatives. Maxima and Minima of a function of two variables, Lagrange's Method of undetermined multipliers of two variables	To introduce student about maxima and minima and methods.	Students are able to understand and find maximum and minimum value of the function

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COURSE OUTCOMES

Name of Department: Mathematics

B.A. / B.Sc. / M.A. / M.Sc.	B.Sc.II
Name Of Subject	Mathematics
SEM I / II / III / IV / V / VI	Sem III
Course Number (Paper Number)	Paper VI
Title of Course (Name of Paper)	Laplace Transform

COURSE CONTENT	OBJECTIVES	OUTCOME
Laplace Transform: Integral Transform (Definition), Laplace Transform (Definition), Linearity property of Laplace Transform, Piecewise continuous functions, Existence of Laplace Transform, Functions of exponential order functions of Class A, First Translation or Shifting Theorem, Second Translation or Shifting Theorem, Change of Scale Property, Laplace Transform of the derivatives of F(t), Laplace Transform of the nth order derivatives of F(t), Initial value theorem, Final value theorem, Laplace Transform of Integrals, Multiplication by t, Multiplication by t^n , Division by t, Evolution of Integrals, periodic function	To introduce to student the technique of Laplace Transform.	Students are able to use the technique of Laplace Transform
The Inverse Laplace Transform: Inverse Laplace Transform, Null Function, Linearity Property, Table of Inverse Laplace Transform, First Translation or Shifting Theorem, Second Translation or Shifting Theorem, Change of Scale Property, Use of Partial function, Inverse Laplace Transform of the derivatives, Inverse Laplace Transform of Integrals, Multiplication by powers of p, Division by powers of p, Convolution (definition), Convolution theorem, Heaviside's expansion formula, Beta function.	To introduce to student the technique of Inverse Laplace Transform.	Students are able to use the technique of Inverse Laplace Transform

Application of Laplace Transforms. Ordinary Differential equations with constant coefficients, Ordinary Differential equations with variable coefficients .Partial differential equation	To introduce to student about the Applications of Laplace Transform	Students are able to apply the technique of Inverse Laplace Transform

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COURSE OUTCOMES

Name of Department: Mathematics

B.A. / B.Sc. / M.A. / M.Sc.	B.Sc.II
Name Of Subject	Mathematics
SEM I / II / III / IV / V / VI	Sem IV
Course Number (Paper Number)	Paper VII
Title of Course (Name of Paper)	Differential Equations

COURSE CONTENT	OBJECTIVES	OUTCOME
Differential Equations of the first order and of degree higher than the first : Equations that can be resolved into factors of the first degree, Equations solvable for x, Equations solvable for y, Clairaut's equation, Equations reducible to clairaut's form**.**	To introduce to student what is differential equation and how to get a solution of differential equation.	Students can understand what differential equation is and how to get a solution of it
Linear Equations of the second order : General form of the second order linear equation, Complete solution when one integral belonging to complementary function is known, Rules of getting an integral belonging to complementary function, Removal of the First order Derivative. Transformation of the linear equation of second order by Changing the independent variable.	To introduce to a student what is linear equation of second order and how to get asolution of linear equation.	Students can understand what linear equation of second order is and how toget a solution of linear equation.
Homogeneous linear equation: Homogeneous linear equations, Working rule for finding the solution, Equations reducible to Homogeneous form.	To introduce to a student what is Homogeneous linear equation of second order and how to get a solution of Homogeneous linear equation.	Students can understand what Homogeneous linear equation of second order is and how to get a solution of Homogeneous linear equation.
Simultaneous Equations: Nature of the solution of simultaneous equations, Rules of solving the Equation,	To introduce to a student what is Simultaneous Equations and how to get a solution of Simultaneous Equations.	Students can understand what Simultaneous Equations is and how to get a solution of Simultaneous Equations

Total Differential Equations: Total Differential Equation, Necessary and sufficient condition for the integrability of total differential equation (proof of Necessity only), Condition for exactness, Criterion for exactness, Method of Solving the Equation.	To introduce to a student what is Total Differential Equation and how to get a solution of Total Differential Equation.	Students can understand what Total Differential Equation is and how to get a solution of Simultaneous Equations

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COURSE OUTCOMES

Name of Department: Mathematics

B.A. / B.Sc. / M.A. / M.Sc.	B.Sc.II
Name Of Subject	Mathematics
SEM I / II / III / IV / V / VI	Sem IV
Course Number (Paper Number)	Paper VIII
Title of Course (Name of Paper)	Abstract Algebra I

COURSE CONTENT	OBJECTIVES	OUTCOME
Introduction to Groups: Definition and Example of Groups, Permutations, Subgroups, Groups and Symmetry.	To introduce to a students about Group and examples.	Students can understood Group and examples.
Equivalence, Congruence and Divisibility: Equivalence relation and partitions, Congruence and Division Algorithm, Integer Modulo n, Greatest Common Divisors, The Euclidean Algorithm, Factorization, Euler's Phi Function	To introduce to a students about Equivalence, Congruence, Divisibility	Students can understood the Equivalence, Congruence, Divisibility
Groups: Elementary Properties of Groups, Generators, Direct products, Cossets, Lagrange's Theorem, Isomorphism, More on Isomorphism, Cayley's Theorem**.**	To introduce a students about properties of Group and some theorems of group.	Students can understand properties of Group some theorems of group.
Group Homomorphism: Homomorphism of Groups, Kernels, Quotient Groups, The Fundamental theorem of Homomorphism	To introduce a students about Group Homomorphism	Students can understood Group Homomorphism and examples

Vidnyan Mahavidyalaya Sangola

COURSE OUTCOMES

Name of Department: Mathematics

B.A. / B.Sc. / M.A. / M.Sc.	B.Sc.III
Name Of Subject	Mathematics
SEM I / II / III / IV / V / VI	Sem V
Course Number (Paper Number)	Paper IX
Title of Course (Name of Paper)	Algebra II

COURSE CONTENT	OBJECTIVES	OUTCOME
Introduction to Rings: Definitions and Examples, Integral Domains, Subrings , Fields , Isomorphism, Characteristic of rings	To introduce to students Ring Theory ,To give knowledge about Isomorphism	Students can apply the Ring Theory in Real Life.
Quotient Rings: Homomorphism of rings, ideals Quotient Rings	To introduce to students Quotient Group & Quotient Ring	Students Can understood Ideals,Quotient Ring
Vector Spaces: Vector spaces, subspaces, linear combination and system of linear equation, linear dependence and independence, basis and dimensions	To introduce to students about Vector Space.	Students can Understood the vector Spaces
Linear transformation and matrices: Linear transformation, null spaces and range, matrix representation of linear transformation, composition of linear transformation and matrix multiplication, invertibility and isomorphism	To introduce to students about Linear Transformation and Matrix representation	Students are able to use matrices technique for solving Linear Equation
Inner product space: Inner products and Norms.	To introduce to students Inner Product Space,Norms and distances	Students can understoodthe Norms, Distance

Vidnyan Mahavidyalaya Sangola

COURSE OUTCOMES

Name of Department: Mathematics

B.A. / B.Sc. / M.A. / M.Sc.	B.Sc.III
Name Of Subject	Mathematics
SEM I / II / III / IV / V / VI	Sem V
Course Number (Paper Number)	Paper X
Title of Course (Name of Paper)	Complex Analysis

COURSE CONTENT	OBJECTIVES	OUTCOME
Analytic Functions: Complex Differentiation, Limits and Continuity, Differentiability Necessary and sufficient condition of analytic function, Method of constructing a regular function and analytic function, Simple method of constructing analytic function, Polar fromof Cauchy-Riemann Equations.	To introduce to students about some method to check analyticity of function.	The students able able to use technique of checking the analyticity of function.
Complex Integration: Introduction, Some basic definitions, Complex integral, Reduction of complex integrals to real integrals, Some properties of complex Integrals, An estimation of a complex integral, Line integrals as functions of arcs, Cauchy's Fundamental Theorem, Cauchy Goursat Theorem [Statement Only], Cauchy's Integral formula [Statement only], its consequences and examples, Derivative and higher order derivatives of an analytic function [Statement(s) only] and examples, Expansions of Analytic functions as power series (Taylor's Maclaurin's and Laurent's Series [Statement only]) and its examples,The zeros of an analytic function, Different Types of Singularities, Some Theorems on Poles and other Singularities (Theorem-I to IV only) and its examples, The point at infinity	To introduce to students about some theorems on the analytic function.	The students will understood for checking the analytic function.
Calculus of Residues: Residue at simple pole, Residue at a Pole of order greater than unity, Residue at infinity, Cauchy’s Residue	To introduce to students about pole and singularity.	The students will understood for checking the analytic function.

Theorem. Evaluation of Definite integrals, Integration round the unit Circle. Evaluation of $\int_0^{2\pi} f(cos\theta\ , sin\theta)d\theta$		

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COURSE OUTCOMES

Name of Department: Mathematics

B.A. / B.Sc. / M.A. / M.Sc.	B.Sc.III
Name Of Subject	Mathematics
SEM I / II / III / IV / V / VI	Sem V
Course Number (Paper Number)	Paper XI
Title of Course (Name of Paper)	Integral Calculus

COURSE CONTENT	OBJECTIVES	OUTCOME
Improper Integrals: Convergence of Improper integrals of the first kind, Test of convergence of a (Positive integrands),Necessary and sufficient condition for the convergence of improper integrals, Comparison of two integrals, A practical comparison test, Useful comparison integrals, Two useful tests, f(x) not necessarily positive general test for convergence, Absolute and conditionally convergence, Convergence of improperintegrals of the second kind, Convergence at infinity (Integrand being positive), Comparison of two integrals,A useful comparison integrals, General test (for convergence at infinity and f(x) may be positive or negative), Cauchy's test for convergence, Absolute and conditionally convergence of improper integrals of second kind,Test for the absolute convergence of the integral of product, Abel's test, Dirichlet's test**.**	To introduce to students about improper integral and familiar with convergence of improper integral.	The students can able to use technique for checking convergence ofimproper integral.
Beta and Gamma function: Definition, Properties, Transformations of Gamma function and Beta function and relation between them,Some important deductions, Duplication formula**.**	To introduce to students about Beta and Gamma function.	The students can able touse technique for Solving Beta and Gamma function.

Multiple integrals Double Integrals, Cartesian and polar, Applications of Double Integration (Area of regions and Volume of a Solid only), Change oforder of integration, Change of Variables.	To introduce to students about Multiple integrals.	The students can able touse technique to solve Multiple integrals.

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COURSE OUTCOMES

Name of Department: Mathematics

B.A. / B.Sc. / M.A. / M.Sc.	B.Sc.III
Name Of Subject	Mathematics
SEM I / II / III / IV / V / VI	Sem V
Course Number (Paper Number)	Paper XII (DSE – I)
Title of Course (Name of Paper)	Partial Differential Equations

COURSE CONTENT	OBJECTIVES	OUTCOME
Linear Partial differential equation of order one: Formation of partial differential equation by eliminating arbitrary constants , Formation of partial differential equation by eliminating arbitrary functions ,Types of integrals of partialdifferential equation , Lagrange's Method of solving linear partial differential equation of order one namelyPp + Qq = R Working rule for solving Pp+Qq =R by Lagrange's Method), Integral surface passing through a given curve	To introduce to students methods of find solution for first order linear partial differential equation.	Students will be able to solve first order linear partial differential equation.
Non Linear partial differential equation of order one: Solution of first order partial differential equation by Charpit's Method, Special methods of solution applicable to certain standard form I, II,III, IV.	To introduce to students methods of find solution for first order non linear partial differential equation.	Students will be able to solve first order non linear partial differential equation.
Linear partial differential equation with constant Coefficient: Homogeneous and Non Homogeneous linear partial differential equation with constant coefficient working rule for finding complementary function (C.F.),method of finding particular integral (P.I.) , Short method whenf (x, y) is φ (ax + by) and $x^m y^n$	To introduce to students methods of find solution for Homogeneous and Non Homogeneous linear partialdifferential equation with constant coefficient.	Students will be able to solve Homogeneous and Non Homogeneous linear partial differentialequation with constant coefficient.

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COURSE OUTCOMES

Name of Department: Mathematics

B.A. / B.Sc. / M.A. / M.Sc.	B.Sc.III
Name Of Subject	Mathematics
SEM I / II / III / IV / V / VI	Sem V
Course Number (Paper Number)	Paper XII (DSE – II)
Title of Course (Name of Paper)	Mathematical Analysis

COURSE CONTENT	OBJECTIVES	OUTCOME
Functions of a Single Variable (I): Limits, Continuous functions, Functions continuous on closed intervals, Uniform continuity	To introduce to students about limit, continuous functions and uniform continuity.	Students will get an idea about limit, continuous functions and uniform continuity.
Functions of a Single Variable (II): The Derivative, Continuous functions, Increasing and decreasing Functions, Darboux's Theorem, Rolle's Theorem, Lagrange's Mean Value Theorem, Cauchy's Mean Value Theorem, Higher Order Derivatives	To introduce to students about Functions of a Single Variable.	Students will understand Functions of a Single Variable.
Functions: Power series, Exponential functions, Logarithmic functions, Trigonometric functions, Functional equations, Functions ofbounded variation, Vector - Valued functions	To introduce to students about Functions.	Students will understand Functions.

Vidnyan Mahavidyalaya Sangola

COURSE OUTCOMES

Name of Department: Mathematics

B.A. / B.Sc. / M.A. / M.Sc.	B.Sc.III
Name Of Subject	Mathematics
SEM I / II / III / IV / V / VI	Sem VI
Course Number (Paper Number)	Paper XIII
Title of Course (Name of Paper)	Metric Spaces

COURSE CONTENT	OBJECTIVES	OUTCOME
Limits and metric Spaces: The Class l^2 (Schwartz, Minkowski inequality), Limit of a function on the real line, Metric Spaces, Limits in metric spaces.	To introduce to students about Limits and metric Spaces.	Students will understand Limits andmetric Spaces.
Continuous functions on metric spaces: Functions continuous at a pointon the real line, Reformulation, Function continuous on a metric space ,Open Sets, Closed Sets	To introduce to students about Continuous functionson metric spaces.	Students will understood Continuous functions on metric spaces.
Completeness and Compactness: More about open sets, Bounded sets and totally bounded sets, Complete metric spaces,Compact metric spaces, Continuous functions on compact metric spaces.	To introduce to students about Completeness and Compactness	Students will understood Completeness and Compactness

Vidnyan Mahavidyalaya Sangola

COURSE OUTCOMES

Name of Department: Mathematics

B.A. / B.Sc. / M.A. / M.Sc.	B.Sc.III
Name Of Subject	Mathematics
SEM I / II / III / IV / V / VI	Sem VI
Course Number (Paper Number)	Paper XIV
Title of Course (Name of Paper)	Numerical Analysis

COURSE CONTENT	OBJECTIVES	OUTCOME
Finite Differences: Introduction, Finite differences, Differences of Polynomial, Relation between the operators	To introduce to students about Finite Differences	Students can understood Finite Differences
Interpolation: Introduction, Newton's forward interpolation formula, Newton's backward interpolation formula, Central difference interpolation formula, Gauss's forward interpolationformula, Gauss's backward interpolation formula, Stirling's formula, Interpolation with unequal Intervals, Lagrange's Interpolation Formula	To introduce to students about Interpolation	Students can understood Interpolation
Numerical Differentiation and Integration: Numerical differentiation, Formula for derivatives, Maxima and minima of a tabulated function, Numerical Integration, Quadrature formulae (Trapezoidal rule, Simpson's 1/3 Rule and Simpson's 3/8 th rule)	To introduce to students about Numerical Differentiation and Integration	Students can Understood NumericalDifferentiation and Integration
Difference Equations: Introduction, Definitions, Formation ofdifference equations, Linear difference equation, Rules for finding the Complementaryfunction, Rules for finding the Particular Integral, Difference equations reducible to linear form	To introduce to students about Difference Equations	Students will understood DifferenceEquations

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COURSE OUTCOMES

Name of Department: Mathematics

B.A. / B.Sc. / M.A. / M.Sc.	B.Sc.III
Name Of Subject	Mathematics
SEM I / II / III / IV / V / VI	Sem VI
Course Number (Paper Number)	Paper XV
Title of Course (Name of Paper)	Programming in C

COURSE CONTENT	OBJECTIVES	OUTCOME
Overview of C: Introduction, Importance of C, Sample C programs, Basic structure of C programs, Programming style, Executing a C program, Points to remember	To introduce to students concept of algorithm for problem solving.	Students are able todesign flowchart / algorithm for given problem
Constants, Variables and Data Types: Introduction, Character Set, C Token, Constants, Keywords andIdentifiers, Variables, Data Types, Declaration of variables, Assigning values to variables, Defining symbolic constants	To introduce to students about Constants, Variables and Data Types	Students will be able to design Constants, Variables and Data Types
Operators and Expressions Introduction , Arthmetic Operators, Relational Operators, Logical Operators, Assignment Operators, Increments and decrement operators, Conditional operators, Bit-wise operators, Special operators, Arithmetic expressions, Evaluation of expressions, Precedence of arithmetic operators, Some computational problems, Type conversions in expressions, Operators precedence andassociativity, Mathematical function	To introduce to students about operators and expressions.	Students will be able to design operators and expressions.
Managing Input and Output Operators: Introduction, Reading a character, Writing a character, Formatted input , Formatted output	To introduce to students about Managing Input and Output Operators	Students will be able to understood Managing Input and Output Operators

Decision Making and Branching Introduction, Decision making with IF statement, Simple IF statement, The IF…ELSE Statement, Nesting of If….ELSE Statement, The ELSE…. IF ladder,The SWITCH Statement, The ? : operator, The GOTO statement	To introduce to students about fundamental structures.	Students will be able to design fundamental structures.
Decision Making and Looping: Introduction, The WHILE Statement The DO Statement, The FOR Statement, Jumps in loops	To introduce to students about Decision Making structures and Looping structures	Students will be able to design Decision Making structures and Looping structures
Arrays: Introduction, One dimensional arrays, Two dimensional arrays, Initializing two dimensional arrays, Multidimensional arrays	To introduce to students about arrays.	Students will be able to design arrays.
User - defined Functions Introduction, Need for user defined functions, A multifunction program , The form of C Functions, Return values and their types	To introduce to students about User - defined Functions.	Students will be able to design User - defined Functions.

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COURSE OUTCOMES

Name of Department: Mathematics

B.A. / B.Sc. / M.A. / M.Sc.	B.Sc.III
Name Of Subject	Mathematics
SEM I / II / III / IV / V / VI	Sem VI
Course Number (Paper Number)	Paper XVI (DSE – I)
Title of Course (Name of Paper)	Integral Transform

COURSE CONTENT	OBJECTIVES	OUTCOME
Laplace Transform: Integral Transform (Definition), Laplace Transform (Definition), Linearity property of Laplace Transform, Piecewise continuous functions, Existence of Laplace Transform, Functions of exponential order functions of Class A, First Translation or Shifting Theorem, Second Translation or Shifting Theorem, Change of Scale Property, Laplace Transform of the derivatives of F(t), Laplace Transform of the nth order derivatives of F(t), Initial value theorem, Final value theorem, Laplace Transform of Integrals, Multiplication by t, Multiplication by t^n , Division by t, Evolution of Integrals, periodic function	To introduce to student the technique of Laplace Transform.	Students are able to use the technique of Laplace Transform
The Inverse Laplace Transform: Inverse Laplace Transform, Null Function, Linearity Property, Table of Inverse Laplace Transform, First Translation or Shifting Theorem, Second Translation or Shifting Theorem, Change of Scale Property, Use of Partial function, Inverse Laplace Transform of the derivatives, Inverse Laplace Transform of Integrals, Multiplication by powers of p, Division by powers of p, Convolution (definition), Convolution theorem, Heaviside's expansion formula, Beta function.	To introduce to student the technique of Inverse Laplace Transform.	Students are able to use the technique of Inverse Laplace Transform

Application of Laplace Transforms. Ordinary Differential equations with constant coefficients, Ordinary Differential equations with variable coefficients .Partial differential equation	To introduce to student about the Applications of Laplace Transform	Students are able to apply the technique of Inverse Laplace Transform

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COURSE OUTCOMES

Name of Department: Mathematics

B.A. / B.Sc. / M.A. / M.Sc.	B.Sc.III
Name Of Subject	Mathematics
SEM I / II / III / IV / V / VI	Sem VI
Course Number (Paper Number)	Paper XVI (DSE – II)
Title of Course (Name of Paper)	Graph Theory and Combinatorics

COURSE CONTENT	OBJECTIVES	OUTCOME
Graph: Introduction, Basic terminology, Simple graph, Multigraph and Psuedo graph , Degree of vertex and types of graph	To introduce to students Graph	Students can understood Graph
Colorings of graph: Vertex Coloring - evaluation of vertex chromatic number of some standard graphs, critical graph. Upperand lower bounds of Vertex chromatic Number - Statement of Brooks theorem. Edge coloring - Evaluation of edge chromatic number of standard graphs such as complete graph, complete bipartite graph, cycle, Statements of Vizing Theorem. Chromatic polynomial ofgraphs - Recurrence Relation and properties of Chromatic polynomials. Vertex and Edge cuts vertex and edge connectivity and the relation between vertex and edge connectivity. Equality of vertexand edge connectivity of cubic graphs. Whitney's theorem on 2 -vertex connected graphs.	To introduce to students about Colorings of Graph.	Students are able to coloring the graph
Planar graph: Definition of planar graph. Euler formula and its consequences. Non-planarity of K5, K(3,3). Dual of a graph. Polyhedran in R and existence of exactly five regular polyhedral-(Platonic solids) Colorability of planar graphs - 5 color theorem for planar graphs, statement of 4 color theorem. Networks and flow and cut in a network - value of a flow and the capacity of cut in a network, relation between flow and cut.	To introduce to students about Planar graph.	Students can understand Planar graph.

Maximal flow and minimal cut in a network and Ford-Fulkerson theorem		
Combinatorics: Applications of Inclusion Exclusion Principle - Rook Polynomial, Forbidden position problems Introduction to partial franctions and using Newton's binomial theorem for real power find series, expansion of some standard functions. Forming recurrence relation and getting a generating function. Solving a recurrence relation using ordinary generating functions. System of Distinct Representatives and Hall's theorem of SDR. Introduction to matching, M alternating and M augmenting path, Berge theorem. Bipartite graphs.	To introduce to students about Combinatorics and Applications of Inclusion Exclusion Principle.	Students can understand Combinatorics and Applications of Inclusion Exclusion Principle

VIDNYAN MAHAVIDYALAYA,SANGOLA.

B.A- I

SEM - I

NAME OF SUBJECT - POLITICAL SCIENCE

PAPER NUMBER - I

NAME OF PAPER - INDIAN GOVERNMENT AND POLITICS.

COURSE CONTENT	OBJECTIVES	OUTCOME
Sources and features of the Indian constitution. Importance of the Preamble of constitution.	To get knowledge about Indian Constitution.	Students can understood the Indian Constitution
Fundamental Rights and Fundamental Duties of Indian citizen, Directive Principles of State Policy	To get the knowledge about Fundamental Rights, Duties and Directive Principles of State Policy.	Students can understood the Fundamental Rights, Duties and Directive Principles of State Policy.
Union legislature: Lok Sabha and Rajya Sabha : Composition, Powers and functions	To get the knowledge about Union Legislature	Students can Understood the system of Union Legislature
Union Executive: President Vice President , Prime Minister and Council of Ministers	get the knowledge about Union Executives.	Students can Understood the system of Union Executives
Judiciary: Supreme Court: Composition, Powers and Functions, Judicial Review	To get the knowledge about Judiciary system	Students can understood the Judiciary system

VIDNYAN MAHAVIDYALAYA,SANGOLA.

B.A- I

SEM - II

NAME OF SUBJECT - POLITICAL SCIENCE

PAPER NUMBER - I
NAME OF PAPER - INDIAN GOVERNMENT AND POLITICS.

COURSE CONTENT	OBJECTIVES	OUTCOME
Indian Federal System: Centre State relation and its changing nature.	To get the knowledge about Indian Federal System.	Students can understood the Indian Federal System.
Election Commission: Powers and Functions.	To get the knowledge about Election Commission	Students can understood the Structure of Election Commission
Political Parties in India: A) Origin, B) Ideology and Programme , C) Its role in Indian Politics. 1) Indian National Congress, 2)Nationalist Congress Party, 3)Communist Party of India, 4) Communist Party of India (Marxist), 5) Bhartiya Janata Party, 6) Bhujan Samaj Party,	To get knowledge about Political Parties in India.	Students can understood the Origin, Ideology and Programme of Political Parties
Influencing Factors on Indian Politics: Caste, Religion, Region, Money and Media	To get knowledge about Influencing Factors on Indian Politics.	Students can understood the Influencing Factors on Indian Politics.

VIDNYAN MAHAVIDYALAYA,SANGOLA.

B.A- II

SEM - III

NAME OF SUBJECT - POLITICAL SCIENCE

PAPER NUMBER - IV

NAME OF PAPER - Modern Indian Political Thought

COURSE CONTENT	OBJECTIVES	OUTCOME
Raja Rammohan Roy (a) Social Reforms. (b) Political Thoughts. (c) The role of Roy in Indian renaissance.	To know the thoughts about social reforms, political thoughts and the role of Raja rammohan roy in Indian renaissance	Students can understood the thoughts about social reforms, political thoughts and the role of Raja rammohan roy in Indian renaissance
B. G. Tilak (a) Views about British Rule. (b) Nationalism. (c) Four – Fold Programme.	To know the thoughts about views about British Rule, Nationalism and four-fold Programme of B.G. Tilak	Students can understood the thoughts about views about British Rule, Nationalism and four-fold Programme of B.G. Tilak
Mahatma Gandhi (a) Satya, Ahimsa and Satyagraha. (b) Concept of Swaraj (c) Theory of Trusteeship.	To know the thoughts about Satya, Ahimsa, Satyagraha, concept of Swaraj and theory of Trusteeship of Mahatma Gandhi	Students can understood the thoughts about Satya, Ahimsa, Satyagraha, concept of Swaraj and theory of Trusteeship of Mahatma Gandhi
Jawaharlal Nehru (a) Secular Nationalism (b) Democratic Socialism (c) Non-Alignment and Panchasheel	To know the thoughts about Secular Nationalism, Democratic Socialism and Non-Alignment and Panchasheel of Jawaharlal Nehru.	Students can understood the thoughts about Secular Nationalism, Democratic Socialism and Non-Alignment and Panchasheel of Jawaharlal.

VIDNYAN MAHAVIDYALAYA,SANGOLA.

B.A- II

SEM - III

NAME OF SUBJECT - POLITICAL SCIENCE

PAPER NUMBER - III

NAME OF PAPER - Introduction to Political Theory

COURSE CONTENT	OBJECTIVES	OUTCOME
Political Theory (a)Meaning (b) Nature, scope and importance.	To get the knowledge about meaning, nature, scope and importance of Political Theory.	Students can understood the meaning, nature, scope and importance of Political Theory.
Liberty (a) Meaning. (b) Types.	To get the knowledge about meaning and types of Liberty.	Students can understood the meaning and types of Liberty.
Equality (a) Meaning. (b) Types.	To get the knowledge about meaning and types of Equality.	Students can understood the meaning and types of Equality.
Justice (a) Meaning. (b) Types. (C) Importance of Social Justice	To get knowledge about meaning, types and importance of Social Justice.	Students can understood the meaning, types and importance of Social Justice.

VIDNYAN MAHAVIDYALAYA,SANGOLA.

B.A- II

SEM - IV

NAME OF SUBJECT - POLITICAL SCIENCE

PAPER NUMBER - VI

NAME OF PAPER - Modern Indian Political Thought

COURSE CONTENT	OBJECTIVES	OUTCOME
Maulana Abul Kalam Azad (a) Religion and Politics (b) Nationalism (c) Democracy.	To know the thoughts about Religion, Politics, Nationalism and Democracy of Maulana Abul Kalam Azad.	Students can understood the thoughts about Religion, Politics, Nationalism and Democracy of Maulana Abul Kalam Azad
M. N. Roy (a) Radical Democracy (b) New Humanism	To know the thoughts about Radical Democracy and New Humanism of M.N. Roy	Students can understood the thought about Radical Democracy and New Humanism of M.N. Roy.
Dr. B.R. Ambedkar (a) Social Thought (b) State Socialism (Economic Thought) (c) Views on Democracy	To know the thoughts about Social thought, State Socialism and views on Democracy of Dr. B.R.Ambedkar.	Students can understood the thought about Social thought, State Socialism and views on Democracy of Dr. B.R.Ambedkar
R.M. Lohia (a) Caste and Language (b) Four Pillar of the State. (c) Ideas about Democratic Socialism	To know the thoughts about Caste, Language ,Four pillar of state and ideas about Democratic Socialism of R.M. Lohia..	Students can understood the thoughts about Caste, Language ,Four pillar of state and ideas about Democratic Socialism of R.M. Lohia..

VIDNYAN MAHAVIDYALAYA,SANGOLA.

B.A- II

SEM - IV

NAME OF SUBJECT - POLITICAL SCIENCE

PAPER NUMBER - V

NAME OF PAPER - Introduction to Political Theory

COURSE CONTENT	OBJECTIVES	OUTCOME
Power (a)Meaning (b) Types	To get the knowledge about meaning and types of Power	Students can understood the meaning and types of Power
Authority (a) Meaning. (b) Kinds. (c) Features.	To get the knowledge about meaning, kinds and features of Authority.	Students can understood the meaning, kinds and features of Authority.
Legitimacy (a) Meaning. (b) Bases of Legitimacy	To get the knowledge about meaning and bases of Legitimacy.	Students can understood the meaning and bases of Legitimacy.
Democracy (a) Meaning. (b) Features. (c) Kinds: Parliamentary and Presidency.	To get the knowledge about meaning, features and kinds o Democracy.	Students can understood the meaning, features and kinds of Democracy.

Punyashlok Ahilyadevi Holkar Solapur University, Solapur

पुण्यश्लोक अहिल्यादेवी होळकर
सोलापूर विद्यापीठ
।। विद्यया संपन्नता ।।

NAAC Accredited-2015
'B' Grade (CGPA 2.62)

Name of the Faculty: Science & Technology

CHOICE BASED CREDIT SYSTEM

Syllabus: ZOOLOGY

Name of the Course: B.Sc. I (Sem–I & II)

(To be effective from the academic year June-2019).

Punyashlok Ahilyadevi Holkar Solapur University, Solapur,
Faculty of Science
Choice Based Credit System (CBCS)
(2019 -2020 : W.e.f. June 2019)

Choice Based Credit System: With the view to ensure worldwide recognition, acceptability, horizontal as well as vertical mobility for students completing undergraduate degree, Solapur University has implemented Choice Based Credit System (CBCS) at Undergraduate level.

The CBCS provides an opportunity for the students to choose courses from the prescribed courses comprising core, elective/minor or skill based courses. The courses can be evaluated following the grading system, which is considered to be better than the conventional marks system. Therefore, it is necessary to introduce uniform grading system in the entire higher education in India. This will benefit the students to move across institutions within India to begin with and across countries. The uniform grading system will also enable potential employers in assessing the performance of the candidates. In order to bring uniformity in evaluation system and computation of the Cumulative Grade Point Average (CGPA) based on student's performance in examinations.

· **Outline of Choice Based Credit System:**

1. ***Core Course:*** A course, which should compulsorily be studied by a candidate as a core requirement is termed as a Core course.

2. ***Elective Course:*** Generally a course which can be chosen from a pool of courses and which may be very specific or specialized or advanced or supportive to the discipline/ subject of study or which provides an extended scope or which enables an exposure to some other discipline/subject/domain or nurtures the candidate's proficiency/skill is called an Elective Course.

Discipline Specific Elective (DSE) Course: Elective courses may be offered by the main discipline/subject of study is referred to as Discipline Specific Elective.

3. ***Ability Enhancement Courses (AEC):*** The Ability Enhancement (AE) Courses may be of two kinds: **Ability Enhancement Compulsory Courses (AECC)** and **Skill Enhancement Courses (SEC).** "AECC" courses are the courses based upon the content that leads to Knowledge enhancement; (i) Environmental Science and (ii) English/MIL Communication. These are mandatory for all disciplines. SEC courses are value-based and/or skill-based and are aimed at providing hands-on-training, competencies, skills, etc.

· **Credit:** Credit is a numerical value that indicates students work load (Lectures, Lab work, Seminar, Tutorials, Field work etc.) to complete a course unit. In most of the universities 15 contact hours constitute one credit. The contact hours are transformed into credits. Moreover, the grading system of evaluation is introduced for B.Sc. course wherein process of Continuous Internal Evaluation is ensured. The candidate has to appear for Internal Evaluation of 20 marks and University Evaluation for 80 marks.

Punyashlok Ahilyadevi Holkar Solapur University, Solapur

Faculty of Science

Choice Based Credit System (CBCS),(w.e.f.2019-20) Structure for B. Sc-I Zoology

Subject/ Core Course	Name and Type of the Paper		No. of papers/ Practical	Hrs/week			Total Marks Per Paper	UA	CA	Credits
	Type	Name		L	T	P				
Class :	**B.Sc.- I Semester – I**									
Ability Enhancement Course(AECC)		English (communication skill)	Paper- I	4.0			100	80	20	4.0
Core (*Students can opt any Four Subjects from the Twelve Subjects Listed below. Out of these Four Subjects One Subject will be CORE and other Three will be ELECTIVE Subjects.)		DSC 1A	Paper-I	2.5	--	--	50	40	10	4.0
			Paper-II	2.5	--	--	50	40	10	
		DSC 2A	Paper-I	2.5	--	--	50	40	10	4.0
			Paper-II	2.5	--	--	50	40	10	
		DSC 3A	Paper-I	2.5	--	--	50	40	10	4.0
			Paper-II	2.5	--	--	50	40	10	
		DSC 4A **Zoology -Animal Diversity I and II**	Paper-I **Animal Diversity I**	2.5	--	--	50	40	10	4.0
			Paper-II **Animal Diversity II**	2.5	--	--	50	40	10	
Total				**24**	--	--	**500**	**400**	**100**	**20**
Class :	**B.Sc.- I Semester - II**									
Ability Enhancement Course(AECC)		English (Communication skill)	Paper- II	4.0			100	80	20	4.0
Core (*Students can opt any Four Subjects from the Twelve Subjects Listed below. Out of these Four Subjects One Subject will be CORE and other Three will be ELECTIVE Subjects.)		DSC 1B	Paper-III	2.5	--	--	50	40	10	4.0
			Paper-IV	2.5	--	--	50	40	10	
		DSC 2B	Paper-III	2.5	--	--	50	40	10	4.0
			Paper-IV	2.5	--	--	50	40	10	
		DSC 3B	Paper-III	2.5	--	--	50	40	10	4.0
			Paper-IV	2.5	--	--	50	40	10	
		DSC 4B **Zoology- Comparative Anatomy and Developmental Biology of vertebrates**	Paper-III **Comparative Anatomy of vertebrates**	2.5	--	--	50	40	10	4.0
			Paper-IV **Developmental Biology of vertebrates**	2.5	--	--	50	40	10	
		Democracy, Elections and Good Governance		3.0			50	40	10	NC
Total (Theory)				**27**	--	--	**550**	**440**	**110**	**20**
Core		DSC 1 A & 1B	Practical I and II	--	--	4	100	80	20	4.0
		DSC 2 A & 2B	Practical I and II	--	--	4	100	80	20	4.0
		DSC 3A & 3B	Practical I and II	--	--	4	100	80	20	4.0
		DSC 4A & 4B **Zoology**	Practical I and II	--	--	4	100	80	20	4.0
Total (Practical)						**16**	**400**	**320**	**80**	**16**
Grand Total				**51**		**16**	**1450**	**1160**	**290**	**56**

***Core Subjects**
Chemistry/Physics/Electronics/Computer Science/Mathematics/Statistics/Botany/Zoology/ Microbiology/Geology/ Geography/Psychology

Punyashlok Ahilyadevi Holkar Solapur University, Solapur

Faculty of Science
Choice Based Credit System (CBCS)
(W.e.f. June 2019)

- **Title of the Course:** B.Sc. Part-I

- **Subject:** Zoology

- **Introduction:** This course provides a broad overview of Zoology and to produces expert hands that would have sufficient knowledge and expertise to solve the urgent problems of the region by using Zoology. The course structure is basic science centric where students learn core science and are taught necessary fundamental subject for that purpose.

- **Objectives of the course:** The objectives of B. Sc. Zoology course are:
  a. To provide an intensive and in depth learning to the students in field of Zoology.
  b. Beyond simulating, learning, understanding the techniques, the course also addresses the underlying recurring problems of disciplines in today scientific and changing world.
  c. To develop awareness & knowledge of different organization requirement and subject knowledge through varied branches and research methodology in students.
  d. To train the students to take up wide variety of roles like researchers, scientists, consultants, entrepreneurs, academicians, industry leaders and policy.

Course outcome and Advantages : Zoology has tremendous job potential.

a) The successful students will be able to establish research organizations with the help of agriculture, environment protection and also their own industry for transgenic animals, clinical pathology, genetic counseling, human karyotyping etc.
b) Scientific Research Organizations.
c) Universities in India & aboard.
d)

- **Eligibility and Admission:** A Candidate passing 10+2 with biology MLT , dairy science , Fisheries, Agricultural science as one of the subject and passed from state syllabus / CBSE / equivalent with minimum passing percentage of as per the directives of the higher education and Solapur university, Solapur.

- **Duration:** The duration for this program is of 3 years with semester pattern (06 Semesters)

- **Medium of Instruction:** English

- **Syllabus Structure:**
- The University follows semester system.
- An academic year shall consist of two semesters.
- Each B.Sc. course shall consist of three years i.e. six semesters.
- B.Sc. Part-I Zoology shall consist of two semesters: Semester I and Semester II.

In semester I, there will be two core papers is having paper I and paper II of 100 marks.
Similarly in Semester II there will be two core papers is having paper I and paper II of 100 marks. English will be as Ability Enhancement Course (AECC) in both Semester I
and II. English paper carries 100 marks in each semester.
The scheme of evaluation of performance of candidates shall be based on
University assessment as well as College internal assessment as given below. For B.Sc.
Part-I Zoology sem I & II the internal assessment will be based on Internal tests, Home
assignment, Tutorials, Seminars, Group discussion, Brain storming sessions etc. as

given below. Practical course examination is of 100 marks shall be conducted at the end of semester II. The practical examination of 100 marks shall also consist of 80 marks for University practical assessment and 20 marks for college internal assessment.

· **Scheme of Evaluation**

As per the norms of the grading system of evaluation, out of 100 marks, the candidate has to appear for college internal assessment of 20 marks and external evaluation (University assessment) of 20 marks.

Semester – I:

Theory: (100 marks)

University Examination (80 marks): No. of theory papers: 2 (paper I and paper II of 40 marks each)

Internal Continuous Assessment: (20 marks and 10 marks each for two papers)

(a) Internal test- Home assignment / tutorials / seminars / viva/ group discussion/ outreach programs.

Semester – II

Theory: (100 marks)

University Examination (80 marks): No. of theory papers: 2 (paper III and paper IV of 40 marks each)

Internal Continuous Assessment: (20 marks and 10 marks each for two papers)

(a) Internal test- Home assignment / tutorials / seminars / viva/ group discussion/ outreach programs.

Practical Examination: (100 marks)

University Examination (80 marks): No. of practical course: 1

Internal Continuous Assessment: (20 marks)

(a) Internal practical test - Scheme of marking: **10 marks**

(b) Viva/group discussion/model or chart/attitude/attendance/overall behavior: **10 marks**

Passing Standard

The student has to secure a minimum of 4.0 grade points (Grade C) in each paper. A student who secure less than 4.0 grade point (39% or less marks, Grade FC/FR) will be declared fail in that paper and shall be required to reappear for respective paper. A student who failed in University Examination (theory) and passed in internal assessment of a same paper shall be given FC Grade. Such student will have to reappear for University Examination only. A student who fails in internal assessment and passed in University examination (theory) shall be given FR Grade. Such student will have to reappear for both University examination as well as internal assessment. In case of Annual pattern/old semester pattern students/candidates from the mark scheme the candidates shall appear for the same 70 marks of external examination and his performance shall be scaled to 100 marks.

· **ATKT**

Candidate passed in all papers, except **5 (five)** papers combined together of semester I and II of B.Sc. Part-I Zoology examination shall be permitted to enter upon the course of Semester III of B.Sc. Part-II Zoology

B.Sc .I Semester-I & II, ZOOLOGY
Choice Based Credit System (CBCS) Structure (2019-20)

Semester- I (Theory)

Paper	Title	Marks
I	Animal diversity-I (Paper I)	50 (40- UA and 10-CA)
II	Animal diversity-II (Paper II)	50 (40- UA and 10-CA)

Semester- II (Theory)

Paper	Title	Marks
III	Comparative Anatomy of vertebrates (Paper III)	50 (40- UA and 10-CA)
IV	Developmental Biology of vertebrates (Paper IV)	50 (40- UA and 10-CA)

PRACTICAL AT THE END OF SEMESTER-II

PRACTICAL	Title	Marks
I	Animal diversity I & II AND Comparative Anatomy of vertebrates and Developmental Biology of vertebrates	100 (80 UA+20 CA)

SEMESTER – I

CORE COURSE- I- **(Total credits: 4)**

PAPER I: Animal Diversity- I
(Total credits 2.0, Contact Hrs 30.0)

Unit 1: Kingdom Protista **3**
General characters and classification up to classes; locomotory organelle and locomotion in protozoa ,nutrition in protozoa.

Unit 2: Phylum Porifera **3**
General characters and classification up to classes; canal system in *Sycon*

Unit 3: Phylum Cnidaria **3**
General characters and classification up to classes; polymorphism in hydrozoa

Unit 4: Phylum Platyhelminthes **3**
General characters and classification up to classes; life history of *Taenia solium*

Unit 5: Phylum Nemathelminthes **4**
General characters and classification up to classes; life history of *Ascaris lumbricoides* and its parasitic adaptations

Unit 6: Phylum Annelida **3**
General characters and classification up to classes; metamerism in annelid, economic importance of annelids with reference to earthworm and leech

Unit 7: Phylum Arthropoda **4**
General characters and classification up to classes; vision in arthropoda, metamorphosis in insects, economic importance of insects.

Unit 8: Phylum Mollusca **3**
General characters and classification up to classes; torsion in gastropods
economic importance of molluscs

Unit 9: Phylum Echinodermata **4**
General characters and classification up to classes; water-vascular system in Asteroidea

Total- **30**

PAPER II: Animal Diversity- II
(Total credits 2.0, Contact Hrs 30.0)

Unit 1: Protochordates **3**
General features and phylogeny of protochordata

Unit 2: Agnatha **3**
General features of agnatha and classification of cyclostomes up to classes

Unit 3: Pisces **4**
General features and classification up to orders; economic importance of fishes

Unit 4: Amphibia **5**
General features and classification up to orders; parental care

Unit 5: Reptiles **5**
General features and classification up to orders; poisonous and non-poisonous snakes, types of snake venom, symptoms and treatments of snake bite

Unit 6: Aves **5**
General features and classification up to orders; flight adaptations in birds

Unit 7: Mammals **5**
General features and classification up to orders; adaptive radiation in mammals

Total -30

References:

- Ruppert and Barnes, R.D. (2006). *Invertebrate Zoology*, VIII Edition. Holt Saunders International Edition.

- Barnes, R.S.K., Calow, P., Olive, P.J.W., Golding, D.W. and Spicer, J.I. (2002). *The Invertebrates: A New Synthesis*, III Edition, Blackwell Science

- Young, J. Z. (2004). *The Life of Vertebrates*. III Edition. Oxford university press.

- Pough H. *Vertebrate life*, VIII Edition, Pearson International.

- Hall B.K. and Hallgrimsson B. (2008). *Strickberger's Evolution*. IV Edition. Jones and Bartlett Publishers Inc.

SEMESTER – II

CORE COURSE II- **(Total credits: 4)**

PAPER III: COMPARATIVE ANATOMY OF VERTEBRATES
(Total credits 2.0, Contact Hrs 30.0)

Unit 1: Integumentary System **4**
Derivatives of integument with reference to glands and digital tips

Unit 2: Skeletal System **4**
Appendicular and axial skeleton in vertebrates

Unit 3: Digestive System **5**
Brief account of alimentary canal and digestive glands

Unit 4: Respiratory System **5**
Brief account of skin, gills, lungs, air sacs and swim bladder

Unit 5: Circulatory System **4**
Evolution of heart and aortic arches

Unit 6: Urinogenital System **4**
Succession of kidney, Evolution of urinogenital ducts

Unit 7: Nervous System **4**
Comparative account of brain

Total - 30

PAPER IV: DEVELOPMENTAL BIOLOGY OF VERTEBRATES

(Total credits 2.0, Contact Hrs 30.0)

Unit-I: Gametogenesis: **03**

(a) Spermatogenesis and oogenesis with reference to mammals
(b) Vitellogenesis in birds and structure of hens egg

Unit-II: Fertilization **03**

(a) External fertilization in amphibians
(b) Internal fertilization in mammals
(c) General mechanism of fertilization in mammals

Unit-III: Early Embryonic Development up to Gastrulation **05**

(a) Cleavage, blastulation and gastrulation in frog
(b) Cleavage, blastulation and gastrulation in human
(c) Fate map of blastula in frog and human

Unit-IV: Placenta in mammal **04**

(a) Implantation of blastocyst in humans, human placenta and functions
(b) Types of placenta on the basis of histology

Unit-V: Development and its Regulation **05**

(a) Cellular differentiation: Definition, mechanism of differentiation
(b) Cellular movements: Epiboly, emboly and its significance in development
(c) Apoptosis: Definition, general mechanism and significance

Unit-VI: General Topics in Embryology **05**

(a) Metamorphosis in frog tadpole and its hormonal regulation
(b) Types of twins in human

Unit-VII: Recent Developments in Human Embryology **05**

(a) Principles and applications of ultrasound
(b) Causes of miscarriages

REFERENCES:

- Kardong, K.V. (2005) *Vertebrates' Comparative Anatomy, Function and Evolution*. IV Edition. McGraw-Hill Higher Education.
- Kent, G.C. and Carr R.K. (2000). *Comparative Anatomy of the Vertebrates*. IX Edition. The McGraw-Hill Companies.
- Hilderbrand, M and Gaslow G.E. *Analysis of Vertebrate Structure*, John Wiley and Sons.
- Walter, H.E. and Sayles, L.P; *Biology of Vertebrates*, Khosla Publishing House.
- Gilbert, S. F. (2006). Developmental Biology, VIII Edition, Sinauer Associates, Inc., Publishers, Sunderland, Massachusetts, USA.
- Balinsky, B.I. (2008). An introduction to Embryology, International Thomson Computer Press.
- Carlson, Bruce M (1996). Patten's Foundations of Embryology, McGraw Hill, Inc.

Practical Course in Zoology for B. Sc. I

For both Semester I and II

(Credits 4)

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1. Study of the following specimens (General characters and classification)
CD/Model/Chart/Slides/Virtual

- *Amoeba, Euglena, Plasmodium, Paramecium*
- *Sycon, Hyalonema, and Euplectella*
- *Obelia, Physalia, Aurelia, Metridium*
- *Taenia,, Ascaris, Fasciola*
- *Aphrodite, Nereis, Pheretima, Hirudinaria*
- *Peripatus, Palaemon, Crab, Limulus, Scolopendra, Julus, Periplaneta*
- *Chiton, Dentalium, Pila, Unio, Sepia, Octopus*
- *Pentaceros, Ophiura, Echinus, Cucumaria and Antedon,*
- *Balanoglossus, Herdmania, Branchiostoma*
- *Petromyzon, Sphyrna, Pristis, Torpedo, Labeo, Exocoetus, Anguilla*
- *Ichthyophis, Salamandra, Bufo, Hyla*
- *Chelone,Hemidactylus, Chamaeleon, Draco, Vipera, Naja, Crocodylus, Gavialis*
- **Any six** common birds from different orders:
- *Ornithorhynchus, Pteropus, Rattus, Loris, Funambulus*

2. Study of the following permanent slides/lab.specimens:

(a) T.S. and L.S. of *Sycon*,
(b) *Taenia*- Scolex, mature & gravid proglottid
(c) Whole mount of male and female *Ascaris* and Liverfluke
(d) Observation and identification of protozoans, helminthes, arthropod vectors

3. Key for Identification of poisonous and non-poisonous snakes: Cobra & Rat Snake

(An "**animal album**" containing photographs, cut outs, with appropriate write up about the above mentioned taxa. Different taxa/ topics may be given to different sets of students for this purpose.)

4 . Osteology: **CD/Model/Chart/Slides/Virtual CD**

a) Disarticulated skeleton of frog: Skull, Atlas, Typical Vertebra, Pectoral and Pelvic Girdle
b) Study of mammalian skulls: One herbivorous and one carnivorous animal

5. Frog - Study of developmental stages - whole mounts and sections through permanent slides – cleavage, blastula, gastrula, tadpole external and internal gill stages. **(CD/Model/Chart/Slides/Virtual CD)**

6. Chick Embryology: Study of chick egg and W.M. of embryonic stages: 24hrs, 33hrs, 48hrs, 72 hrs.

6 Placenta: Study of the different types of mammalian **placenta**- histological sections using permanent slides or Intact placenta of Rat / Human using laboratory material / photomicrographs./ **CD/Model/Chart/Slides/Virtual CD**

7. Examination of **gametes -** frog/rat - sperm and ova through permanent slides or photomicrographs./ **CD/Model/Chart/Slides/Virtual CD**

8. Cytological Preparation:

(a) Stained preparation of mitochondria using vital staining with suitable material
(b) Stained preparation of nucleus in blood smear using Leishman's stain
(c) Study of Osmosis: Effect of Isotonic, hypotonic and hypertonic solution on blood cells

8) Study Tour / – Visit to any suitable place of Zoological interest to study animal biodiversity / IVF and hospital Facility / Research Center and submission of report. **All necessary precautions must be taken while organizing study tour with reference to the safety of students.**

(Or)

A small project report or review article submission of any one topic related to any Ecological and Applied Zoological interest.

Scheme of Marking for University Practical Examination

Total Marks: 80

Q.1.	Cytological preparation of mitochondria / nucleus **(any one)**	10
Q.2.	Effect of isotonic / hypotonic / hypertonic solution on blood cells **(any one)**	10
Q.3.	Spotting **(Five spots)** (a) Identify & classify giving reasons (b) Identify, sketch & label (c) Identify & describe (d) Identify & give evolutionary significance (e) Identify & classify giving reasons	
Q.4.	Identification and explanation of mammalian placenta **(any one)**	10
Q.5.	Identification and explanation of: (a) Any one bone: Identify, sketch & label (b) Any one developmental stages of frog: Identify & explain (c) Any one gamete of frog / rat: Identify, sketch & label (d) Any one poisonous / non-poisonous snake: Identify & describe (e) Any one of: canal system / parasite / W.M. of chick embryo: Identify & describe	10
Q.6.	Tour Report/ project report or review article submission	10
Q.7.	Laboratory Record (Journal)	10
Q8:	Viva –Voce (General)	10

B O S in Zoology

PUNYASHLOK AHILYADEVI HOLKAR SOLAPUR UNIVERSITY, SOLAPUR

पुण्यश्लोक अहिल्यादेवी होळकर
सोलापूर विद्यापीठ
।। विद्यया संपन्नता ।।

NAAC Accredited-2015
'B' Grade (CGPA 2.62)

Name of the Faculty: Science & Technology

CHOICE BASED CREDIT SYSTEM

Syllabus: ZOOLOGY

Name of the Course: B.Sc. II (Sem–III& IV)

(Draft Syllabus to be implemented from w.e.f. June 2020)

P.A.H.Solapur University, Solapur , Faculty of Science
Choice Based Credit System (CBCS)
B.Sc.-II Zoology
(2020-2021 : W.e.f. June 2020)

Background of Curriculum:

In accordance with the UGCs reference to standardize curricula at the national level and bring a match across all the Indian Universities, an attempt has been made to follow the pattern given in the UGCs Undergraduate Template.

Zoology deals with the study of animal kingdom specially the structural diversity, biology, embryology, evolution, habits and distribution of animals, both living and extinct. As it covers a fascinating range of topics, the modern zoologists need to have insight into many disciplines. The learning outcomes-based curriculum framework for a B.Sc. degree in Zoology is designed to cater to the needs of students in view of the evolving nature of animal science as a subject. The framework is expected to assist in the maintenance of the standard of Zoology degrees/programmes across the country by reviewing and revising a broad framework of agreed expected graduate attributes, qualification descriptors, programme learning outcomes and course-level learning outcomes. The framework, however, does not seek to bring about uniformity in syllabi for a programme of study in Zoology, or in teaching learning process and learning assessment procedures. Instead, the framework is intended to allow for flexibility and innovation in programme design and syllabi development, teaching learning process, assessment of student learning levels. A comprehensive knowledge of structure-function relationship at the level of gene, genome, cell, tissue, organ, and systems, through development would further add to the knowledge base and the learning outcome in terms of editing of genes and genomes for industrial application and research purposes.

Learning Outcomes based approach to Curriculum Planning:

The courses should be delivered in terms of concepts, mechanisms, biological designs & functions and evolutionary significance cutting across organisms at B.Sc. level. These courses should be studied by students of all branches of biology. Both chalk and board, and PowerPoint presentations can be used for teaching the course. The students should do the dissertation/ project work under practical of different courses, wherever possible.

The students are expected to learn the courses with excitements of biology along with the universal molecular mechanisms of biological designs and their functions. They should be able to appreciate shifting their orientation of learning from a descriptive explanation of biology to a unique style of learning through graphic designs and quantitative parameters to realize how contributions from research and innovation have made the subjects modern, interdisciplinary and applied and laid the foundations of Zoology, Animal Sciences, Life Sciences, Molecular Biology and Biotechnology. These courses and their practical exercises will help the students to apply their knowledge in future course of their career development in higher education and research. In addition, they may get interested to look for engagements in industry and commercial activities employing Life Sciences, Molecular Biology and Biotechnology. They may also be interested in entrepreneurship and start some small business based on their interest and experience.

Graduate Attributes in Zoology:

- Disciplinary knowledge and skills: Capable of demonstrating (i) comprehensive knowledge and understanding of major concepts, theoretical principles and experimental findings in Zoology and its different subfields (ii) ability to use modern instrumentation for advanced genomic and proteomic technology.

- Skilled communicator: Ability to impart complex technical knowledge relating to Zoology in a clear and concise manner in writing and oral skills.

- Critical thinker and problem solver: Ability to have critical thinking and efficient problem solving skills in the basic areas of Zoology

- Sense of inquiry: Capability for asking relevant/appropriate questions relating to issues and problems in the field of Zoology, and planning, executing and reporting the results of an experiment or investigation.

- Team player/worker: Capable of working effectively in diverse teams in both classroom, laboratory and in industry and field-based situations.

- Skilled project manager: Capable of identifying/mobilizing appropriate resources required for a project, and manage a project to completion, while observing responsible and ethical scientific conduct; and safety and chemical hygiene regulations and practices.

- Digitally literate: Capable of using computers for Bioinformatics and computation and appropriate software for analysis of genomics and proteomics data, and employing modern bioinformatics search tools to locate, retrieve, and evaluate location and biological annotation genes of different species.

- Ethical awareness/reasoning: Capable of conducting their work with honesty and precision thus avoiding unethical behavior such as fabrication, falsification or misrepresentation of data or committing plagiarism, and appreciating environmental and sustainability issues. Research ethics committee expects them to declare any type of conflict of interest that may affect the research. Any plan to withhold information from researchers should be properly explained with justification in the application for ethical approval.

- Lifelong learners: Capable of self-paced and self-directed learning aimed at personal development and for improving knowledge/skill development and reskilling

Choice Based Credit System: With the view to ensure worldwide recognition, acceptability, horizontal as well as vertical mobility for students completing undergraduate degree, Solapur University has implemented Choice Based Credit System (CBCS) at Undergraduate level. The CBCS provides an opportunity for the students to choose courses from the prescribed courses comprising core, elective/minor or skill based courses. The courses can be evaluated following the grading system, which is considered to be better than the conventional marks system. Therefore, it is necessary to introduce uniform grading system in the entire higher education in India. This will benefit the students to move across institutions within India to begin with and across countries. The uniform grading system will also enable potential employers in assessing the performance of the candidates. In order to bring uniformity in evaluation system and computation of the Cumulative Grade Point Average (CGPA) based on student's performance in examinations.

• Outline of Choice Based Credit System:

1. *Core Course:* A course, which should compulsorily be studied by a candidate as a core requirement is termed as a Core course.

2. *Elective Course:* Generally a course which can be chosen from a pool of courses and which may be very specific or specialized or advanced or supportive to the discipline/ subject of study or which provides an extended scope or which enables an exposure to some other discipline/subject/domain or nurtures the candidate's proficiency/skill is called an Elective Course.

Discipline Specific Elective (DSE) Course: Elective courses may be offered by the main discipline/subject of study is referred to as Discipline Specific Elective.

3. *Ability Enhancement Courses (AEC):* The Ability Enhancement (AE) Courses may be of two kinds: Ability Enhancement Compulsory Courses (AECC) and Skill Enhancement Courses (SEC). "AECC" courses are the courses based upon the content that leads to Knowledge enhancement; (i) Environmental Science and (ii) English/MIL Communication. These are mandatory for all disciplines. SEC courses are value-based and/or skill-based and are aimed at providing hands-on-training, competencies, skills, etc.

• Credit: Credit is a numerical value that indicates students work load (Lectures, Lab work, Seminar, Tutorials, Field work etc.) to complete a course unit. In most of the universities 15 contact hours constitute one credit. The contact hours are transformed into credits. Moreover, the grading system of evaluation is introduced for B.Sc. course wherein process of Continuous Internal Evaluation is ensured. The candidate has to appear for Internal Evaluation of 20 marks and University Evaluation for 80 marks.

Punyashlok Ahilyadevi Holkar Solapur University, Solapur
Faculty of Science & Technology
Choice Based Credit System (CBCS): (w.e.f.2020-21): Draft Structure for B. Sc-II

Subject/ Core Course	**Name and Type of the Paper**		**No. of papers/ Practical**	**Hrs/week**			**Total Marks Per Paper**	**UA**	**CA**	**Credits**
	Type	**Name**		**L**	**T**	**P**				
Class :	B.Sc.- II : semester-III									
Core (*Students can opt any Three subjects among the Four Subjects offered at B.Sc.I. Out of Three Subjects offered One Subject will be the Core Subject		C-5	Paper-V	3.0	--	--	50	40	10	4.0
			Paper-VI	3.0	--	--	50	40	10	
		C-6	Paper-V	3.0	--	--	50	40	10	4.0
			Paper-VI	3.0	--	--	50	40	10	
		C-7 (Zoology)	**Paper-V: Cell Biology**	**3.0**	**--**	**--**	**50**	**40**	**10**	**4.0**
			Paper-VI: Principles of Ecology	**3.0**	**--**	**--**	**50**	**40**	**10**	
		SEC-1								
		GE-3								
Grand Total				18	--	--	300	240	60	12
Class :	B.Sc.- II Semester – IV									
Core (*Students can opt any Three subjects among the Four Subjects offered at B.Sc.I. Out of Three Subjects offered One Subject will be the Core Subject **OR** Students can opt any Two subjects among the Four Subjects offered at B.Sc.I. Out of Two Subjects One Subject will be the Core Subject and any One Subject among the other will be Elective		C-8	Paper-VII	3.0	--	--	50	40	10	4.0
			Paper-VIII	3.0	--	--	50	40	10	
		C-9	Paper-VII	3.0	--	--	50	40	10	4.0
			Paper-VIII	3.0	--	--	50	40	10	
		C-10 (Zoology)	**Paper-VII Fundamentals of Biochemistry**	**3.0**	**--**	**--**	**50**	**40**	**10**	**4.0**
			Paper-VIII Physiology-Control & Coordination	**3.0**	**--**	**--**	**50**	**40**	**10**	

Subject									
	SEC-2								
	GE-4								
	Environmental Studies		3.0	--	--	50	40	10	NC
Total (Theory)			21	--	--	350	280	70	12
Practical	C-5 & C-8	Pr. III&IV	--	--	8	100	80	20	4.0
	C-6 & C-9	Pr. III&IV	--	--	8	100	80	20	4.0
	C-7 & C-10 (Zoology)	**<u>Pr. I:</u> (Cell Biology & Principles of Ecology) & <u>Pr. II:</u> (Fundamentals of Biochemistry & Physiology-Control & Coordination)**	**--**	**--**	**8**	**100**	**80**	**20**	**4.0**
	GE-3 & GE-4								
Total (Practical)					24	300	240	60	12
Grand Total			39		24	950	760	190	36

*Core Subjects
Chemistry/Physics/Electronics/Computer Science/Mathematics/Statistics/Botany/Zoology/ Microbiology/Geology/ Geography/Psychology
Core Subjects- (Additional)-Geochemistry/Biochemistry/Meteorology/Plant Protection

Summary of the Structure of B.Sc. Programme as per CBCS pattern

Class	**Semester**	**Marks-Theory**	**Credits-Theory**	**Marks-Practical**	**Credits-Practicals**	**Total – credits**
B.Sc.-II	III	300	12	--	--	12
	IV	350	12	300	12	24
Total		650	24	300	12	36

B.Sc. Programme :
Total Marks : Theory + Practical's = 650 +300 =950
Credits : Theory + Practical's = 12 + 24 = 36
Numbers of Papers Theory: Ability Enhancement Course (AECC) : 00
Theory: Discipline Specific Elective Paper (DSE) : 00
Theory: CC : 06
Skill Enhancement Courses : 00
GE : 00
Total : Theory Papers :

: Practical Papers :

Abbreviations:

L: Lectures
T: Tutorials
P: Practicals
UA : University Assessment
CA : College Assessment
DSC / CC: Core Course
AEC : Ability Enhancement Course
DSE : Discipline Specific Elective Paper
SEC : Skill Enhancement Course
GE : Generic Elective
CA: Continuous Assessment
ESE: End Semester Examination

PAH SOLAPUR UNIVERSITY, SOLAPUR
Faculty of Science
Choice Based Credit System (CBCS)
(W.e.f. 2020-21)

• Title of the Course: B.Sc. Part-II

• Subject: Zoology

• **Introduction**: This course provides a broad overview of Zoology and to produces expert hands that would have sufficient knowledge and expertise to solve the urgent problems of the region by using Zoology. The course structure is basic science centric where students learn core science and are taught necessary fundamental subject for that purpose.

• **Objectives of the course: The objectives of B. Sc. Zoology course are:**
To provide an intensive and in depth learning to the students in field of Zoology. Beyond simulating, learning, understanding the techniques, the course also addresses the underlying recurring problems of disciplines in today scientific and changing world. To develop awareness & knowledge of different organization requirement and subject knowledge through varied branches and research methodology in students. To train the students to take up wide variety of roles like researchers, scientists, consultants, entrepreneurs, academicians, industry leaders and policy.

- **Course outcome and Advantages:** Zoology has tremendous job potential. The successful students will be able to establish research organizations with the help of agriculture, environment protection and also their own industry for transgenic animals, clinical pathology, genetic counseling, human karyotyping etc. Scientific Research Organizations. Universities in India & aboard.

• Medium of Instruction: English
• Syllabus Structure:
• The University follows semester system.
• An academic year shall consist of two semesters.
• B.Sc. Part-II Zoology shall consist of two semesters: Semester III and Semester IV

In semester III: there will be two DSC papers having paper V and paper VI of 100 marks. There will a **Compulsory paper on "Ability Enhancement Compulsory Course (AECC)" on** Environmental Studies

In Semester IV: there will be two DSC papers having paper VII and paper VIII of 100 marks.

The scheme of evaluation of performance of candidates shall be based on **University Assessment (UA**) as well as **College Internal Assessment (CA)** as given below.

For B.Sc.Part-II Zoology Sem III & IV the "internal assessment" will be based on Internal tests, Home assignment, Tutorials, Open Book Examination, Seminars, Group discussion, Brain storming sessions etc. as given below.

- **Practical course examination** is of 100 marks shall be conducted at the end of semester II. The

practical examination of 100 marks shall also consist of **80 marks for University practical assessment** and **20 marks for college internal assessment (CA)**.

• **Scheme of Evaluation**: As per the norms of the grading system of evaluation, out of 100 marks, the candidate has to appear for college internal assessment of 20 marks and external evaluation (University assessment) of 80 marks.

Semester – III: Theory: (100 marks): Comprising DSC-

a) University Examination (UA) (80 marks): No. of theory papers: 2 (paper V and paper VI of 40 marks each)

b) Internal Continuous Assessment (CA) (20 marks) No. of theory papers: 2 (paper V and paper VI of 10 marks each)

c) **Compulsory paper on "Ability Enhancement Compulsory Course (AECC)" on** Environmental Studies

Internal test- Home assignment / tutorials / seminars / viva/ group discussion/ outreach programs.

Semester – IV: Theory: (100 marks): Comprising DSC-

a) University Examination (UA) (80 marks): No. of theory papers: 2 (paper VII and paper VIII of 40 marks each)

b) Internal Continuous Assessment (CA) (20 marks) No. of theory papers: 2 (paper VII and paper VIII of 10 marks each)

Internal test- Home assignment / tutorials / seminars / viva/ group discussion/ outreach programs.
Practical Examination: (100 marks)
University Examination (80 marks): No. of practicals': 02

Practical-I: Based on papers V & VI : (40 UA + 10 CA)
Practical-II: Based on papers VII & VIII : (40 UA + 10 CA)

Internal Continuous Assessment: (20 marks): Practical-I (10) + Practical-II (10)

(a) Internal practical test and
(b) Viva/group discussion/model or chart/attitude/attendance/overall behavior
(c) University practical examination of 80 marks (Practical I & II for two separate days) will be conducted at the end of semester IV

Passing Standard:

The student has to secure a minimum of 4.0 grade points (Grade C) in each paper. A student who secure less than 4.0 grade point (39% or less marks, Grade FC/FR) will be declared fail in that paper and shall be required to reappear for respective paper. A student who failed in University Examination (theory) and passed in internal assessment of a same paper shall be given FC Grade.

Such student will have to reappear for University Examination only. A student who fails in internal assessment and passed in University examination (theory) shall be given FR Grade. Such student will have to reappear for both University examination as well as internal assessment. In case of Annual pattern/old semester pattern students/candidates from the mark scheme the candidates shall appear for the same 70 marks of external examination and his performance shall be scaled to 100 marks.

• ATKT:

Candidate passed in all papers, except 5 (five) papers combined together of semester I and II of B.Sc. Part-I Zoology examination shall be permitted to enter upon the course of Semester III of B.Sc. Part-II Zoology

B.Sc .II Semester-III & IV, ZOOLOGY

Choice Based Credit System (CBCS) Structure (2020-21)

Semester- III (Theory)

Paper	**Title**	**Marks**
V	Cell Biology	50 (40- UA and 10-CA)
VI	Principles of Ecology	50 (40- UA and 10-CA)

Semester- IV (Theory)

Paper	**Title**	**Marks**
VII	Fundamentals of Biochemistry	50 (40- UA and 10-CA)
VIII	Physiology-Control & Coordination	50 (40- UA and 10-CA)

PRACTICALS

PRACTICAL	**Title**	**Marks**
I	Cell Biology & Principles of Ecology	50 (40- UA and 10-CA)
II	Fundamentals of Biochemistry & Physiology Control & Coordination	50 (40- UA and 10-CA)
	Total Marks	100 (80-UA + 20-CA)

PAH SOLAPUR UNIVERSITY, SOLAPUR
Choice Based Credit System (CBCS)
Zoology

Paper-V

CELL BIOLOGY: THEORY (Credits-02 & contact hours-30)

Unit 1: **Overview of Cells** **02**
Prokaryotic and Eukaryotic cells, Virus, Viroids

Unit 2: **Plasma Membrane** **03**
Singer & Nicholson's model of plasma membrane. Transport across membranes: An overview of active and passive transport

Unit 3: **Endomembrane System** **06**
Structure and Functions: Endoplasmic Reticulum, Golgi apparatus, Lysosomes

Unit 4: **Mitochondria** **04**
Mitochondria: Ultrastructure, Semi-autonomous nature, Endosymbiotic hypothesis Mitochondrial Respiratory Chain, functions.

Unit 5: **Cytoskeleton** **04**
Structure and Functions: Microtubules, Microfilaments

Unit 6: **Nucleus** **05**
Structure and functions of Nucleus, Nuclear envelope, Nuclear pore complex, Nucleolus, Chromatin: Euchromatin, Hetrochromatin and nucleosome

Unit 7: **Cell Division** **04**
Cell cycle, Mitosis and Meiosis

Unit 8: **Cell Signaling** **02**

- Types of cell signaling , Brief idea of G-Protein Coupled Receptor (GPCR) and Role of secondary messengers (cAMP)

SUGGESTED READINGS

1) Karp, G. (2010). Cell and Molecular Biology: Concepts and Experiments. VI Edition. John Wiley and Sons. Inc.
2) De Robertis, E.D.P. and De Robertis, E.M.F. (2006). Cell and Molecular Biology. VIII Edition. Lippincott Williams and Wilkins, Philadelphia.
3) Cooper, G.M. and Hausman, R.E. (2009). The Cell: A Molecular Approach. V Edition. ASM Press and Sunderland, Washington, D.C.; Sinauer Associates, MA.
4) Becker, W.M., Kleinsmith, L.J., Hardin. J. and Bertoni, G. P. (2009). The World of the Cell. VII Edition. Pearson Benjamin Cummings Publishing, San Francisco.
5) Bruce Albert, Bray Dennis, Levis Julian, Raff Martin, Roberts Keith and Watson James (2008).

Molecular Biology of the Cell, V Edition, Garland publishing Inc., New York and London.

Learning outcomes : Students will come to know about:

- Cellular architecture & their functions at organismic level
- This knowledge will help students in future to explore areas like: oncology, medical diagnostics and treatment
- Understand the functioning of nucleus and extra nuclear organelles and understand the intricate cellular mechanisms involved.
- Acquire the detailed knowledge of different pathways related to cell signaling and apoptosis thus enabling them to understand the anomalies in cancer.
- Develop an understanding how cells work in healthy and diseased states and to give a 'health forecast' by analyzing the genetic database and cell information.
- Get new avenues of joining research in areas such as genetic engineering of cells, cloning, vaccines development, human fertility programme, organ transplant, etc.

Paper-VI

PRINCIPLES OF ECOLOGY: THEORY (Credits-02 & contact hours-30)

Unit 1: **Introduction to Ecology** **02**

History of ecology, Autecology and synecology

Unit 2: **Population Ecology** **05**

Brief idea about attributes of population: Density, natality, mortality, life tables, fecundity tables, survivorship curves.

Unit 3: **Animal Associations- Brief idea and definitions** **05**

- Intraspecifc associations: Parental care in fishes, groupism and social behavior
- Interspecific associations: commensalism, mutualism, predation and parasitism

Unit 4: **Abiotic Factors** **03**

Introduction & Effects on animals: Temperature, light, water, water hardness, humidity, soil, oxygen and carbon dioxide.

Unit 5: **Community** **04**

Community characteristics: species richness, dominance, diversity indices, abundance.

Unit 6: **Ecosystem** **05**

General characteristics & faunal adaptations in:

- Aquatic (freshwater ecosystem: lotic and lentic) &
- Terrestrial (grassland and desert ecosystem).

Unit 7: **Food chain:** **04**

Pond ecosystem: with reference to food chain, ecological pyramid, energy flow and ecological succession

Unit 8 **Applied Ecology** **02**

Brief idea of: Biodiversity hot-spots and sacred groves in India with examples

SUGGESTED READINGS:

1) Colinvaux, P. A. (1993). Ecology. II Edition. Wiley, John and Sons, Inc.
2) Krebs, C. J. (2001). Ecology. VI Edition. Benjamin Cummings.
3) Odum, E.P., (2008). Fundamentals of Ecology. Indian Edition. Brooks/Cole
4) Robert Leo Smith Ecology and field biology Harper and Row publisher
5) Ricklefs, R.E., (2000). Ecology. V Edition. Chiron Pres

Learning Outcomes (LO): Students will come to know about

- Ecological principles & applications that govern the planet Earth
- This knowledge will help students in future to explore areas like: biodiversity, conservation biology, forestry & natural resource management
- Know the evolutionary and functional basis of animal ecology.
- Understand what makes the scientific study of animal ecology a crucial and exciting endeavor.
- Engage in field-based research activities to understand well the theoretical aspects taught besides learning techniques for gathering data in the field.
- Analyze a biological problem, derive testable hypotheses and then design experiments and put the tests into practice.
- Solve the environmental problems involving interaction of humans and natural systems at local or global level.

Semester-IV

B.Sc.-II Zoology (CBCS): Semester-IV

PAPER-VII: FUNDAMENTALS OF BIOCHEMISTRY

THEORY (CREDITS 2; Contact Hours-30)

Unit 1: **Carbohydrates** **(04)**
Structure and biological Significance of: Monosaccharides, Disaccharides, Polysaccharides and Glycoconjugates

Unit 2: **Lipids** **(04)**
Structure and biological Significance of: Physiologically important of saturated and unsaturated fatty acids, Tri-acylglycerols, Phospholipids, Glycolipids, Steroids

Unit 3: **Amino Acids** **(03)**
Amino acids: Structure, Classification and General Properties of α-amino acids;

Unit 4: **Proteins:**
Levels of organization in proteins (primary, secondary, tertiary & quaternary); Simple and conjugate proteins with examples **(02)**

Unit- 5: **Immunoglobulins:**
Basic Structure, Classes and biological significance **(02)**

Unit 6: **Nucleic Acids** **(04)**
Structure: Purines and pyrimidines, Nucleosides, Nucleotides, Nucleic acids: Base pairing, Denaturation and Renaturation of DNA; Types of DNA and RNA.

Unit 7: **Central Dogma**
Basic concepts of replication, transcription and translation in prokaryotes **(04)**

Unit 8: **Enzymes** **(07)**
Nomenclature and classification; Co-factors; Properties of enzymes; Mechanism of enzyme action; Factors affecting enzyme actions; Enzyme inhibition, Isozymes

Learning Outcome:

After successfully completing this course, the students will be able to:

- Understand the structure and biological significance of carbohydrates, amino acids, proteins, lipids and nucleic acids.
- Understand the structure and function of immunoglobulins.
- Understand the concept of enzyme, its mechanism of action and regulation.
- Understand the process of DNA replication, transcription and translation.
- Learn the preparation of models of peptides and nucleotides.

- Learn biochemical tests for amino acids, carbohydrates, proteins and nucleic acids.
- Learn measurement of enzyme activity and its kinetics.

PAPER-VIII
ANIMAL PHYSIOLOGY: CONTROLLING AND COORDINATING SYSTEMS

THEORY (CREDITS 2; Contact Hours-30)

Unit 1: **Tissues** **(04)**
Structure, location, classification and functions of: epithelial tissue, connective tissue, muscular tissue and nervous tissue :
Blood –Types of blood cells(RBC,WBC ,Platelets , Plasma) , functions of blood

Unit 2: **Histology of following mammalian organs:** **(04)**
i) Tooth ii) Salivary gland iii) Stomach iv) IIeum
v) Liver vi) Pancreas vii) Kidney viii) Testis ix) Ovary

Unit 3: **Nervous System** **(04)**
Ultastructure of neuron, resting membrane potential, origin of action potential and its propagation across the nerve fibers; Structure of Synapse and Synaptic transmission,

Unit 4: **Muscle** **(03)**
Types of muscles (smooth, Striated, cardiac) and Ultra structure of skeletal muscle; Molecular and chemical basis of muscle contraction.

Unit 5: **Reproductive Physiology** **(03)**
Pituitary gland & its hormones, Sex hormones (male & female)

Unit 6: **Reproductive Cycle** **(04)**
Oestrous and Menstrual cycle, Hormonal control of pregnancy, parturition and lactation; Contraception methods: Physical, oral contraceptives pills, IUD, surgical methods

Unit 7: **In-vitro Fertilization** **(02)**
Technique of IVF and its applications

Unit 8: **Endocrine System** **(06)**
Histology, hormonal secretions & their functions and disorders of following endocrine glands- Pituitary, Thyroid, Parathyroid, Pancreas, Adrenal.

*Note: With reference to mammals.

Learning outcomes:

After successfully completing this course, the students will be able to:

- Acquire knowledge of the coordinated physiological functioning
- Realize that very physiological mechanisms are used in very diverse organisms.
- Understand how cells, tissues, and organisms function at different levels.

- Develop an understanding of the related disciplines, such as cell biology, neurophysiology, pharmacology, biochemistry etc
- Get a flavor of research by working on project besides improving their writing skills. It will further enable the students to think and interpret individually.
- Undertake research in any aspect of animal physiology in future.

REFERENCES:

CELL BIOLOGY:

- Karp, G. (2010). Cell and Molecular Biology: Concepts and Experiments. VI Edition. John Wiley and Sons. Inc.
- De Robertis, E.D.P. and De Robertis, E.M.F. (2006). Cell and Molecular Biology. VIII Edition. Lippincott Williams and Wilkins, Philadelphia.
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ECOLOGY:

- Colinvaux, P. A. (1993). Ecology. II Edition. Wiley, John and Sons, Inc.
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FUNDAMENTALS OF BIOCHEMISTRY:

- Cox, M.M and Nelson, D.L. (2008). Lehninger's Principles of Biochemistry, V Edition, W.H. Freeman and Co., New York.
- Berg, J.M., Tymoczko, J.L. and Stryer, L. (2007). Biochemistry, VI Edition, W.H. Freeman and Co., New York.
- Murray, R.K., Bender, D.A., Botham, K.M., Kennelly, P.J., Rodwell, V.W. and Well, P.A. (2009). Harper's Illustrated Biochemistry, XXVIII Edition, International Edition, The McGraw-Hill Companies Inc.
- Hames, B.D. and Hooper, N.M. (2000). Instant Notes in Biochemistry, II Edition, BIOS Scientific Publishers Ltd., U.K.
- Watson, J.D., Baker, T.A., Bell, S.P., Gann, A., Levine, M. and Losick, R. (2008). Molecular Biology of the Gene, VI Edition, Cold Spring Harbor Lab. Press, Pearson Pub.

PHYSIOLOGY: CONTROL & COORDINATION:

- Guyton, A.C. & Hall, J.E. (2006). Textbook of Medical Physiology. XI Edition. Hercourt Asia PTE Ltd. /W.B. Saunders Company.
- Tortora, G.J. & Grabowski, S. (2006). Principles of Anatomy & Physiology. XI Edition John Wiley & sons
- Victor P. Eroschenko. (2008). diFiore's Atlas of Histology with Functional correlations. XII

Edition. Lippincott W. & Wilkins.

Practical

PAH Solapur University, Solapur, Faculty of Science
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(2020-2021 : w.e.f. June 2019) **

Practical-I (Paper-V & VI): Cell Biology and Principles of Ecology (04 Credits)

1. Preparation of temporary stained squash of onion root tip to study various stages of mitosis.

2. Study of various stages of meiosis in onion flower buds.

3. Demonstration/ Observation of Barr body using permanent slide(s) ***(spotter)***

4. Study of principle and procedure and technique using permanent slide ***(spotter)***
i) DNA by Feulgen technique.
ii) Mucopolysaccharides by Periodic Acid Schiffs Reaction (PAS)

5. Study and construction of ecological pyramid from given data:
i) Members of Grass land ecosystem –
Grasshopper, Rat Snake, Grass, Herbs, Shrubs, Weeds, Trees, Vulture, Squirrel, Earthworm, Centipede, Scorpion , Rabbit and Indian Bustard.
ii) Members of Pond ecosystem –
Sponge, Nepa, Leech, Planaria, Hydra, Lymnea, Planorbis, Heron, Kingfisher, Cyclops, Daphnia, Tortoise , Diatoms Vallisneria, Hydrilla, Chara and Spirogyra.

6. Calculation of Shannon-Weiner diversity index from the given data/ model.

7. Study of an aquatic ecosystem: Identification of Zooplankton with the help of permanent slides (***Spotters***),
8. Estimation of Dissolved Oxygen (Winkler's method) from given sample,
9. Estimation of Carbondioxide (CO_2) from given sample.
10 .Estimation of Total Hardness content from given sample.

11 Study Visit: Report on a visit to National / Central / State institutes / Local water bodies/National Park/Biodiversity Park/Wild life sanctuary.

Practical-II
(Paper-VII & VIII):

FUNDAMENTALS OF BIOCHEMISTRY and ANIMAL PHYSIOLOGY: CONTROLLING AND COORDINATING SYSTEMS (CREDITS-04) **

1. Qualitative tests of functional groups in carbohydrates, proteins and lipids.

2. Estimation of protein by colorimetric method.

3. Estimation of carbohydrates by colorimetric method.

4. Demonstration of paper chromatography of amino acids.

5. Action of amylase or papain enzyme under optimum conditions.

6. Effect of pH, temperature and inhibitors on the action of amylase.

7. Demonstration of proteins separation by SDS-PAGE.

8. Recording of simple muscle twitch/ Cardiogram – demonstration. (Virtual frog/ computer generated)
(Analysis of given graph of Frog- muscle twitch or cardiogram In the examination students are provided with any one computer generated graph and supposed to 'Analyze the given graph and explain details of principle, procedure, result, Inference and viva-voce based on the given practical is expected)

9. Study of permanent slides (T.S./V,S.) - of Mammalian organs using permanent slides:
i) Tooth ii) Salivary gland iii) Stomach iv) IIeum v) Liver vi) Pancreas vii) Kidney viii) Testis ix) Ovary

10. Study of ABO blood group system and blood group antigens

11. Microtomy: Study of principle , procedure and mechanism of micro-technique and microtome : flow chart of technique, study of procedure and observation of HE staining technique/ whole mount using permanent slides (study of protocol using flowchart).

12. Study visit: Visit to wetlands, medical college, pathology laboratory and blood bank

OR

13. Preparation and submission of small project/ review on topics related to ecology, cell biology, biochemistry and physiology

****Note:**

As per the guidelines of **UGC notification number F.14-6/2014(CPP-II) dated 1st August, 2014** it is now essential to make necessary modifications to stop dissection and promote and orient students towards the knowledge component rather than skill development. However, ITC based virtual dissections are promoted. Now, the responsibility to discontinue dissections and use of animals in experiments totally rests on concerned authorities of respective colleges/Institutes. As per the notification it is important to encourage the field trips and observations without disturbing the biodiversity. For laboratory observations existing permanent slides and specimens should be shown. As per the guidelines of UGC , all the Zoology departments should be empowered with infrastructure to adopt Information communication technology (ICT) required for the purpose of virtual dissections for which virtual class room / laboratory to be enriched with few computers (according to the strength of students),internet facility , printer etc.

Skeleton paper for practical examination
(University Examination for 40 Marks)

Practical-I (Paper-V & VI) **Cell Biology and Principles of Ecology**		
Questions		**Marks**
Q-1:	Preparation of temporary stained squash of onion root tip to study various stages of mitosis ***OR*** Study of various stages of meiosis in onion flower buds.	08
Q-2:	Estimation from given sample - of Dissolved Oxygen (Winkler's method) **OR** Carbondioxide (CO_2) ***OR*** Total Hardness content	08
Q:3:	Study and construction of ecological pyramid from given data: ***i) Members of Grass land ecosystem –*** Grasshopper, Rat Snake, Grass, Herbs, Shrubs, Weeds, Trees, Vulture, Squirrel, Earthworm, Centipede, Scorpion , Rabbit and Indian Bustard. **OR** ***ii) Members of Pond ecosystem –*** Sponge, Nepa, Leech, Planaria, Hydra, Lymnea, Planorbis, Heron, Kingfisher, Cyclops, Daphnia, Tortoise , Diatoms Vallisneria, Hydrilla, Chara and Spirogyra.	08
Q:4	Spotting / Identification (Any four) Zooplankton with the help of permanent slides (chart/ model /photo) / Bar body (***Spotters***).	08
Q:5	Submission of tour report and viva-voce	04
Q:6	Submission of certified journal	04
Total Marks		**40**

Practical-II (Paper-VII & VIII): Fundamentals of Biochemistry and Animal Physiology: Controlling and Coordinating Systems		
Questions		Marks
Q-1:	Qualitative tests of functional groups in carbohydrates, proteins and lipids. Or Estimation of protein and carbohydrates by colorimetric method.	08
Q-2:	Action of amylase or papain enzyme under optimum conditions **Or** Effect of pH, temperature and inhibitors on the action of amylase. **Or** Study of ABO blood group system and blood group antigens	08
Q:3:	Recording of simple muscle twitch demonstration. / Cardiogram (Virtual frog) **Or** Microtomy: Study of principle and mechanism of microtechnique: flow chart of technique, study of procedure and observation of Haemotoxylene Eosine staining technique using permanent slides.	08
Q:4	Spotting / Identification (any 4). **Mammalian T.S. or V.S. -** Tooth / Salivary gland / Stomach / IIeum / Liver / Pancreas / Kidney / Testis / Ovary	08
Q:5	Submission of tour report / Project/ review and viva-voce	04
Q:6	Submission of certified journal	04
Total Marks		**40**

Punyashlok Ahilyadevi Holkar Solapur University, Solapur

पुण्यश्लोक अहिल्यादेवी होळकर
सोलापूर विद्यापीठ
।। विद्यया संपन्नता ।।

NAAC Accredited-2015
'B' Grade (CGPA 2.62)

Name of the Faculty: Science & Technology

CHOICE BASED CREDIT SYSTEM

Syllabus: ZOOLOGY

Name of the Course: B.Sc. III (Sem–V & VI)

(Syllabus to be implemented from w.e.f. June 2021)

P.A.H.Solapur University, Solapur , Faculty of Science
Choice Based Credit System (CBCS)
B.Sc.-III Zoology
(2021-2022 : W.e.f. June 2021)

Background of Curriculum:

In accordance with the UGCs reference to standardize curricula at the national level and bring a match across all the Indian Universities, an attempt has been made to follow the pattern given in the UGCs Undergraduate Template.
Zoology deals with the study of animal kingdom specially the structural diversity, biology, embryology, evolution, habits and distribution of animals, both living and extinct. As it covers a fascinating range of topics, the modern zoologists need to have insight into many disciplines. The learning outcomes-based curriculum framework for a B.Sc. degree in Zoology is designed to cater to the needs of students in view of the evolving nature of animal science as a subject. The framework is expected to assist in the maintenance of the standard of Zoology degrees/programmes across the country by reviewing and revising a broad framework of agreed expected graduate attributes, qualification descriptors, programme learning outcomes and course-level learning outcomes. The framework, however, does not seek to bring about uniformity in syllabi for a programme of study in Zoology, or in teaching learning process and learning assessment procedures. Instead, the framework is intended to allow for flexibility and innovation in programme design and syllabi development, teaching learning process, assessment of student learning levels. A comprehensive knowledge of structure-function relationship at the level of gene, genome, cell, tissue, organ, and systems, through development would further add to the knowledge base and the learning outcome in terms of editing of genes and genomes for industrial application and research purposes.

Learning Outcomes based approach to Curriculum Planning:

The courses should be delivered in terms of concepts, mechanisms, biological designs & functions and evolutionary significance cutting across organisms at B.Sc. level. These courses should be studied by students of all branches of biology. Both chalk and board, and PowerPoint presentations can be used for teaching the course. The students should do the dissertation/ project work under practical of different courses, wherever possible.

The students are expected to learn the courses with excitements of biology along with the universal molecular mechanisms of biological designs and their functions. They should be able to appreciate shifting their orientation of learning from a descriptive explanation of biology to a unique style of learning through graphic designs and quantitative parameters to realize how contributions from research and innovation have made the subjects modern, interdisciplinary and applied and laid the foundations of Zoology, Animal Sciences, Life Sciences, Molecular Biology and Biotechnology. These courses and their practical exercises will help the students to apply their knowledge in future course of their career development in higher education and research. In addition, they may get interested to look for engagements in industry and commercial activities employing Life Sciences, Molecular Biology

and Biotechnology. They may also be interested in entrepreneurship and start some small business based on their interest and experience.

Graduate Attributes in Zoology:

- Disciplinary knowledge and skills: Competent of demonstrating (i) complete information and understanding of major concepts, theoretical principles and experimental findings in Zoology and its different subfields (ii) capacity to apply modern instrumentation for advanced genomic and proteomic technology.

- Skilled communicator: Capability to communicate complex technical knowledge relating to Zoology in an obvious and brief manner in writing and oral skills.

- Critical thinker and problem solver: Talent to have critical thinking and competent problem solving skills in the basic areas of Zoology

- Sense of inquiry: Capability for asking appropriate/proper questions relating to issues and problems in the field of Zoology, and planning, executing and reporting the results of an experiment or investigation.

- Team player/worker: Accomplished of working effectively in diverse teams in both classroom, laboratory and in industry and field-based situations.

- Skilled project manager: Able of identifying/mobilizing appropriate resources required for a project, and manage a project to completion, while observing responsible and ethical scientific conduct; and safety and chemical hygiene regulations and practices.

- Digitally literate: Skilled of using computers for Bioinformatics and computation and appropriate software for analysis of genomics and proteomics data, and employing modern bioinformatics search tools to locate, retrieve, and evaluate location and biological annotation genes of different species.

- Ethical awareness/reasoning: Capable of conducting their work with honesty and precision thus avoiding unethical behavior such as fabrication, falsification or misrepresentation of data or committing plagiarism, and appreciating environmental and sustainability issues. Research ethics committee expects them to declare any type of conflict of interest that may affect the research. Any plan to withhold information from researchers should be properly explained with justification in the application for ethical approval.

- Lifelong learners: Capable of self-paced and self-directed learning aimed at individual growth and for improving knowledge/skill development and re-skilling

Choice Based Credit System: With the view to ensure worldwide recognition, acceptability, horizontal as well as vertical mobility for students completing undergraduate degree, Solapur University has implemented Choice Based Credit System (CBCS) at Undergraduate level. The CBCS provides an opportunity for the students to choose courses from the prescribed courses comprising core, elective/minor or skill based courses. The courses can be evaluated following the grading system, which is considered to be better than the conventional marks system. Therefore, it is

necessary to introduce uniform grading system in the entire higher education in India. This will benefit the students to move across institutions within India to begin with and across countries. The uniform grading system will also enable potential employers in assessing the performance of the candidates. In order to bring uniformity in evaluation system and computation of the Cumulative Grade Point Average (CGPA) based on student's performance in examinations.

• Outline of Choice Based Credit System:

1. *Core Course:* A course, which should compulsorily be studied by a candidate as a core requirement is termed as a Core course.

2. *Elective Course:* Generally a course which can be chosen from a pool of courses and which may be very specific or specialized or advanced or supportive to the discipline/ subject of study or which provides an extended scope or which enables an exposure to some other discipline/subject/domain or nurtures the candidate's proficiency/skill is called an Elective Course.

Discipline Specific Elective (DSE) Course: Elective courses may be offered by the main discipline/subject of study is referred to as Discipline Specific Elective.

3. *Ability Enhancement Courses (AEC):* The Ability Enhancement (AE) Courses may be of two kinds: Ability Enhancement Compulsory Courses (AECC) and Skill Enhancement Courses (SEC). "AECC" courses are the courses based upon the content that leads to Knowledge enhancement; (i) Environmental Science and (ii) English/MIL Communication. These are mandatory for all disciplines. SEC courses are value-based and/or skill-based and are aimed at providing hands-on-training, competencies, skills, etc.

• Credit: Credit is a numerical value that indicates students work load (Lectures, Lab work, Seminar, Tutorials, Field work etc.) to complete a course unit. In most of the universities 15 contact hours constitute one credit. The contact hours are transformed into credits. Moreover, the grading system of evaluation is introduced for B.Sc. course wherein process of Continuous Internal Evaluation is ensured. The candidate has to appear for Internal Evaluation of 20 marks and University Evaluation for 80 marks.

PAH Solapur University, Solapur

Faculty of Science-New Choice Based Credit System (CBCS) - (w.e.f.2021-22)

Structure for B. Sc-III

Subject/ Core Course	Name and Type of the Paper		No. of papers/ Practical	Hrs/week			Total Marks Per Paper	UA	CA	Credits
	Type	Name		L	T	P				
Class :	**B.Sc.- III Semester – V**									
Ability Enhancement Course(AECC)		**English (Business English)**	Paper- III	4.0	--	--	100	80	20	4.0
Discipline Specific Elective (DSE) (Students can opt any one subjects among the three Subjects excluding interdisciplinary offered at B.Sc II.		**DSE-1A- Molecular Biology**	Paper- IX	3	--	--	100	80	20	4.0
		DSE- 2 A- Principles of Genetics	Paper -X	3	--	--	100	80	20	4.0
		DSE- 3 A-Endocrinology	Paper- XI	3	--	--	100	80	20	4.0
		DSE 4 A- Wildlife Conservation & Management	Paper- XII	3	--	--	100	80	20	4.0
		(Add-on /-self learning)- MOOC/SWAYAM/Skill based -certificate course –institute or university /internship/ apprenticeship		--	--	--	--	--	--	4.0
Grand Total				**16.0**	**--**	**--**	**500**	**400**	**110**	**24**
Class :	**B.Sc.- III Semester –VI**									
Ability Enhancement Course(AECC)		**English (Business English)**	Paper IV	4.0	--	--	100	80	20	4.0
DSE (Students can opt any one subjects among the three Subjects excluding interdisciplinary offered at B.Sc. II.		**DSE- 1B -Animal Physiology: Life Sustaining Systems**	Paper -XIII	3.0	--	--	100	80	20	4.0
		DSE- 2B- Evolutionary Biology	Paper- XIV	3.0	--	--	100	80	20	4.0
		DSE- 3B -Animal Behaviour And Chronobiology	Paper- XV	3.0	--	--	100	80	20	4.0
		DSE 4B- Applied Zoology	Paper- XVI	3.0	--	--	100	80	20	4.0
Total (Theory)				**16.0**	**--**	**--**	**500**	**400**	**100**	**20**

DSE - Practical (Annual Exam)	**DSE- 1 A&B**	Practical- IX & XIII	--	--	5	100	80	20	4.0
	DSE -2 A&B	Practical- X&XIV	--	--	5	100	80	20	4.0
	DSE- 3 A&B	Practical- XI&XV			5	100	80	20	4.0
	DSE- 4 A& B	Practical- XII & XVI			5	100	80	20	4.0
Total (Practicals)					**20**	**400**	**320**	**80**	**16**
Grand Total			**32.0**		**20**	**1400**	**1120**	**280**	**60**

Summary of the Structure of B.Sc. Programme as per CBCS pattern

Class	Semester	Marks-Theory	Credits-Theory	Marks-Practical	Credits-Practicals	Total – credits
B.Sc.-I	I	500	20	--	--	20
	II	550	20	400	16	36
B.Sc.-II	III	350	14	--	--	14
	IV	350	14	300	12	26
B.Sc.-III	V	500	22	--	--	22
	VI	500	20	400	16	36
Total		2750	110	1100	44	154

B.Sc.Programme :

Total Marks : Theory + Practical's = 2750 +1100 =3950
Credits : Theory + Practical's = 110 + 44 = 154
Numbers of Papers Theory: Ability Enhancement Course(AECC) : 05
Theory: Discipline Specific Elective Paper (DSE) : 08
Theory: DSC : 12
Skill Enhancement Courses /Add on : 01
Total : Theory Papers : 31
: Practical Papers : 11

Abbreviations :

L: Lectures
T: Tutorials
P: Practicals
UA : University Assessment
CA : College Assessment
DSC / CC: Core Course
AEC : Ability Enhancement Course
DSE : Discipline Specific Elective Paper
SEC : Skill Enhancement Course
GE : Generic Elective
CA: Continuous Assessment
ESE: End Semester Examination

PAH SOLAPUR UNIVERSITY, SOLAPUR
Faculty of Science
Choice Based Credit System (CBCS)
(w.e.f. 2021-22)

• Title of the Course: B.Sc. Part-III (Honors)
• Subject: Zoology

• **Introduction**: This course provides a broad overview of Zoology and to produces expert hands that would have sufficient knowledge and expertise to solve the urgent problems of the region by using Zoology. The course structure is basic science centric where students learn core science and are taught necessary fundamental subject for that purpose.

• **Objectives of the course: The objectives of B. Sc. Zoology course are:**
To provide an intensive and in depth learning to the students in field of Zoology. Beyond simulating, learning, understanding the techniques, the course also addresses the underlying recurring problems of disciplines in today scientific and changing world. To develop awareness & knowledge of different organization requirement and subject knowledge through varied branches and research methodology in students. To train the students to take up wide variety of roles like researchers, scientists, consultants, entrepreneurs, academicians, industry leaders and policy.

- **Course outcome and Advantages:** Zoology has tremendous job potential. The successful students will be able to establish research organizations with the help of agriculture, environment protection and also their own industry for transgenic animals, clinical pathology, genetic counseling, human karyotyping etc. Scientific Research Organizations. Universities in India & aboard.

• Medium of Instruction: English
• Syllabus Structure:
• The University follows semester system.
• An academic year shall consist of two semesters.
• B.Sc. Part-IIl Zoology shall consist of two semesters: Semester V and Semester VI

In semester V: there will be Four DSC papers having paper IX to XII of 100 marks each. There will a **Compulsory paper on "Ability Enhancement Compulsory Course (AECC)" on** English and one self learning compulsory course of any one from - MOOC/SWAYAM COURSE/INTERNSHIP

In Semester VI: there will be two DSC papers having paper XIII to paper XVI of 100 marks each. There will a **Compulsory paper on "Ability Enhancement Compulsory Course (AECC)" on** English

The scheme of evaluation of performance of candidates shall be based on University Assessment **(UA**) as well as **College Internal Assessment (CA)** as given below.

For B.Sc.Part-III Zoology Sem V & VI the "internal assessment" will be based on Internal tests, Home assignment, Tutorials, Open Book Examination, Seminars, Group discussion, Brain storming sessions etc. as given below.

- **Practical course examination** is of 100 marks shall be conducted at the end of semester II. The practical examination of 400 marks shall also consist of **320 marks for University practical assessment** and **80 marks for college internal assessment (CA)**.

• **Scheme of Evaluation**: As per the norms of the grading system of evaluation, out of 100 marks, the candidate has to appear for college internal assessment of 20 marks and external evaluation (University assessment) of 80 marks..

Semester – V: Theory: (100 marks): Comprising DSE-

a) University Examination (UA) (80 marks): No. of theory papers: 4 (paper IX to paper XII)

b) Internal Continuous Assessment (CA) (20 marks) No. of theory papers: 4 (paper IX to paper XII)
c) **Compulsory paper on "Ability Enhancement Compulsory Course (AECC)" on** English
d) One Add-on - self learning course **(compulsory)** MOOC/SWAYAM/Sill based -certificate course – institute or university /internship/ apprenticeship

Internal test- Home assignment / tutorials / seminars / viva/ group discussion/ outreach programs.

Semester – VI: Theory: (100 marks): Comprising DSE-

a) University Examination (UA) (80 marks): No. of theory papers: 4 (paper XIII to paper XVI)

b) Internal Continuous Assessment (CA) (20 marks) No. of theory papers: 4 (paper XIII to paper XVI)

Internal test- Home assignment / tutorials / seminars / viva/ group discussion/ outreach programs.
Practical Examination: (400 marks)
University Examination (320 marks): Number . of practicals': 04

Practical-I: Based on **Papers- IX & XIII** (80 UA + 20 CA)
Practical-II: Based on **Papers- X & XIV** :(80 UA + 20 CA)
Practical-III: Based on papers - **XI & XV** :(80 UA + 20 CA)
Practical-IV: Based on papers - **XII& XVI** :(80 UA + 20 CA)

Internal Continuous Assessment: Total 80
(a) Internal practical test and
(b) Viva/group discussion/model or chart/attitude/attendance/overall behavior
(c) University practical examination of 320 marks (Practical I to IV for Four separate days) will be conducted at the end of semester VI
Passing Standard:
The student has to secure a minimum of 4.0 grade points (Grade C) in each paper. A student who secure less than 4.0 grade point (39% or less marks, Grade FC/FR) will be declared fail in that paper and shall be required to reappear for respective paper. A student who failed in University Examination (theory) and passed in internal assessment of a same paper shall be given FC Grade. Such student will have to reappear for University Examination

PAH SOLAPUR UNIVERSITY, SOLAPUR Faculty of Science and technology New CBCS Structure for B.Sc – III Zoology Theory -								
Semester V								
Paper No.	**Title of Paper**	**Hrs/Week**			**Paper Marks**	**UA**	**CA**	**Credits**
		L	T	P				
Ability Enhancement Course(AECC)	**English (Business English)**	4	-	-	100	80	20	4
DSE-IX	**DSE-1A -Molecular Biology**	3	-	-	100	80	20	4
DSE-X	**DSE- 2 A -Principles of Genetics**	3	-	-	100	80	20	4
DSE-XI	**DSE- 3A - Endocrinology**	3	-	-	100	80	20	4
DSE-XII	**DSE 4 A- Wildlife Conservation & Management**	3	-	-	100	80	20	4
SEC-	**(Add-on /-self learning)- MOOC/SWAYAM/Skill based - certificate course –institute or university /internship/ apprenticeship**	--	--	--	--	--	--	4.0
Total		16	-	-	500	400	100	24

only. A student who fails in internal assessment and passed in University examination (theory) shall be given FR Grade. Such student will have to reappear for both University examination as well as internal assessment. In case of Annual pattern/old semester pattern students/candidates from the mark scheme the candidates shall appear for the same stipulated marks of external examination and his/her performance shall be scaled to 100 marks.

• ATKT:

passed in all papers except 6 (six) papers combined together of semester III and IV of B.Sc. Part-II Zoology examination and clearly passed in B.Sc. Part-I-Zoology shall be permitted to enter upon the course of Semester V of B.Sc. III Zoology.

Semester –VI								
Paper No.	**Title of Paper**	**Hrs/Week**			**Paper Marks**	**UA**	**CA**	**Credits**
		L	T	P				
Ability Enhancement Course(AECC)	**English (Business English)**	4	-	-	100	80	20	4
DSE- -XIII	**DSE- 1B -Animal Physiology: Life Sustaining Systems**	3	-	-	100	80	20	4
DSE-XIV	**DSE- 2B- Evolutionary Biology**	3	-	-	100	80	20	4
DSE-XV	**DSE- 3 B- Animal Behaviour And Chronobiology**	3	-	-	100	80	20	4
DSE-A XVI	**DSE 4B- Applied Zoology**	3	-	-	100	80	20	4
Total		16			500	400	100	20

Practicals- B .Sc III Zoology (CBCS)									
Practical No.	**Paper No. based on**	**Title of Paper**	**Hrs/Week**			**Paper Marks**	**UA**	**CA**	**Credits**
			L	T	P				
I	Papers- IX & XIII	**DSE-1A- Molecular Biology AND DSE- 1B- Animal Physiology: Life Sustaining Systems**		-	5	100	80	20	4
II	Papers- X&XIV	**DSE- 2 A -Principles of Genetics** AND **DSE- 2B -Evolutionary Biology**		-	5	100	80	20	4
III	Papers- XI&XV	**DSE- 3A- Endocrinology AND DSE- 3 B - Animal Behaviour and Chronobiology**		-	5	100	80	20	4
IV	Papers- XII & XVI	**DSE 4 A- Wildlife Conservation & Management AND DSE 4B- Applied Zoology**		-	5	100	80	20	4
	Total				**20**	**400**	**320**	**80**	**16**

Abbreviations:

L: Lectures
T: Tutorials
P: Practicals
UA: University Assessment by End Semester Examination
CA: College Assessment by Internal Continuous Examination
UA: University Assessment: - University Theory paper shall be of 70 marks
CA: College Assessment: - The internal examination for theory and practical course

Theory Syllabus

B.Sc. III-Zoology (Semester-V)

w. e. f. June 2021

Paper- -IX- DSE-1A Molecular Biology
[Credits -4, Total Lectures-60]

Unit 1: Nucleic Acids **4**

Salient features of DNA and RNA
Watson and Crick model of DNA

Unit 2: DNA Replication **12**

DNA Replication in prokaryotes and eukaryotes, Semi-conservative mechanism of DNA replication, Replication of circular.

Unit 3: Transcription

10

RNA polymerase and transcription Unit, mechanism of transcription in prokaryotes and eukaryotes, transcription factors.

Unit 4: Translation **12**

Properties of genetic code: Degeneracy and Wobble Hypothesis; Process of protein synthesis in prokaryotes: Ribosome structure and assembly in prokaryotes, amino-acyl tRNA synthetases and charging of tRNA; Proteins involved in initiation, elongation and termination of polypeptide chain; Difference between prokaryotic and eukaryotic translation

Unit 5: Post Transcriptional Modifications and Processing of Eukaryotic RNA **6**

Mechanism of Capping, Splicing (concept of exon and intron) and Polyadenylation of eukaryotic m-RNA and its significance.

Unit 6: Gene Regulation **10**

Transcription regulation in prokaryotes: Principles of transcriptional regulation with example of lac-operon; Transcription regulation in eukaryotes: Activators, repressors, enhancers, silencer elements.

Unit 7: DNA Repair Mechanisms **3**

Pyrimidine dimerization, mismatch repair & SOS mechanism

Unit 8: Recombinant DNA Technology **3**

Basic mechanism of R-DNA Technology and its applications in medicine, agriculture & industry; RNA interference, miRNA, siRNAs.

- **About the course:**

The course provides an insight into the life processes at the subcellular and molecular levels. Other important aspects include DNA and molecular genetics including gene cloning, sequencing and gene mapping in addition to the powerful techniques that revolutionized the pharmaceutical, health and agricultural industries.

- **Learning outcomes**:

After successfully completing this course, the students will be able to:

- Develop an understanding of concepts, mechanisms and evolutionary significance and relevance of molecular biology in the current scenario.
- Get well versed in recombinant DNA technology which holds application in biomedical & genomic science, agriculture, environment management, etc. Therefore, a fundamental understanding of Molecular Biology will help in career building in all these fields.
- Apply their knowledge in problem solving and future course of their career development in higher education and research.
- Get new avenues of joining research in related areas such as therapeutic strategies or related opportunities in industry.

SUGGESTED READINGS:

1) Becker, W.M., Kleinsmith, L.J., Hardin. J. and Bertoni, G. P. (2009). The World of the Cell. VII Edition. Pearson Benjamin Cummings Publishing, San Francisco.
2) Bruce Alberts, Alexander Johnson, Julian Lewis, Martin Raff, Keith Roberts, Peter Walter: Molecular Biology of the Cell, IV Edition.
3) Cooper G. M. and Robert E. Hausman R. E. The Cell: A Molecular Approach, V-Edition, ASM Press and Sinauer Associates.
4) De Robertis, E.D.P. and De Robertis, E.M.F. (2006). Cell and Molecular Biology. VIII Edition. Lippincott Williams and Wilkins, Philadelphia.
5) Karp, G. (2010) Cell and Molecular Biology: Concepts and Experiments. VI-Edition. John Wiley and Sons. Inc.
6) Lewin B. (2008). Gene XI, Jones and Bartlett
7) McLennan A., Bates A., Turner, P. and White M. (2015). Molecular Biology IV-Edition. GS, Taylor and Francis Group, New York and London.

Paper- -X- DSE-2 A: Principles of Genetics
[Credits -4, Total Lectures-60]

Unit 1: Mendelian Genetics and its Extension **8**

Principles of inheritance-Laws of Mendelian Inheritance, Incomplete dominance and co-dominance, Multiple alleles, Lethal alleles; Gene Interactions: Supplementary, Complementary & Inhibitory interactions; Examples of Sex-linked, sex-influenced and sex-limited characters inheritance.

Unit 2: Linkage, Crossing Over and Chromosomal Mapping **12**

Linkage and crossing over, Cytological basis of crossing over, Molecular mechanisms of crossing over including models of recombination, Recombination frequency as a measure of linkage intensity; Somatic cell hybridization.

Unit 3: Mutations **10**

Types of gene mutations (Classification), Types of chromosomal aberrations (Classification, figures and with one suitable example of each), Molecular basis of mutations in relation to UV light and chemical mutagens; Detection of mutations: CLB method.

Unit 4: Sex Determination **4**

Chromosomal mechanisms of sex determination in Drosophila and Human; Human Genetic Disorders: Mechanism, symptoms, treatment: Down's Syndrome, Klinefeler's Syndrome and Turner's Syndrome

Unit 5: Extra-chromosomal Inheritance **6**

Extra-chromosomal inheritance with examples

Unit 6: Polygenic Inheritance **3**

Polygenic inheritance with suitable examples; simple numerical.

Unit 7: Recombination in Bacteria and Viruses **9**

Conjugation, Transformation, Transduction with examples; Complementation test in Bacteriophage.

Unit 8: Transposable Genetic Elements **8**

Transposons in bacteria

About the course

The course is designed to revise basic concepts of Genetics and then move on to advanced concepts. Some key aspects include the mechanism of inheritance, gene structure and function, sex chromosomal and autosomal anomalies, aspects of human genetics, etc. will be covered. A strong emphasis will be laid on the modern tools and techniques used in genetics.

Learning outcomes:

After successfully completing this course, the students will be able to:

- Understand how DNA encodes genetic information and the function of mRNA and tRNA
- Apply the principles of Mendelian inheritance.

- Understand the cause and effect of alterations in chromosome number and structure.
- Relate the conventional and molecular methods for gene manipulation in other biological systems.
- Discuss and analyse the epigenetic modifications and imprinting and its role in diseases.
- Get new avenues of joining research in related areas such as genetic engineering of cells, cloning, genetic disorders, human fertility programme, genotoxicity, etc

SUGGESTED READINGS:

1) Gardner, E.J., Simmons, M.J., Snustad, D.P. (2008). *Principles of Genetics*. VIII Edition. Wiley India
2) Snustad, D.P., Simmons, M.J. (2009). *Principles of Genetics*. V-Edition. John Wiley and Sons Inc
3) Klug, W.S., Cummings, M.R., Spencer, C.A. (2012). *Concepts of Genetics*. X Edition. Benjamin Cummings
4) Russell, P. J. (2009). *Genetics- A Molecular Approach.*III Edition. Benjamin Cummings
5) Griffiths, A.J.F., Wessler, S.R., Lewontin, R.C. and Carroll, S.B. *Introduction to Genetic Analysis*. IX Edition. W. H. Freeman and Co.
6) Fletcher H. and Hickey I. (2015). *Genetics.* IV Edition. GS, Taylor and Francis Group, New York and London

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Paper- -XI- DSE-3 A: Endocrinology
[Credits -4, Total Lectures-60]

Unit 1: **Introduction to Endocrinology** **12**

History of endocrinology, Brief introduction of endocrine glands, Classification, Characteristic and Transport of Hormones, Neurosecretions and Neurohormones

Unit 2: Epiphysis **06**

Location & structure of pineal gland, Secretions and their functions in biological rhythms and reproduction.

Unit-3: Hypothalamo-hypophysial Axis
07

Structure of hypothalamus, Hypothalamic nuclei and their functions, Regulation of neuroendocrine glands, Feedback mechanism.

Unit 4: Structure of pituitary gland, Hormones and their functions, Hypothalamo-hypophysial
06
portal system, Control and Disorders of pituitary gland.

Unit 5: Regulation of Hormone Action **11**

Hormone action at Cellular level: Hormone receptors, transduction and regulation Hormone action at Molecular level: Molecular mediators, Genetic control of hormone action

Unit 6: Structure, Hormones, Functions and Regulation and Disorders of Testis **08**

Unit 7: Structure, Hormones, Functions and Regulation and Disorders of Ovary
06

Unit 8: Structure, Hormones, Functions and Regulation and Disorders of Placenta
04

About the course

The course envisages information on endocrine system with emphasis on the structure of hypothalamus and anterior pituitary. The associated hormones and the related disorders will be explained.

Learning outcomes:

- Understand neurohormones and neurosecretions.
- Learn about hypothalamo and hypapophysial axis.
- Understand about different endocrine glands and their disorders.
- Understand the mechanism of hormone action.

SUGGESTED READINGS

1) General Endocrinology C. Donnell Turner Pub- Saunders Toppan
2) Endocrinology: An Integrated Approach; Stephen Nussey and Saffron Whitehead.
3) Oxford: BIOS Scientific Publishers; 2001.
4) Hadley, M.E. and Levine J.E. 2007. Endocrinology, 6th Edition. Pearson Prentice-Hall, Pearson Education Inc., New Jersey.

5) David O. Norris & J. A. Carr. Vertebrate Endocrinology, 6th Ed., Academic Press

Paper- -XII- DSE-4 A: Wildlife Conservation & Management [Credits -4, Total Lectures-60]

Unit 1: Introduction to Wild Life **8**

Values of wild life - positive and negative; Conservation ethics; Importance of conservation; Causes of depletion; World conservation strategies.

Unit 2: Evaluation and Management of Wild life **8**

Habitat analysis, Physical parameters: Topography, Geology, Soil and water; Biological Parameters: food, cover, forage, browse and cover estimation; Standard evaluation procedures: remote sensing and GIS.

Unit 3: Management of Habitats **8**

Setting back succession; Grazing logging; Mechanical treatment; Advancing the succession process; Cover construction; Preservation of general genetic diversity; Restoration of degraded habitats.

Unit 4: Population Estimation **8**

Methods of population estimation: Sex ratio computation; Fecal analysis of ungulates and carnivores: Hair identification, Pug marks and census method.

Application of biostatistics in Biodiversity estimation: Analysis of Shannon and Simpson's Diversity Indices.

Unit 5: Management Planning of Wild life in Protected Areas **8**

Estimation of carrying capacity; Eco tourism / wild life tourism in forests; Concept of climax persistence; Ecology of perturbence.

Unit 6: Management of Excess Population **7**

Bio-telemetry; Care of injured and diseased animal; Quarantine; Common diseases of wild animal

Unit 7: Protected areas **8**

National parks & sanctuaries in India, Community reserve; important features of protected areas in India; Tiger conservation- Tiger reserves in India & its management challenges; Great Indian Bustard (GIB) Reserve & its management.

Unit 8: Wildlife Protection Acts: National: Wildlife Protection Act-1972; International: CITES, 1973 5

About the course

The course envisages information on wildlife management

Learning outcomes

- Students will understand the factors affecting the need to find sustainable practices

- Students will understand the general principles of ecology as how they related to terrestrial and/or aquatic plant and animal conservation and management.
- Students will be able to identify species, characteristics, habitat requirements and life cycles of birds, fish and/or wildlife species.
- Students will be able to evaluate current events and public information related to wildlife conservation and management as being scientifically-based or opinion

SUGGESTED READINGS:

1) Caughley, G., and Sinclair, A.R.E. (1994). Wildlife Ecology and Management. Blackwell Science.
2) Woodroffe R., Thirgood, S. and Rabinowitz, A. (2005). People and Wildlife, Conflict or Co-existence? Cambridge University.
3) Bookhout, T.A. (1996). Research and Management Techniques for Wildlife and Habitats, 5 th edition. The Wildlife Society, Allen Press.
4) Sutherland, W.J. (2000). The Conservation Handbook: Research, Management and Policy. Blackwell Sciences
5) Hunter M.L., Gibbs, J.B. and Sterling, E.J. (2008). Problem-Solving in Conservation Biology and Wildlife Management: Exercises for Class, Field, and Laboratory. Blackwell Publishing.

SEMESTER –VI

PAH SOLAPUR UNIVERSITY, SOLAPUR (CBCS)
Theory Syllabus

B.Sc. III-Zoology (Semester-VI)

w. e. f. June 2021

Paper- -XIII- DSE-1B Animal Physiology: Life Sustaining Systems

[Credits -4, Total Lectures-60]

Unit 1: Physiology of Digestion **10**

Structural organization and functions of gastrointestinal tract and associated glands; Mechanical and chemical digestion of food; Digestion and absorption in stomach and intestine; Hormonal control of secretion of enzymes in Gastrointestinal tract.

Unit 2: Physiology of Respiration **10**

General mechanism of respiration in mammals, Pulmonary ventilation; Respiratory volume and capacities; Transport of oxygen and carbon dioxide in blood; Dissociation curves and the factors influencing it; Control of respiration: Chemical & Nervous.

Unit 3: Respiratory pigments: Types structure and function
04

Hemoglobin, hemocyanin, erythrocruorin-chlorocruorin, hemerythrin

Unit 4: Renal Physiology **8**

Structure of Kidney and its functional unit (nephron); Mechanism of urine formation; Regulation of water balance; Regulation of acid-base balance; Dialysis.

Unit 5: Blood and Blood groups : **12**

Haematopoiesis – Brief account, Components of blood – RBC, WBC & Platelets and their functions; Blood clotting system, Complement system & Fibrinolytic system.

Types of Blood groups -ABO and MN type, blood group antigens, Rh factor & Erythroblastosis Foetalis.

Unit 6: Physiology of Heart **08**

Structure of mammalian heart; Origin, structure & working of heart beat (SA Node, AV Node & Purkinje's Fibre), Coronary circulation; Pacemaker.

Unit 7: Cardiac cycle: **04**

Cardiac output and its regulation, nervous and chemical regulation of heart rate. Electrocardiogram, Blood pressure and its regulation

Unit 8: Physiology of Stress
04

1. Introduction to stress physiology

2. Managing stress by exercise, yoga and meditation

About the course:

The course deals with various physiological functions in mammals. It also gives an account of the metabolic/ biochemical pathways and the probable impact of environment on them.

Learning outcomes

After successfully completing this course, the students will be able to:

- Understand the physiology at cellular and system levels.
- Understand the mechanism and regulation of breathing, oxygen consumption and determination of respiratory quotient. .
- Understand the process of digestion and excretion.
- Understand the renal physiology
- Understand the process in haematology
- Learn the determination of hemoglobin content, blood groups and blood pressure.
- Understand the process of Physiology of Heart

SUGGESTED READINGS

1) Guyton, A.C. & Hall, J.E. (2006). Textbook of Medical Physiology. XI Edition. Hercourt Asia PTE Ltd. W.B. Saunders Company.
2) Tortora, G.J. & Grabowski, S. (2006). Principles of Anatomy & Physiology. XI-Edition John Wiley & sons,
3) Victor P. Eroschenko. (2008). diFiore's Atlas of Histology with Functional correlations. XII Edition. Lippincott W. & Wilkins.
4) Vander A, Sherman J. and Luciano D. (2014). Vander's Human Physiology: The Mechanism of Body Function. XIII Edition, McGraw Hills

Paper- -XIV- DSE-2B : Evolutionary Biology

[Credits -4, Total Lectures-60]

Unit 1: Life Beginnings **7**

Chemogeny, RNA world, organic evolution, Evolution of eukaryotes.

Unit 2: Historical Review of Evolutionary Concepts **4**

Lamarckism, Darwinism, Neo-Darwinism

Unit 3: Evidences of Evolution: **10**

Fossil record (types of fossils, transitional forms, geological time scale, evolution of horse, Molecular evolution:- universality of genetic code and protein synthesizing machinery, example of globin gene family.

Unit 4: Sources of Variation **8**

Sources of variations: Heritable variations and their role in evolution

Unit 5: Population Genetics **10**

Hardy-Weinberg Law: statement and derivation of equation, application of law to human Population; Evolutionary forces upsetting H-W equilibrium: Natural selection, genetic drift, mutation and migration.

Unit 6: Product of Evolution: **10**

Micro evolutionary changes - inter-population variations, clines, races, species concept, isolating mechanisms, modes of speciation—allopatric, sympatric & parapatric; Adaptive radiation/ macroevolution as exemplified by Galapagos finches.

Unit 7: Extinctions **3**

Back ground and mass extinctions: causes and effects; example of K-T extinction.

Unit 8: Origin and Evolution of Man **8**

Unique hominin characteristics contrasted with primate characteristics, primate phylogeny from Dryopithecus leading to Homo sapiens, molecular analysis of human origin; Socio-cultural evolution of man.

About the course

The course provides information about the patterns and processes of evolution above the species level. Besides elaborating the process of speciation, it also categorically differentiates between the three methods of phylogenetic analysis *viz*., evolutionary systematics, phonetics and cladistics.

Learning outcomes

At the end of the course the students will be able to

- Understand the historical development of systematics past to the present.
- Understand the similarities and differences of different types of data.
- Understand the uses and limitations of phylogenetic trees.
- Appreciate the complexities and difficulties of various species concepts.
- Gain a basic grasp on the rules and philosophy of nomenclature.

SUGGESTED READINGS:

1) Ridley,M (2004) Evolution III Edition Blackwell publishing
2) Hall, B.K. and Hallgrimson, B (2008). Evolution IV Edition. Jones and Barlett Publishers.
3) Campbell, N.A. and Reece J.B (2011). Biology. IX Edition. Pearson, Benjamin & Cummings.
4) Douglas, J. Futuyma (1997). Evolutionary Biology. Sinauer Associates.
5) Pevsner, J (2009). Bioinformatics and Functional Genomics. II Edition Wiley-Blackwell

Paper- -XV- DSE-3B : ANIMAL BEHAVIOUR AND CHRONOBIOLOGY

[Credits -4, Total Lectures-60]

Unit 1: Introduction to Animal Behavior **7**

Origin and history of Ethology; Brief profiles of Karl Von Frish, Ivan Pavlov, Konrad Lorenz, Niko Tinbergen, Proximate and ultimate causes of behavior.

Unit 2: Patterns of Behavior **8**

Stereotyped Behaviours (Orientation, Reflexes); Instinct vs. Learnt Behavior; Associative learning, classical and operant conditioning, Habituation, Imprinting.

Unit 3: Social Behavior **5**

Concept of Society; Communication and the senses; Altruism; Insects' society with Honey bee as example; Foraging & dance language in honey bee and its advantages.

Unit 4: Sexual Behavior **5**

Asymmetry of sex, Sexual dimorphism, Mate choice, Intra-sexual selection (male rivalry), Inter-sexual selection (female choice).

Unit 5: Introduction to Chronobiology **9**

Historical developments in chronobiology; Biological oscillation: the concept of average, amplitude, phase and period. Adaptive significance of biological clocks.

Unit 6: Biological Rhythm **8**

Types and characteristics of biological rhythms: Short- and Long- term rhythms;
Circadian rhythms; Tidal rhythms and Lunar rhythms;
Photoperiod and regulation of seasonal reproduction in vertebrates; Role of melatonin in biological rhythms.

Unit 7: Biological Clocks **4**

Relevance of biological clocks; Chronopharmacology, Chronomedicine, Chronotherapy.

Unit 8: Chronobiology and drug discovery **4**

Brief idea of chronopharmacology and its role in various diseases

About course:

- Many animal species have a sort of internal clock, called a biological clock, which predicts cyclical environmental change and prepares the animal to deal with it. Biological rhythms are self –sustaining natural cycles of animal life history which maintain themselves regardless of the environmental factors

Learning outcomes:

- Understand the. Biological Clocks and its importance
- Understand how Biological Rhythm influence animal behavior
- Understand Social and Sexual Behaviour of animals
- Understand Behaviour Patterns of animals

SUGGESTED READINGS:

1) David McFarland, Animal Behaviour, Pitman Publishing Limited, London, UK.
2) Manning, A. and Dawkins, M. S, An Introduction to Animal Behaviour, Cambridge, University Press, UK.
3) John Alcock, Animal Behaviour, Sinauer Associate Inc., USA.
4) Paul W. Sherman and John Alcock, Exploring Animal Behaviour, Sinauer Associate Inc., Massachusetts, USA.
5) Chronobiology Biological Timekeeping: Jay. C. Dunlap, Jennifer. J. Loros, Patricia J. DeCoursey (ed). 2004, Sinauer Associates, Inc.Publishers, Sunderland, MA, USA
6) Insect Clocks D.S. Saunders, C.G.H. Steel, X., Afopoulou (ed.)R.D.Lewis. (3rdEd) 2002 Barens and Noble Inc. New York, USA
7) Biological Rhythms: Vinod Kumar (2002) Narosa Publishing House, Delhi/ Springer-Verlag, Germany.

Paper- -XVI- DSE-4B : Applied Zoology

[Credits -4, Total Lectures-60]

UNIT 1: Introduction to Aquaculture: **7**

Fish Culture, Breeding Pond, Fish Seed, Hatching pond. Transport of fish fry to rearing ponds. Harvesting, preservation of fish. By products of fishing industry and common fish diseases; Prawn culture: Culture of fresh water prawn

UNIT 2: Fisheries: **8**

Inland Fisheries; Marine Fisheries
Fishing crafts and Gears; Depletion of fisheries resources; Application of remote sensing and GIS in fisheries; Fisheries law and regulations.
Application of biostatistics in Fishery: morphometric analysis of length, weight to determine mean, mode, variance and standard deviation

UNIT 3: Apiculture: **8**

a) Apiculture: Species of honey bees in India. Life history of *Apis.* Methods of Bee keeping. Bee products and their uses. Natural enemies and their control.; Medicinal value of honey; Importance of bee colonies in crop pollination.

Unit-4: Lac culture 7

Lac insect and its life cycle, Cultivation of lac insect, host plants, processing and uses of lac.

Unit 5: Sericulture 8

Types of silk; Silkworms and their host plants; Mulberry silkworm culture; Life history of silkworm; Natural enemies and their control

Unit 6: Dairy Management **7**

Introduction to common dairy animals. Techniques of dairy management. Milk and milk products. Cattle Diseases.

Unit 7: Poultry Management **10**

Types of breeds. Rearing method. Diseases and control measures. Housing and Equipment, Deep litter System, Laying cages, Methods of brooding and Rearing,. Feed formulations for chicks, Diseases of fowl. Nutritive value of egg and meat. Incubation and hatching of eggs.

UNIT 8: Recent advances applied zoology **5**

Zebrafish as a model organism in research, transgenic animals (Salmon, chicken, goat, pigs) & its significance.

About course:

Applied Zoology is the enterprise of raising or harvesting of fishes, prawns, honey bees, lac insects, silkworms, poultry birds and dairy industry. It will allow students to employ the knowledge of zoology in entrepreneurship.

Learning outcome :

- Students will understands the fisheries
- Students will learn the sericulture and Lac culture techniques
- Students will understand the Apiculture techniques
- Students will learn how to initiate Aquaculture practices.
- Students can incorporate social information about poultry and dairy

SUGGESTED READINGS

1) Q Bone and R Moore, Biology of Fishes, Talyor and Francis Group, CRC Press, U.K.
2) D. H. Evans and J. D. Claiborne, The Physiology of Fishes, Taylor and Francis Group, CRC Press, UK von der Emde, R.J. Mogdans and B.G. Kapoor.The Senses of
3) Fish: Adaptations for the Reception of Natural Stimuli, Springer, Netherlands
4) C.B.L. Srivastava, Fish Biology, Narendra Publishing House
5) J.R. Norman, A history of Fishes, Hill and Wang Publishers
6) S.S. Khanna and H.R. Singh, A text book of Fish Biology and Fisheries, Narendra Publishing House

PAH SOLAPUR UNIVERSITY, SOLAPUR (CBCS)
B.Sc. III-Zoology
w. e. f. June 2021 --Practicals Syllabus
(Where ever possible use virtual /CD/ Videos /models/simulations should be used during practical demonstration)

Practical -I

Paper No. based on : Papers- IX & XIII-

DSE-1A Molecular Biology
AND
DSE- 1B Animal Physiology: Life Sustaining Systems
(Credits-4)

DSE-1A Molecular Biology:-Practicals

1) Cell Division: Study of meiosis in onion bud
2) Molecular Biology: Isolation of DNA from suitable material
3) Chromatography: Demonstration/ Separation of amino acids using paper chromatography by TLC
4) Quantitative estimation of DNA using colorimeter (Diphenylamine reagent)
5) Quantitative estimation of RNA using Orcinol reaction
6) Demonstration of DNA and RNA using methyl green pyronine
7) Demonstrate of retrieval of gene sequence using bioinformatics tools - NCBI, Entrez, BLAST- -hemoglobin / insulin-- gene /protein in FASTA format
8) Electrophoresis: Demonstration of electrophoretic separate of protein /DNA by/Agarose/PAGE method
9) Codon Analysis: To find out codon sequences for known polypeptide chain of ten amino acids or to find out amino acid sequence from given codons (chart will be provided)
10) Karyotyping: Study of human Karyotype(s): Normal male and female (Classification of chromosomes according to size and position of centromere); Down syndrome, Klinefelter's syndrome, Turners syndrome using pictures of karyotypes & Idiograms

DSE- 1B Animal Physiology: Life Sustaining Systems

1. Estimation of salivary amylase activity
2.Measurement of blood pressure and heart beat under normal and any two physical stress condition.
3. Determination of Body Mass Index (BMI)
4.Enumeration of Red Blood Cells (RBCs) and White Blood Cells (WBCs) using haemocytometer.
5. Differential count of WBCs using Leishman's/Geimsa stain
6. Estimation of haemoglobin and carrying capacity of blood.
7. Preparation of haemin crystals
8. To determine blood clotting time using capillary method
9.Determination of abnormal and normal constituents of urine
10. Estimation of normal oxygen (O2) consumption using any aquatic animal and /or effect of temperature on the rate of oxygen consumption
11. Histological studies of mammalian organs: oesophagus, stomach, duodenum, ileum, rectum, liver, trachea, lung, kidney
12. Estimation of uric acid from sample
13 .**Field Visits:** Local water bodies for collection of planktons / Visit to medical college/ blood bank / IVF center, / Pranayam and yoga meditation center for study and submission of report
(*Subject to UGC guidelines)

Practical –II
Paper No. based on : Papers- X &XIV
DSE- 2A Principles of Genetics
AND
DSE- 2B Evolutionary Biology
(Credits-4)

Practicals:-

DSE- 2A Principles of Genetics

1. Examples in Genetics based on Monohybrid ratio (05 examples)
2. Examples in Genetics based on Dihybrid ratio (05 examples)
3. Examples based on multiple alleles: Blood groups, Coat color in rabbit (05 examples)
4. Examples based on gene interactions (Complementary, Supplementary & Inhibitory interactions) (05 examples).
5. Examples based on human genetic traits: Rolling tongue, free & attached ear lobes, hitchhiker's thumb, PTC taste, Widows Peak Hairline (01 example from each)
6. Laboratory culture of *Drosophila* to study its life cycle
7. Study of normal genetic traits of *Drosophila* using cultured material
8. Pedigree analysis of some human inherited traits
9. Fieldwork to collect data on genetic diseases from local hospitals
10. To perform statistical analysis (age, sex, family history etc.) of data on genetical diseases from local hospitals (Bar diagram, Pie Chart)

DSE- 2B Evolutionary Biology

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1. Study of types of fossils using samples available in Zoology and Geology Lab./or models (for eg. Limulus, Peripatus, Dipnoi, Sphenodon, *Archaeopteryx*, examples based on: Molluscan, Echioderms, Brachiopods and as available in laboratory)
2. Study of Zoogeographical Regions of world to understand the concept of speciation with examples
3. Study of biogeographic zones of India to study evolutionary variation and adaptation in species with examples
4. Study of macroevolution using Darwin's Finches using charts/models

5. Study of homologous organs from suitable specimens/models in the museum
6. Study of analogous organs from suitable specimens/ models in the museum
7. Study of adaptive radiation in mammals from museum specimens/models
8. Examples based on Hardy Weinberg Law (08 examples)
9. Study of phylogeny of horse using model/charts (reconstruction using limbs and teeths of horse ancestors)
10. Construction of phylogenetic tree using bioinformatic tools/softwares (Searching sequences of any five genes or proteins using biological databased (NCBI, GenBank or DDBJ, construct phylogenetic tree using Clustal X, Phylip, NJ & submit the report).
11. Visit to natural history museum and submission of report
12.Project work- Research project should be prepared in consultation with faculty either individually or in group as required. The research guide will support students in selecting and executing the entire topic and preparing the report for final submission during examination after approval of the guide in the following format-
(a) Format of Report: Title, Introduction, Review of literature, Objectives, Material and Methodology, Result and discussion, Conclusion & References
(b) Submission & presentation of research work: At the time of practical examination submit the final project report (hard copy) and present your research findings using 'PowerPoint'.

Practical –III

Paper No. based on : Papers- XI & XV

DSE- 3A Endocrinology
AND
DSE- 3 B ANIMAL BEHAVIOUR AND CHRONOBIOLOGY
(Credits -4)

Practicals- DSE- 3A Endocrinology–

1. Identification explanation of endocrine glands in rat using model / virtual method
2. Study of the permanent slides of endocrine glands: Pineal, pituitary, testis, ovary and placenta
3. Observation of insect life cycle and its hormonal control- metamorphosis
4. Observation of amphibian metamorphosis and its hormonal control.
5. Study of circadian functions in human and its correlation with hormones (daily eating & pre & post-meal insulin level, sleep & role of melatonin and day length & body temperature w. r. t. hypothalamus).
6. To study cyclical variation in body temperature during menstrual cycle using model/chart
7. To study flight and fight behavior to understand reflex action and role of adrenalin hormone
8. To collect data on hormonal disorders from local hospitals and its interpretation
9. Hormonal regulation of reproductive hormones in human with age using chart
10. Study of contraceptive pills with reference to hormone and its mechanism
11. Visit to IVF centre/hospital and submit a report

Practicals- DSE- 3 B ANIMAL BEHAVIOUR AND CHRONOBIOLOGY–

1. Observation of nests and nesting behavior of the birds.
2. Observation of termatoria of ants and termites.
3. Study and observation of casts in ants and honey bees.
4. Observation of geotaxis behaviour in earthworm.
5. Observation of phototaxis behaviour in insect larvae.
6. Observation of intra-specific behavior: Dancing behavior in honey bees; flocking behavior in birds and Courtship behavior in Great Indian Bustard and Peacock (virtual)
7. Observation of inter-specific behavior between: Ant-*Acacia*, Buffalo-cattle egret, Fig-wasp pollination, Root nodules-bacteria, Tick-dog using models/charts/museum specimens

8. Recording and interpretation of calls, songs, vocalizations of insects (e.g. cricket), amphibians, birds and mammals and their importance in signaling behavior (based on actual records or internet collection)
9. Observation of foraging behavior in ants to study chemo-signaling
10. Observation of foraging behavior in *Calotes*, *Hemidactylus*, *Chameleon* and *Naja*
11. Observation of nest parasitism in Asian koel
12. **Study tour /:**
(a) Agriculture research center, Yoga & Meditation center, Biotechnology lab, etc.
(b)summer or winter training programmes/workshops/field survey with NGOs & GOs: students can work in various institutes/laboratories/NGOs etc. for period up to 07 days and prepare a report for submission during exam
(c) Visit to Forest/ Biodiversity Park/Zoological Park to study behavioural activities of animals and prepare a short report.

Practical –IV

Paper No. based on : Papers- XII & XVI
DSE 4 A- Wildlife Conservation & Management
AND
DSE 4B- Applied Zoology

(Credits-4)

Practical-DSE 4 A- Wildlife Conservation & Management

1. Temporary preparation to study of faunal diversity of zooplanktons/insects/mollusca from surrounding area
2. Study of faunal diversity (amphibians, reptiles, birds and mammals) from campus & surrounding area
3. Demonstration of basic tools for field studies: Binocular, Global Positioning System, Cameras, Plankton & butterfly collecting net, insect collecting bottles, Mounting chamber for insects & preservation of museum specimens
4. Identification of animals through pug marks, hoof marks, scats, pellet groups, nest, antlers etc.
5. Casting of pug marks of common animals using plaster of Paris in and around campus
6. To perform line transect and quadrat method to study diversity in and around campus
7. To calculate species richness, abundance and Shannon diversity indices from collected data
8. Study of endangered species from India, their bio-geographic distribution and conservation status: Great Indian Bustard, Jerdon's Courser, Lesser Florican, Asian Elephant, Nilgiri Tahr, lion-tailed macaque, Nilgiri Langur, Lion, Sarus crane, Ganges River Dolphin, Hoolock Gibbon, Wild Ass, Olive Ridley Sea Turtle, Indian Pangolin, Leopard Cat.
9. Study of IUCN Categorization of Red List of animals (Data deficient, Least concern, Near Threatened, Vulnerable, Endangered, Critically endangered, Extinct in wild and Extinct)
10. Visit to local/state/national wildlife sanctuary or protected area or zoo and submission of report

Practical - DSE 4B- Applied Zoology

1. Morphometric and meristic characters of fishes (Length, width, weight, fins, scale type etc.)
2. Identification of major carps (*Labeo*, *Catla*, *Mrigal*, *Cyprinus*)
3. Preparation and study of temporary mount of cycloid and placoid scale from preserved specimens
4. Preparation and study of models of crafts, gears and their importance in Fisheries
5. Analysis of water quality parameters for Aquaculture: estimation of pH, Total Dissolved Solids (TDS);

dissolved O2 and free CO2 and hardness of given sample.
6. Study of honey bee morphology and identification of castes in honey bees (museum specimens/charts/specimens)
7. Observation of life cycle of mulberry silkworm, *Bombyx mori* (model/chart/specimens) and life cycle of tasar silkworm, *Antheraea mylitta*.
8. Test for good quality eggs (Floating test, cracking test) and for fertilized and unfertilized eggs (Light test, Cracking test).
9. Common dairy and poultry breeds in Solapur district
10. Biostatics: examples based on fish morphometry (any 05)
10. Demonstration of induced breeding in Fishes (video/model)
12. **Tour/Review of research:**

a) Excursion/Study Tour:- Visit to any National Parks/ Zoo parks / visit to any fish farm/ pisciculture unit/or Lab./marine water / freshwater habitat / Wildlife Sanctuaries / National or State Research Institutes / University departments / or other appropriate Institutes/poultry/dairy/sericulture units.
OR
b) Review of research work / student research publication: Review of 10 research papers related to zoology or life science and to prepare a review articles of minimum 5-10 pages
OR
c) Publication of one research paper in a peer reviewed journal in collaboration with teacher (accepted/published or personated research paper in seminar/conferences/symposia and submission of copy of presented paper with certificate

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Note:
1. Kindly note that during field visits students shall observe only animals and make record of the observations without disturbing natural habitat not kill the animals. Students should be told about the importance of biodiversity and conservation;
2. Students are encouraged to prepare and submit a concise report of the excursion;
3. Report on multiple excursion tours may be clubbed for preparing and submitting report at the time of final examination will be allowed;
4. Reduce or avoid the use of plastic files during submission of reports / projects as an ecofriendly method

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Skeleton paper for practical examination
(University Examination for 80 Marks)
Practical – I-

Practical – I-: Papers- IX & XIII- DSE-1A Molecular Biology AND DSE- 1B Animal Physiology: Life Sustaining Systems	
Question	**Marks**
Que:1- Preparation of meiotic stages from onion buds/ bioinformatics	10
Que:2- Isolation of DNA from given material /DNA estimation/RNA estimation	10
Que:3- Example(s) based on codon analysis/Chromatography/	10
Que:4- Estimation/enumeration of- haemoglobin/RBC/WBCs/salivary amylase /uric acid from sample/BMI	10
Que:5- Preparation of haemin crystals from given sample/Differential count of WBCs/Estimation of O2 consumption from aquatic animals/ Determination of blood	10

clotting time/ abnormal and normal constituents of urine	
Que:6- Spottings based on: a) Identify and describe: analysis karyotype b) Identify and describe: analysis of nucleotides separated using electrophoresis c) Identify and describe: methyl green pyronin-tissue /stained image d) Identify, sketch and describe: T.S. of esophagus, stomach, duodenum, ileum e) Identify, sketch and describe: T.S. of rectum, liver, trachea, lung, kidney	10
Que:7- Submission of Field Visit Report (any one of): Visit to local water bodies for collection of planktons / Visit to medical college/ blood bank / IVF center/yoga center	10
Que:8- Journal & Viva	10

Practical –II
Papers- X&XIV
DSE- 2 A Principles of Genetics
AND
DSE- 2B Evolutionary Biology

Questions	Marks
Que:1-Example based on monohybrid/dihybrid ratios/supplementary /complementary interactions/Multiple alleles (any one)	10
Que:2-Perform statistical analysis of given data on genetic disease(s) using MS-Excel©	10
Que:3- Construction of pedigree analysis of given data/example	05
Que:4-Example based on Hardy-Weinberg Law (any one)	10
Que:5-Construction of phylogenetic tree using bioinformatics tool	05
Que:6- Spottings based on: a) Identify and describe: Human genetic traits (rolling tongue, free & attached ear lobes, hitch-hikers thumb, wideow's peak, PTC taste) b) Identify and describe: Genetic traits of *Drosophila* (any one) c) Identify and describe: types of fossils (*Limulus*, *Peripatus*, *Archaeopteryx*, *Sphenodon* etc.) d) Identify, sketch and describe: Zoogeographic zones/biogeographic zones/macroevolution using charts/models/photographs e) Identify, sketch and describe: Analogous/homologous organs/adaptive radiation using charts/models/photographs/museum specimens	10
Que:7-Submission of Research Project Report & PPT presentation	20
Que:8-Journal & Viva	10

Practical –III **Papers- XI & XV** **DSE- 3A Endocrinology** **AND** **DSE- 3 B ANIMAL BEHAVIOUR AND CHRONOBIOLOGY**	
Questions	**Marks**
Que:1-Identify, sketch and discuss location, structure and function of endocrine glands of rat from model/chart (any two)	10
Que:2-Identify, sketch and discuss: insect life cycle & its hormonal control/amphibian metamorphosis & its hormonal control	10
Que:3-Interpret the given behavioral interaction: ant-Acacia; buffalo-cattle egret; fig-wasp; root nodules-bacteria; tick-dog based on model/chart/museum specimens	10
Que:4-Identify and interpret behavioral significance of call/song/vocalization (any 01 from journal)	10
Que:5-Discuss the behavior & its significance: Nest/termatoria/geotaxis/phototaxis/foraging (model/chart/museum specimens)	10
Que:6- Spottings based on: a) Identify and describe: Temperature variation during menstrual cycle/Circadian cycle & its hormonal correlation (any 01 from journal) b) Identify and describe: Flight & Fight response/contraceptive pill/ c) Identify and describe: hormonal regulation of reproduction d) Identify and describe behavior: Dancing/flock/courtship e) Identify and describe: Casts in honey bee	10
Que:7-12. Study tour / Internship: (a) Agriculture research center, , Biotechnology lab, etc. (b) summer or winter training programmes/workshops/field survey with NGOs & GOs: students can work in various institutes/laboratories/NGOs etc. for period up to 07 days and prepare a report for submission during exam (c) Visit to Forest/ Biodiversity Park/Zoological Park to study behavioural activities of animals and prepare a short report.	10
Que:8-Journal & Viva	10

Practical –IV **Papers- XII & XVI** **DSE 4 A- Wildlife Conservation & Management** **AND** **DSE 4B- Applied Zoology**	
Question	**Marks**
Que:1-Calculate Shannon Diversity Indices from given data	**10**
Que:2-Perform line transect/quadrat method to study diversity	**10**
Que:3-Perform temporary mount & identification of zooplanktons/insects/mollusca from given sample	**10**
Que:4-Perform estimation of O_2/CO_2 /Hardness/TDS from given sample/biostatistics example	**10**
Que:5-Perform temporary mount of cycloid/placoid scales from preserved specimens	**10**
Que:6- Spottings based on: a) Identify and describe: GPS/Binocular/Plankton collection Net/camera b) Identify and describe: Pug mark/bio-geographical distribution of endangered species from India (any 01 from journal) c) Identify and describe: IUCN categorization of given fauna / air breathing organs in fish-(any one from journal) d) Identify and describe morphology & economic importance of fish /types of castes of honey-bee/poultry & dairy breeds (chart/photo)-Any 01 from journal e) Identify and describe: any 01 cast or gear from journal	**10**
Que:7- a) Excursion/Study Tour:- Visit to any National Parks/ Zoo parks / visit to any fish farm/ pisciculture unit/or Lab./marine water / freshwater habitat / Wildlife Sanctuaries / National or State Research Institutes / University departments / or other appropriate Institutes//poultry/dairy/sericulture units. OR	**10**

b) Review of research work / student research publication: Review of 10 research papers related to zoology or life science and to prepare a review articles of minimum 5-10 pages OR c) Publication of one research paper in a peer reviewed journal in collaboration with teacher (accepted/published or personated research paper in seminar/conferences/symposia and submission of copy of presented paper with certificate	
Que:8 Journal & Viva	**10**

Important Instructions:
-All necessary precautions must be taken while organizing study tour with special reference to the safety of students as per Higher Education rules and regulations.
Note:
-As per the guidelines of **UGC notification number F.14-6/2014(CPP-II) dated 1stAugust, 2014** it is now essential to make necessary modifications to stop dissection and promote and orient students towards the knowledge component rather than skill development. However, ITC based virtual dissections are promoted. Now, the responsibility to discontinue dissections and use of animals in experiments totally rests on concerned authorities of respective colleges/Institutes. As per the notification it is important to encourage the field trips and observations without disturbing the biodiversity. For laboratory observations existing permanent slides and specimens should be shown. As per the guidelines of UGC , all the Zoology departments should be empowered with infrastructure to adopt Information communication technology (ICT) required for the purpose of virtual dissections for which virtual class room / laboratory to be enriched with few computers (according to the strength of students),internet facility , printer etc.

Equivalence:

Paper no.	**Old CBCS**	**New CBCS w e f .2021-22**
	Semester-V	
Paper no. IX	Non-chordate	**NO- Equivalence**
Paper no. X	Biostatistics, bioinformatics, medical zoology, evolutionary biology and Biodiversity & Conservation Biology	**NO- Equivalence**
Paper no. XI	Comparative anatomy of chordates	**NO- Equivalence**
Paper no. XII	Developmental biology	**NO- Equivalence**

Semester-VI		
Paper no. XIII	Physiology	**DSE- 1B -Animal Physiology: Life Sustaining Systems (cc) - Equivalence**
Paper no. XIV	Endocrinology, environmental biology & toxicology	**NO- Equivalence**
Paper no. XV	Molecular Biology & Biotechnology	**DSE-1A -Molecular Biology (CC-Hon) Equivalence**
Paper no. XVI	Techniques in Biology **AND** Economic Zoology	**NO- Equivalence**

Chairman
(Board of studies in Zoology)

Vidnyan mahavidyalaya, Sangola Dist Solapur

COURSE OUTCOME

Name of Department: **Physics**

B.A. / B.Sc. / M.A. / M.Sc.: **B.Sc.**		
NAME OF SUBJECT: **Physics**		
SEM I / II / III / IV / V / VI : **Sem-I**		
COURSE NUMBER (PAPER NUMBER): **Paper I**		
TITLE OF COURSE (NAME OF PAPER): **Mechanics and Properties of Matter**		
COURSE CONTENT	OBJECTIVES	OUTCOME
Moment of Inertia Review of M.I., Moment of Inertia of 1) Circular disc 2) Rectangular lamina 3) Spherical Shell 4) Fly wheel.	To understand the concept of Moment of Inertia and to calculate moment of inertia of various rigid bodies	Student understand the concepts of Moment of Inertia. The students are able to calculate moment of inertia of various rigid bodies.
Pendulums Introduction, Theory of compound pendulum, Bar pendulum, Kater's Pendulum, Bassel's Theory, Bifilar pendulum (parallel suspensions of equal lengths), Torsional Pendulum.	To understand theory of compound pendulum. To study various pendulums like Bar pendulum, Kater's Pendulum, Bifilar pendulum, Torsional Pendulum.	Students understand the working theory of compound pendulum. Students are successfully able to understand theory of various pendulums like Bar pendulum, Kater's Pendulum, Bifilar pendulum, Torsional Pendulum.
Elasticity Introduction, Equivalence of shear strain to compression and extension strains, Relation between elastic constants, Poisson's ratio of rubber tube (Theory and experimental method)	To understand the concept of elasticity. To study elastic constant and relation between them. To study the Poisson's ratio of rubber tube.	Students understand the concept of elasticity. Students understood the relation between elastic constants. Students also studied the theory and experimental method to study Poisson's ratio.

Surface Tension Review of S.T., relation between excess pressure and surface tension, excess pressure inside a liquid drop and soap bubble, Jaeger's method to determine Surface Tension, Factors affecting Surface Tension, Applications of Surface Tension.	To understand the concept of surface tension. To understand relation between excess pressure and surface tension, excess pressure inside a liquid drop and soap bubble. To study the factors affecting Surface Tension and Applications of Surface Tension.	Students understand the of surface tension. And Also the relation between excess pressure and surface tension, excess pressure inside a liquid drop and soap bubble. Students understood the factors affecting Surface Tension and Applications of Surface Tension.
Viscosity and Fluid dynamics Introduction, Newton's law of viscosity, streamline and turbulent flow, Critical velocity and Reynolds number, Equation of continuity, Energy possessed by liquid, Poiseuille's equation, Bernoulli's theorem and its applications to 1) Venturimeter 2) Automiser. Factors Affecting on viscosity.	To understand the concept of Viscosity and Fluid dynamics. To understand Energy possessed by liquid, Poiseuille's equation, Bernoulli's theorem and its applications.	The Students understand concept of Viscosity and Fluid dynamics. To understand Energy possessed by liquid, Poiseuille's equation, Bernoulli's theorem and its applications.

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Vidnyan mahavidyalaya, Sangola Dist Solapur

COURSE OUTCOME

Name of Department: **Physics**

B.A. / B.Sc. / M.A. / M.Sc.: **B.Sc.**		
NAME OF SUBJECT: **Physics**		
SEM I / II / III / IV / V / VI: **Sem-V**		
COURSE NUMBER (PAPER NUMBER) : **XI**		
TITLE OF COURSE (NAME OF PAPER): **Classical Mechanics**		
COURSE CONTENT	OBJECTIVES	OUTCOME
Mechanics of a particle and system of particles 1.1 Mechanics of a particle using vector algebra and vector calculus 1.2 Conservation theorems for linear momentum, angular momentum and energy of a particle 1.3 Mechanics of a system of particles, concept of centre of mass 1.4 Conservation theorems for linear momentum, angular momentum and energy of a system of particles 1.5 Application of Newton's law of motion - Projectile motion in resistive medium 1.6 Problems	To understand Mechanics of a particle and system of particles, Conservation laws and applications.	The students understand Mechanics of a particle and system of particles, Conservation laws and applications.
Lagrangian Formulation 2.1 Limitations of Newtonian Formulation 2.2 Introduction of Lagrangian Formulation 2.3 Constraints 2.4 Degrees of freedom 2.5 Generalised coordinates 2.6 Principle of virtual work 2.7 D'Alembert's Principle 2.8 Lagrange's equation from D'Alembert's Principle	To get knowledge of Constraints, Degrees of freedom, Generalised coordinates, Principle of virtual work, D'Alembert's Principle and Lagrangian Formulation and Applications of Lagrange's equation.	The students gain knowledge of Constraints, Degrees of freedom, Generalised coordinates, Principle of virtual work, D'Alembert's Principle and Lagrangian Formulation and Applications of Lagrange's equation.

2.9 Application of Lagrange's equation to i) A particle in space (Cartesian coordinates) ii) Atwood's Machine and iii) A bead sliding on uniformly rotating wire iv) Simple Pendulum v) Simple harmonic Oscillator 2.10 Problems		
Moving Coordinate systems 3.1 Moving origin of coordinates 3.2 Pseudo forces 3.3 Rotating coordinate systems 3.4 Coriolis force 3.5 Foucault's pendulum 3.6 Effects of Coriolis force in nature 3.7 Effect of Coriolis force on freely falling body 3.8 Promlems	To get knowledge of Moving Coordinate systems, Coriolis force, Foucault's pendulum, Effects of Coriolis force in nature and freely falling body	The students get knowledge of Moving Coordinate systems, Coriolis force, Foucault's pendulum, Effects of Coriolis force in nature and freely falling body
Techniques of Calculus of Variation 4.1 Hamilton's principle 4.2 Deduction of Lagrange's equations from Hamilton's principle 4.3 Applications: i) Shortest distance between two points in a plane ii) Brachistochrone problem iii) Minimum surface of revolution	To get knowledge of Hamilton's principle, its derivation from Lagrange's equations and applications of Hamilton's principle.	The students get knowledge of Hamilton's principle, its derivation from Lagrange's equations and applications of Hamilton's principle.
Coupled Oscillations 5.1 Frequencies of coupled oscillatory system 5.2 Normal modes and normal coordinates 5.3 Energy of coupled oscillations 5.4 Energy transfer in coupled oscillatory system 5.5 Problems	To get knowledge of coupled oscillatory system, Normal modes and normal coordinates, energy and energy transfer coupled oscillatory system	The students get knowledge of coupled oscillatory system, Normal modes and normal coordinates, energy and energy transfer coupled oscillatory system
Motion of rigid body 6.1 Motion of rigid body in space 6.2 Euler's theorem 6.3 Angular momentum and energy 6.4 Euler's equations of motion	To get knowledge of Motion of rigid body in space, Euler's theorem, Angular momentum and energy, Euler's equations of motion	The students get knowledge of Motion of rigid body in space, Euler's theorem, Ang. Mom.and energy, Euler's equations of motion

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Vidnyan mahavidyalaya, Sangola Dist Solapur

COURSE OUTCOME

Name of Department **Physics**

B.A. / **B.Sc**. / M.A. / M.Sc. : **B.Sc.**		
NAME OF SUBJECT : **Physics**		
SEM I / II / III / **IV** / V / VI : IV		
COURSE NUMBER (PAPER NUMBER) **VI**		
TITLE OF COURSE (NAME OF PAPER) **OPTICS**		
COURSE CONTENT	OBJECTIVES	OUTCOME
Cardinal points: 1.1 Lagrange's equation 1.2 Cardinal points of optical system 1.3 Graphical construction of image using cardinal points 1.4 Newton's formula 1.5 Relation between focal lengths for any optical system 1.6 Relation between lateral, axial and angular magnifications 1.7 Thick lens (introduction) 1.8 combination of two thin lenses	To study Cardinal points, Newton's formula, Relation between focal lengths for any optical system, Relation between lateral, axial and angular magnifications, Thick lens (introduction) combination of two thin lenses	Students studied Cardinal points, Newton's formula, Relation between focal lengths for any optical system, Relation between lateral, axial and angular magnifications, Thick lens (introduction) combination of two thin lenses
Interference of light: 2.1 Michelson's interferometer 2.2 Applications of Michelson's interferometer to measure i) wavelength of light ii) Difference in wavelengths and iii) Refractive index of thin film 2.3 Construction and working of Michelson's interferometer 2.4 Superiority of F.P. interferometer over Michelson's interferometer	To study Michelson's interferometer and Michelson's interferometer	Students studied Michelson's interferometer and Michelson's interferometer

Diffraction of light: 3.1 Fresnel's half period zones 3.2 Explanation of rectilinear propagation of light 3.3 Zone plate 3.4 Fresnel's diffraction at straight edge	To study Fresnel's half period zones, Explanation of rectilinear propagation of light, Zone plate,, Fresnel's diffraction at straight edge	Students studied Fresnel's half period zones, Explanation of rectilinear propagation of light, Zone plate,, Fresnel's diffraction at straight edge
Resolving power: 4.1 Geometrical and spectral resolution 4.2 Distinction between magnification and resolution 4.3 Rayleigh's criterion for the limit of resolution 4.4 Modified Rayleigh's criterion 4.5R.P. of plane diffraction grating 4.6 R.P. of prism	To study Resolving power, Geometrical and spectral resolution, Distinction between magnification and resolution, Rayleigh's criterion for the limit of resolution, Modified Rayleigh's criterion, R.P. of plane diffraction grating, R.P. of prism	Students studed Resolving power, Geometrical and spectral resolution, Distinction between magnification and resolution, Rayleigh's criterion for the limit of resolution, Modified Rayleigh's criterion, R.P. of plane diffraction grating,R.P. of prism
Polarization: 5.1 Double refraction 5.2 Huygen's explanation of double refraction through uni-axial crystals 5.3 Nicols prism 5.4 Phase retardation plates 5.5 Elliptically and circularly polarized light 5.6 Optical rotation 5.7 Laws of rotation of plane of polarization 5.8 Applications a) Polarimeter b) Liquid crystal Displays	To study Polarization**,** Double refraction Huygen's explanation of double refraction through uni-axial crystals, Nicols prism, Phase retardation plates, Elliptically and circularly polarized light, Optical rotation, Laws of rotation of plane of polarization, Applications	Students studied Polarization**,** Double refraction Huygen's explanation of double refraction through uni-axial crystals, Nicols prism, Phase retardation plates, Elliptically and circularly polarized light, Optical rotation, Laws of rotation of plane of polarization, Applications
Optical Fibers: 6.1 Structure and types of fibers 6.2 Numerical aperture (definition only) 6.3 Pulse dispersion in step index fiber 6.4 Fiber optic communication system (Qualitative treatment only) 6.5 Advantages of optical fiber	To study structure and types of fibers, Numerical aperture (definition only), Pulse dispersion in step index fiber, Fiber optic communication system Advantages of optical fiber	Students studied structure and types of fibers, Numerical aperture (definition only), Pulse dispersion in step index fiber, Fiber optic communication system Advantages of optical fiber

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Vidnyan mahavidyalaya, Sangola Dist Solapur

COURSE OUTCOME

Name of Department: Physics

B.A. / B.Sc. / M.A. / M.Sc.: **B.Sc.**		
NAME OF SUBJECT: **Physics**		
SEM I / II / III / IV / V / VI: **Sem-VI**		
COURSE NUMBER (PAPER NUMBER) : **XV**		
TITLE OF COURSE (NAME OF PAPER): **Atomic Physics, Molecular Physics and Quantum Mechanics**		
COURSE CONTENT	OBJECTIVES	OUTCOME
Atomic Spectra 1.1 Review of quantum numbers 1.2 Electronic configuration of alkali metals 1.3 Spectral notations 1.4 Alkali spectra 1.5 Doublet fine structure of alkali metals 1.6 Spectrum of Sodium 1.7 Selection rules 1.8 Intensity rules	To get knowledge of Spectral notations, Alkali spectra, Doublet fine structure of alkali metals, Spectrum of Sodium, Selection rules, Intensity rules	The students get knowledge of Spectral notations, Alkali spectra, Doublet fine structure of alkali metals, Spectrum of Sodium, Selection rules, Intensity rules
Effects of Magnetic and Electric fields on Atomic Spectra 2.1 Anomalous Zeeman effect and its explanation from vector atom model 2.2 Paschen Back effect 2.3 Paschen Back effect in principal series doublet 2.4 Selection rules for Paschen Back effect 2.5 Stark effect of hydrogen 2.6 Weak field Stark effect in hydrogen 2.7 Strong field Stark effect in hydrogen	To study Effects of Magnetic and Electric fields on Atomic Spectra from Anomalous Zeeman effect, Paschen Back effect and stark effect.	The students understand the Effects of Magnetic and Electric fields on Atomic Spectra from Anomalous Zeeman effect, Paschen Back effect and stark effect.
Molecular Spectra and Raman Effect 3.1 Molecular bond 3.2 Rotational energy levels and Rotational spectra 3.3 Vibrational energy levels and Vibrational spectra 3.4 Vibration-Rotation spectra 3.5 Electronic spectra of a diatomic molecule 3.6 Franck-Condon principle 3.7 Raman effect	To get knowledge of Molecular bond, Rotational spectra, Vibrational spectra, Vibration-Rotation spectra, Electronic spectra, Franck-Condon principle and Raman effect.	The students get knowledge of Molecular bond, Rotational spectra, Vibrational spectra, Vibration-Rotation spectra, Electronic spectra, Franck-Condon principle and Raman effect.

3.8 Characteristic properties of Raman lines 3.9 Classical theory of Raman effect		
Quantum Mechanics 4.1 Heisenberg's uncertainty principle (Statement) and its similarity with concept of matter waves 4.2 Physical significance of ψ 4.3 Time dependent and time independent Schrödinger wave equations 4.4 Eigen values and Eigen functions 4.5 Probability current density	To understand Heisenberg's uncertainty principle, Physical significance of ψ, to derive Time dependent and time independent Schrödinger wave equations, Eigen values and Eigen functions and Probability current density	The students understand Heisenberg's uncertainty principle, Physical significance of ψ, to derive Time dependent and time independent Schrödinger wave equations, Eigen values and Eigen functions and Probability current density
Application of Schrodinger's time independent wave equation 5.1 Particle in a Box (one and three dimensional cases), its Eigen values and Eigen functions. 5.2 Step Potential (Statement, boundary conditions, Schrodinger's equations in different regions and Discussion of results) 5.3 Potential Barrier (Statement, boundary conditions, Schrodinger's equations in different regions and Discussion of results) 5.4 Potential Well (Statement, boundary conditions, Schrodinger's equations in different regions and Discussion of results) 5.5 Linear Harmonics Oscillator – Eigen values and Eigen functions 5.6 Zero point energy	To study applications of Schrodinger's time independent wave equation to Particle in a Box, Step Potential, Potential Barrier, Potential Well, Harmonics Oscillator and Zero point energy.	To students can apply Schrodinger's time independent wave equation to Particle in a Box, Step Potential, Potential Barrier, Potential Well, Harmonics Oscillator and Zero point energy.
Operators 6.1 Operators in quantum mechanics 6.2 Expectation values and properties 6.3 Angular momentum operators 6.4 Commutation properties for components Lx, Ly , Lz 6.5 Commutation for L2 and Lz operators and their Eigen values 6.6 Schrodinger's equation for hydrogen atom 6.7 Separation of radial and angular parts	To get knowledge of Operators in quantum mechanics their types, commutation properties. Also Schrodinger's equation for hydrogen atom and Separation of radial and angular parts.	The students get knowledge of Operators in quantum mechanics their types, commutation properties. Also Schrodinger's equation for hydrogen atom and Separation of radial and angular parts.

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VIDNAN MAHAVIDYALAYA SANGOLA

COURSE OUTCOME

Name of the Department : PHYSICS

B.A/ B.Sc/ M.A/M.Sc :- B.Sc PART I		
NAME OF THE SUBJECT :- PHYSICS		
SEMISTER :- I		
COURSE NUMBER (PAPER NUMBER) :- II		
TITLE OF COURSE (NAME OF PAPER) :- OPTICS AND LASER		
COURSE CONTENT	**OBJECTIVES**	**OUTCOME**
Topic 1 – **Geometrical Optics and aberrations** Introduction, Fermat's principle, Deduction of laws of reflection and refraction by Fermat's principle, Chromatic and Spherical aberration, methods to minimize Chromatic and Spherical aberrations.	To understand Fermat's Principle and it's applications aberrations and it's types And methods to minimize aberrations	Students understand Fermat's Principle and it's applications aberrations and it's types And methods to minimize aberrations
Topic 2 – **Optical Instruments** Introduction, Types of eye-pieces, Gauss eye piece, Ramsden's eye-piece, Huygen's eye-piece, Construction, working and Application of Spectrometer and Optical bench.	To get knowledge of optical instruments like eye-pieces, and Construction, working and Application of Spectrometer and Optical bench.	Students get knowledge of optical instruments like eye-pieces, Spectrometer and Optical bench.
Topic 3 – **Interference** Introduction, Interference in parallel faced thin film (Reflected light only), wedge shaped film, Newton's rings and its applications.	To get knowledge of Interference in parallel faced thin film (Reflected light only), wedge shaped film, Newton's rings and its applications.	Students get knowledge of Interference in parallel faced thin film (Reflected light only), wedge shaped film, Newton's rings and its applications.

Topic 4 – Diffraction Introduction, Types of diffraction, Plane diffraction grating and its elementary theory, its application to determine wavelength, Comparison between prism and grating spectra	To get knowledge of Types of diffraction, Plane diffraction grating and its elementary theory, its application to determine wavelength, Comparison between prism and grating spectra	Students get knowledge of Types of diffraction, Plane diffraction grating and its elementary theory, its application to determine wavelength, Comparison between prism and grating spectra
Topic 5 – Laser Introduction, Spontaneous and Stimulated emission and absorption, Einstein's Coefficients, Population inversion, Optical Pumping, Cavity resonator, He-Ne and Ruby Laser, Properties and application.	To get knowledge of Laser Spontaneous and Stimulated emission and absorption, Einstein's Coefficients, Population inversion, Optical Pumping, Cavity resonator, He-Ne and Ruby Laser, Properties and application.	Students get knowledge of Laser Spontaneous and Stimulated emission and absorption, Einstein's Coefficients, Population inversion, Optical Pumping, Cavity resonator, He-Ne and Ruby Laser, Properties and application.

VIDNAN MAHAVIDYALAYA SANGOLA

COURSE OUTCOME

Name of the Department : PHYSICS

B.A/ B.Sc/ M.A/M.Sc :- B.Sc PART II		
NAME OF THE SUBJECT :- PHYSICS		
SEMISTER :- IV		
COURSE NUMBER (PAPER NUMBER) :- VIII		
TITLE OF COURSE (NAME OF PAPER) :- MODERN PHYSICS		
COURSE CONTENT	**OBJECTIVES**	**OUTCOME**
Theory of relativity: 1.1 Inertial frame of reference 1.2 Galilean transformation 1.3 Invariance of laws of mechanics under Galilean transformation 1.4 Ether hypothesis 1.5 Michelson-Morley experiment 1.6 Einstein's postulates of the special theory of relativity 1.7 Lorentz transformation 1.8 Variation of length with velocity 1.9 Variation of time with velocity 1.10 Velocity addition theorem 1.11 Variation of mass with velocity 1.12 Mass energy relation 1.13 Twin paradox	To study Theory of relativity: Inertial frame of reference Galilean transformation Invariance of laws of mechanics under Galilean transformation Ether hypothesis Michelson-Morley experiment Einstein's postulates of the special theory of relativity Lorentz transformation Variation of length with velocity Variation of time with velocity Velocity addition theorem Variation of mass with velocity Mass energy relation Twin paradox	Students studied Theory of relativity: Inertial frame of reference Galilean transformation Invariance of laws of mechanics under Galilean transformation Ether hypothesis Michelson-Morley experiment Einstein's postulates of the special theory of relativity Lorentz transformation Variation of length with velocity Variation of time with velocity Velocity addition theorem Variation of mass with velocity Mass energy relation Twin paradox
Matter waves: 2.1 De Broglie's hypothesis of matter waves 2.2 De Broglie's wavelength 2.3 Particle velocity, group velocity , phase velocity & their interrelationship 2.4 Properties of matter waves 2.5 Bohr's quantum condition on the basis of matter wave hypothesis 2.6 Heisenberg's uncertainty principle and its illustration	To study Matter waves: De Broglie's hypothesis of matter waves De Broglie's wavelength Particle velocity, group velocity , phase velocity & their interrelationship Properties of matter waves Bohr's quantum condition on the basis of matter wave hypothesis Heisenberg's uncertainty principle and its illustration	Students studied Matter waves: De Broglie's hypothesis of matter waves De Broglie's wavelength Particle velocity, group velocity , phase velocity & their interrelationship Properties of matter waves Bohr's quantum condition on the basis of matter wave hypothesis Heisenberg's uncertainty principle and its illustration

Vector Atom model 3.1 Space quantization 3.2 Spin hypothesis 3.3 Stern-Gerlache experiment 3.4 Quantum numbers associated with vector atom model 3.5 Pauli's exclusion principle 3.6 Spin orbit coupling 3.7 Hund's rule 3.8 Total angular momentum 3.9 L-S coupling 3.10 j-j coupling 3.11 Zeeman effect 3.12 Normal and anomalous Zeeman effect 3.13 Debye's explanation of normal Zeeman effect	To study Space quantization Spin hypothesis Stern-Gerlach experiment Quantum numbers associated with vector atom model Pauli's exclusion principle Spin orbit coupling Hund's rule Total angular momentum ,L-S coupling , j-j coupling Zeeman effect Normal and anomalous Zeeman effect Debye's explanation of normal Zeeman effect	Students studied Space quantization Spin hypothesis Stern-Gerlach experiment Quantum numbers associated with vector atom model Pauli's exclusion principle Spin orbit coupling Hund's rule Total angular momentum ,L-S coupling , j-j coupling Zeeman effect Normal and anomalous Zeeman effect Debye's explanation of normal Zeeman effect
Compton effect: 4.1 Compton Effect 4.2 Expression for change in wavelength for scattered photon 4.3 Experimental verification of Compton effect	To study Compton Effect Expression for change in wavelength for scattered photon Experimental verification of Compton effect	Students studied Compton Effect Expression for change in wavelength for scattered photon Experimental verification of Compton effect
Nuclear Energy sources: 5.1 Neutron induced nuclear reaction 5.2 Nuclear fission 5.3 Energy released in fission 5.4 Chain reaction (Atomic Bomb) 5.5 Nuclear reactor 5.6 Atomic energy in India	To study Neutron induced nuclear reaction Nuclear fission Energy released in fission Chain reaction (Atomic Bomb) Nuclear reactor Atomic energy in India	Students studied Neutron induced nuclear reaction Nuclear fission Energy released in fission Chain reaction (Atomic Bomb) Nuclear reactor Atomic energy in India

VIDNAN MAHAVIDYALAYA SANGOLA

COURSE OUTCOME

Name of the Department : PHYSICS

B.A/ B.Sc/ M.A/M.Sc :- B.Sc PART III		
NAME OF THE SUBJECT :- PHYSICS		
SEMISTER :- V		
COURSE NUMBER (PAPER NUMBER) :- XII		
TITLE OF COURSE (NAME OF PAPER) :- NUCLEAR PHYSICS		
COURSE CONTENT	OBJECTIVES	OUTCOME
Nuclear structure and properties 1.1 Composition of nucleus 1.2 Nuclear radius 1.3 Nuclear spin 1.4 Nuclear magnetic moment 1.5 Electric quodrupole moment 1.6 Mass defect 1.7 Binding energy 1.8 Packing fraction 1.9 Liquid drop model of nucleus 1.10 Semi-empirical mass formula	To study Composition of nucleus Nuclear radius Nuclear spin Nuclear magnetic moment Electric quodrupole moment Mass defect ,Binding energy Packing fraction,Liquid drop model of nucleus Semi-empirical mass formula	Students studied Composition of nucleus Nuclear radius Nuclear spin Nuclear magnetic moment Electric quodrupole moment Mass defect ,Binding energy Packing fraction,Liquid drop model of nucleus Semi-empirical mass formula
Nuclear reactions 2.1 General scheme of nuclear reactions 2.2 Q value of nuclear reactions 2.3 Threshold energy 2.4 Cross section of nuclear reactions (qualitative) 2.5 Stripping reactions 2.6 Pick-up reactions	To study General scheme of nuclear reactions Q value of nuclear reactions Threshold energy Cross section of nuclear reactions (qualitative) Stripping reactions Pick-up reactions	Students studied General scheme of nuclear reactions Q value of nuclear reactions Threshold energy Cross section of nuclear reactions (qualitative) Stripping reactions Pick-up reactions
Particle Accelerators: 3.1 Need of accelerator 3.2 Cyclotron 3.3 Limitations of cyclotron 3.4 Phase stable orbit 3.5Betatron	To study Need of accelerator Cyclotron Limitations of cyclotron Phase stable orbit Betatron	Students studied Need of accelerator Cyclotron Limitations of cyclotron Phase stable orbit Betatron

Nuclear radiation detectors 4.1 Classification of detectors 4.2 Geiger Muller counter i. Construction and working ii. ii. Dead time, recovery time and resolving time iii. Self quenching mechanism 4.3 Scintillation counter 4.4 Wilson's Cloud chamber	To study Classification of detectors ,Geiger Muller counter Scintillation counter Cloud chamber	Students studied Classification of detectors ,Geiger Muller counter Scintillation counter Cloud chamber
Nuclear Energy levels 5.1 Alpha decay- α disintegration energy 5.2 α particle spectra 5.3 Nuclear energy levels 5.4 Beta decay –Experimental study of β decay 5 .5 Continuous β ray spectrum 5.6 Pauli's neutrino hypothesis 5.7 Nuclear energy levels from β decay	To study Alpha decay- α disintegration energy α particle spectra Nuclear energy levels Beta decay –Experimental study of β decay Continuous β ray spectrum Pauli's neutrino hypothesis Nuclear energy levels from β decay	Students studied Alpha decay- α disintegration energy α particle spectra Nuclear energy levels Beta decay –Experimental study of β decay Continuous β ray spectrum Pauli's neutrino hypothesis Nuclear energy levels from β decay
Elementary Particles 6.1 Types of interactions 6.2 Classification of elementary particles 6.3 Properties of particles 6.4 Introduction to Quarks 6.5 Different types of quarks	To study Types of interactions Classification of elementary particles Properties of particles Different types of quarks	Students studied Types of interactions Classification of elementary particles Properties of particles Different types of quarks

VIDNAN MAHAVIDYALAYA SANGOLA

COURSE OUTCOME

Name of the Department : PHYSICS

B.A/ B.Sc/ M.A/M.Sc :- B.Sc PART III		
NAME OF THE SUBJECT :- PHYSICS		
SEMISTER :- VI		
COURSE NUMBER (PAPER NUMBER) :- XIV		
TITLE OF COURSE (NAME OF PAPER) :- MATERIAL SCIENCE		
COURSE CONTENT	OBJECTIVES	OUTCOME
Materials and their properties: 1.1 Classification of materials 1.2 Organic, inorganic and biological materials 1.3 Properties of materials 1.3.1 Mechanical properties 1.3.2 Thermal properties 1.3.3 Optical properties 1.3.4 Electrical properties 1.3.5 Magnetic properties	To study Classification of materials Organic, inorganic and biological materials Properties of materials Mechanical properties Thermal properties Optical properties Electrical properties Magnetic properties	Students can studied and obtain knowledge of study Classification of materials Organic, inorganic and biological materials Properties of materials Mechanical properties Thermal properties Optical properties Electrical properties Magnetic properties
Polymer materials 2.1Polymers 2.2Polymerization mechanism 2.2.1 Additional polymerization 2.2.2 Condensation polymerization 2.2.3 Homo-polymer 2.2.4 Co-polymer 2.3 Degree of polymerization 2.4 Defects in the polymers 2.5 Mechanical properties of polymers, deformation, reinforced polymers 2.6 Applications of polymers.	To study Polymers Polymerization mechanism Additional polymerization Condensation polymerization Homo-polymer , Co-polymer Degree of polymerization Defects in the polymers Mechanical properties of polymers, deformation, reinforced polymers Applications of polymers.	Students can studied and obtain knowledge of Polymers Polymerization mechanism Additional polymerization Condensation polymerization Homo-polymer , Co-polymer Degree of polymerization Defects in the polymers Mechanical properties of polymers, deformation, reinforced polymers Applications of polymers
Ceramic Materials: 3.1Classification of ceramic materials 3.2Structure of ceramics 3.3Ceramic possessing 3.4Properties of Ceramics 3.5Applications of Ceramics	To study Classification of ceramic materials Structure of ceramics Ceramic possessing Properties of Ceramics Applications of Ceramics	Students can studied and obtain knowledge of Classification of ceramic materials Structure of ceramics Ceramic possessing Properties of Ceramics Applications of Ceramics

Composite Materials 4.1Fabrication of composites 4.2Mechanical properties of composites 4.3Particle-Reinforced Composites 4.4Fiber-Reinforced composites 4.5Applications of composites	To study Fabrication of composites ,Mechanical properties of composites ,Particle-Reinforced Composites ,Fiber-Reinforced composites ,Applications of composites	Students can studied and obtain knowledge of Fabrication of composites ,Mechanical properties of composites ,Particle-Reinforced Composites ,Fiber-Reinforced composites ,Applications of composites
Biomaterials: 6.1Bio-mechanism 6.2Classification of biomaterials 6.3Processing of biomaterials 6.4Properties of biomaterials 6.5 Applications of biomaterials	To study Bio-mechanism Classification of biomaterials Processing of biomaterials Properties of biomaterials Applications of biomaterials	Students can studied and obtain knowledge of Bio-mechanism Classification of biomaterials Processing of biomaterials Properties of biomaterials Applications of biomaterials
Nanomaterials: 6.1 Introduction to nano-sized materials and structures 6.2 Brief history of nanomaterials and challenges in nanotechnology 6.3 Significance of nano-size and properties 6.4 Classification of nano structured materials 6.5 Methods of synthesis of nanomaterials 6.5.1 Bottom-up and Top-down approaches 6.5.2 Physical methods: High energy ball milling, Physical vapors deposition, sputter deposition, Ultrasonic spray pyrolysis etc. 6.5.3 Chemical methods: colloidal method, co-precipitation and sol-gel method 6.5.4 Hybrid method: Electrochemical and chemical vapors deposition.	To study Introduction to nano-sized materials and structures Brief history of nanomaterials and challenges in nanotechnology Significance of nano-size and properties Classification of nano structured materials Methods of synthesis of nanomaterials Bottom-up and Top-down approaches Physical methods: High energy ball milling, Physical vapors deposition, sputter deposition, Ultrasonic spray pyrolysis etc. Chemical methods: colloidal method, co-precipitation and sol-gel method ,Hybrid method: Electrochemical and chemical vapors deposition.	Students can studied and obtain knowledge of Introduction to nano-sized materials and structures Brief history of nanomaterials and challenges in nanotechnology Significance of nano-size and properties Classification of nano structured materials Methods of synthesis of nanomaterials Bottom-up and Top-down approaches Physical methods: High energy ball milling, Physical vapors deposition, sputter deposition, Ultrasonic spray pyrolysis etc. Chemical methods: colloidal method, co-precipitation and sol-gel method ,Hybrid method: Electrochemical and chemical vapors deposition.

Vidnyan Mahavidyalaya Sangola

COURSE OUTCOME

Name of Department: **Physics**

B.A. / B.Sc. / M.A. / M.Sc.: **B.Sc.**		
NAME OF SUBJECT: **Physics**		
SEM I / II / III / IV / V / VI: **Sem-III**		
COURSE NUMBER (PAPER NUMBER) : **V**		
TITLE OF COURSE (NAME OF PAPER): **General Physics and Sound**		
Course Content	**Objectives**	**Outcome**
Topic Name: Vectors Scalar and vector triple product Scalar and vector fields Del operator Gradient of a scalar Divergence of a vector, curl of vector and their physical significance	To get knowledge of Scalar and vector triple product, Scalar and vector fields, Del operator, Gradient of a scalar, Divergence of a vector, curl of vector and their physical significance	The students get knowledge of Scalar and vector triple product, Scalar and vector fields, Del operator, Gradientof a scalar, Divergence of a vector, curl of vector and their physical significance
Topic Name: Precessional Motion Precession Nutation Gyroscope Lanchester's rules Gyrostatic pendulum Motion of rolling disc Gyroscopic applications in brief	To understand Precession, Nutation, Lanchester's rules, Gyroscope and its applications	The students understand understand Precession, Nutation, Lanchester's rules,Gyroscope and its applications
Topic Name: Elasticity Bending of a beam Bending moment Cantilever Centrally loaded beam Flat spiral spring expression for Y and η	To get knowledge of elasticity, Bending moment, Cantilever and expression for Y and η of Flat spiral spring.	The students get knowledgeof elasticity, Bending moment, Cantilever and expression for Y and η of Flat spiral spring.
Topic Name: Viscosity Viscosity of liquid by rotating cylinder method Searle's viscometer Ostwald's viscometer	To get knowledge of Viscosity, Searle's viscometer and Ostwald's viscometer.	The students get knowledgeof Viscosity, Searle's viscometer and Ostwald's viscometer.
Topic Name: Sound Transducer Pressure microphone Moving coil Loudspeaker Acoustics and its affecting factors Reverberation time Optimum reverberation time Requirements of good acoustics Sabine's formula	To get knowledge of Transducer, Acoustics and its affecting factors, Reverberation time, Requirements of good acoustics, Sabine's formula and production,	The students get knowledge of Transducer, Acoustics andits affecting factors, Reverberation time, Requirements of good acoustics, Sabine's formula and production,

Signature of HOD

VIDNYAN MAHAVIDYALAYA SANGOLA

BCA

Course Objectives and Course Outcome

Course Objectives

- To study database programming using Java.
- To study web development concept using Servlet and JSP
- To learn socket programming concept using Networking.
- To learn Multithreaded Programming.
- To learn GUI programming using different types of python modules.
- To study database programming using MySQL.
- To study Web server programming using CGI and XML.
- To study Statistical Data analysis and Generating Reports using pandas and matplotlib modules.

- To understand the state management techniques and its types.
- To learn Ajax client and server site technology.
- To know the web services
- To learn the different data transactions using ADO.NET

- Reduce the amount of code you write to build rich user interface applications.
- Increase there liability and maintain ability of UI by using data binding.
- Retrieve data from back-end server , manipulate it and display it with ease.
- Modularize your code with the custom services and directives.
- Providing two way binding of data.

- Create Single Page Applications (SPA).
- To learn awk, grap, perl scripts.
- To understand basic of ASP.Net
- To understand different server controls used in ASP.Net for web application.
- To understand master page concept
- To learn how to maintain state and security in web application.
- To understand database connectivity with web application.
- To understand database connectivity using JDBC.
- To learn how to develop web applications using servlet.
- How to develop web applications using JSP.

Course Outcome

- Understand major concepts involved in design of WAN , LAN and wireless networks.
- Know the basics of network configuration and maintenance.
- Know the fundamentals of network security issues.
- Understand the basic concepts and application inTheory of Computation.
- Apply this basic knowledge of Theory of Computation in the computer field to solve computational problems and in the field of compiler also.
- To understand .Net Framework.
- To learn computer programming using the Visual programming language with object-oriented Programming principles.

- To understand the concepts of Exception handling mechanism and Input output programming paradigms.
- Emphasis is on event-driven programming methods, including creating and manipulating objects, classes, and using object-oriented tools such as theclass debugger.
- Design , Create, Build, and Debug Python applications.
- Develop an understanding of information assurance as practiced in computer operating systems, distributed systems ,networks and representative applications.
- Gain familiarity with prevalent network and distributed system attacks ,defenses against them, and forensics to investigate the after math.
- Develop a basic understanding of cryptography, how it has evolved, and some key encryption techniques used today.
- Develop an understanding of security policies(such as authentication ,integrity and confidentiality),as well as protocols to implement such policies in the form of message exchanges.

Punyashlok Ahilyadevi Holkar Solapur University, Solapur

पुण्यश्लोक अहिल्यादेवी होळकर
सोलापूर विद्यापीठ
।। विद्यया संपन्नता ।।

NAAC Accredited-2015
'B' Grade (CGPA 2.62)

Name of the Faculty: Science & Technology

CHOICE BASED CREDIT SYSTEM

Syllabus: Computer Science

Name of the Course: B. Sc. Part- III (Sem. V & VI)

(Syllabus to be implemented from w.e.f. June 2021)

PUNYASHLOK AHILYADEVI HOLKAR SOLAPUR UNIVERSITY, SOLAPUR

Syllabus for B.Sc. Part – III (CBCS Semester Pattern)

Computer Science (W.E.F. June 2021)

Name and Type of the Paper		Title of Paper	Hrs/Wee		Total Marks per paper	UA	CA	Credits
Type	**Name**		**L**	**P**				
	B.Sc.- III Semester - V							
English (Business English)	English (Business English)		4	-	50	40	10	2.0
DSE 1 A	Paper IX	Visual Programming Using C#	4	-	100	80	20	4.0
DSE 2 A	Paper X	Core Java	4	-	100	80	20	4.0
DSE 3 A	Paper XI	Operating System	4	-	100	80	20	4.0
DSE 4 A	Paper XII	Python	4	-	100	80	20	4.0
SEC 3	Paper XIII	Linux	4	-	100	80	20	4.0
	Total (Theory)		**24**	**-**	**550**	**440**	**110**	**22.0**
	B.Sc.- III Semester - VI							
English (Business English)	English (Business English)		4	-	50	40	10	2.0
DSE 1 B	Paper XIV	Web Technology	4	-	100	80	20	4.0
DSE 2 B	Paper XV	Advanced Java	4	-	100	80	20	4.0
DSE 3 B	Paper XVI	Data Communication and Networking	4	-	100	80	20	4.0
DSE 4 B	Paper XVII	Advance Python	4	-	100	80	20	4.0
SEC 4	Paper XVIII	Software Testing	4	-	100	80	20	4.0
	Total (Theory)		**24**	**-**	**550**	**440**	**110**	**22.0**
	Practical							
DSE 1A &1B	Practical IV	Practical On C# and Asp.Net	-	5	100	80	20	4.0
DSE 2A &2B	Practical V	Practical on Core Java and Advanced Java	-	5	100	80	20	4.0
DSE 4A &4B	Practical VI	Practical on Python and Advance Python	-	5	100	80	20	4.0
	Practical VII	Project	-	5	100	80	20	4.0
	Total (Practical)		**-**	**20**	**400**	**320**	**80**	**16.0**
Grand Total			**48**	**20**	**1500**	**1200**	**300**	**60.0**

Course Objectives: -

- implement, test, debug, and document programs that use basic data types and computation, simple I/O, conditional and control structures, string handling and functions.
- To understand the importance of Classes & objects along with constructors, Arrays and Vectors.
- Discuss the principles of inheritance, interface and packages and demonstrate though problem analysis assignments how they relate to the design of methods, abstract classes and interfaces and packages.
- To understand importance of Multi-threading & different exception handling mechanisms.
- To understand how to design GUI base windows application using C#.
- To understand how to design, implement, test, debug, and document programs that use basic data types and computation, simple I/O, conditional and control structures, string handling and functions.
- To understand the importance of Classes & objects along with constructors, Arrays and Vectors.
- Discuss the principles of inheritance, interface and packages and demonstrate though problem analysis assignments how they relate to the design of methods, abstract classes and interfaces and packages.
- To understand importance of Multi-threading & different exception handling mechanisms.
- To understand how to develop GUI applications using Swing technology

- Basics of Python programming
- Decision Making and Functions in Python
- Object Oriented Programming using Python
- Files Handling in Python
- Regular expression for pattern matching

- To understand the main components of an OS & their functions.
- To study the process management and scheduling.
- To understand the concepts and implementation Memory management policies and virtual memory.
- To understand the working of an OS as a resource manager, file system manager, process manager, memory manager and I/O manager and methods used to implement the different parts of OS

- Basics of Python programming
- Decision Making and Functions in Python
- Object Oriented Programming using Python
- Files Handling in Python

- Regular expression for pattern matching

- To introduce Basic Linux general purpose Commands
- To learn different editor
- To learn shell script concepts.
- To learn file management and permission advance commands.
- To learn awk, grap, perl scripts.
- To understand basic of ASP.Net
- To understand different server controls used in ASP.Net for web application.
- To understand master page concept
- To learn how to maintain state and security in web application.
- To understand database connectivity with web application.
- To understand database connectivity using JDBC.
- To learn how to develop web applications using servlet.
- How to develop web applications using JSP.
- To Understand concept of hibernate and struts.
- Study the basic taxonomy and terminology of the computer networking and enumerate the layers of OSI model and TCP/IP model.
- Acquire knowledge of Application layer and Presentation layer paradigms and protocols.
- Study Session layer design issues, Transport layer services, and protocols.
- Study data link layer concepts, design issues, and protocols.
- Read the fundamentals and basics of Physical layer, and will apply them in real time applications.
- Windows application development in python using Tkinter.
- MySql open source database.
- Web application development using Django framework.
- Concept of XML in python and network programming in Python
- Basic software debugging methods.
- White box testing methods and techniques.
- Black Box testing methods and techniques.
- Designing test plans.
- Different testing tools (familiar with open source tools)

Course Outcomes:-

- Implement Object Oriented programming concept using basic syntaxes of control Structures, strings and function for developing skills of logic building activity using Java.
- Identify classes, objects, members of a class and the relationships among them needed for a finding the solution to specific problem in Java.
- Demonstrates how to achieve reusability using inheritance, interfaces and packages and describes faster application development can be achieved.
- Demonstrate understanding and use of different exception handling mechanisms and concept of multithreading for robust faster and efficient application development.
- Able to develop windows applications using C#.
- Implement Object Oriented programming concept using basic syntaxes of control Structures, strings and function for developing skills of logic building activity using Java.
- Identify classes, objects, members of a class and the relationships among them needed for a finding the solution to specific problem in Java.
- Demonstrates how to achieve reusability using inheritance, interfaces and packages and describes faster application development can be achieved.
- Demonstrate understanding and use of different exception handling mechanisms and concept of multithreading for robust faster and efficient application development.
- Able to develop GUI applications using Swing technology.

- Describe the important computer system resources and the role of operating system in their management policies and algorithms.
- Understand the process management policies and scheduling of processes by CPU
- Evaluate the requirement for process synchronization and coordination handled by operating system
- Describe and analyze the memory management and its allocation policies.
- Identify use and evaluate the storage management policies with respect to different storage management technologies.

- Describe the Numbers, Math functions, Strings, List, Tuples and Dictionaries in Python
- Express different Decision Making statements and Functions
- Interpret Object oriented programming in Python
- Understand and summarize different File handling operations
- Understand Regular expression and implement for pattern matching.
- Identify the basic Linux general purpose commands.
- Apply and change the ownership and file permissions using advance Linux commands.
- Use the awk, grep, perl scripts.

- Implement shell scripts.
- Apply basic of administrative task.
- Understand basic of ASP.Net and web application.
- Use different ASP.Net web server control to develop web application.
- Use master page for interactive design
- Maintain state and security in web application.
- Connect any database with web application.
- Use database connectivity using JDBC.
- Develop web applications using servlet.
- Develop web applications using JSP.
- To use the concept of hibernate and struts.
- Describe the functions of each layer in OSI and TCP/IP model.
- Explain the functions of Application layer and Presentation layer paradigms and Protocols.
- Describe the Session layer and Transport layer.
- Describe the functions of data link layer and explain the protocols.
- Explain the types of transmission media with real time applications
- Develop windows application in python using Tkinter library.
- Basic and advance concept of MySql open source database.
- Develop web application and web project using Django framework.
- Understand Concept of XML in python and network programming in Python
- Investigate the reason for bugs and analyze the principles in software testing to prevent and remove bugs.
- Implement various test processes for quality improvement
- Design test planning.
- Manage the test process
- Use practical knowledge of a variety of ways to test software and an understanding of some of the tradeoffs between testing techniques.

Punyashlok Ahilyadevi Holkar Solapur University, Solapur

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NAAC Accredited-2015
'B' Grade (CGPA 2.62)

Name of the Faculty: Science & Technology

CHOICE BASED CREDIT SYSTEM

Syllabus: Entire Computer Science

Name of the Course: B. Sc. (E.C.S.) Part- III (Sem. V & VI)

(Syllabus to be implemented from w.e.f. June 2021)

Course Objectives:

- To understand the structure of Data Communications System and its components.
- Be familiarize with different network terminologies.+
- Course should provide a formal connection between algorithmic problem solving and the theory of languages and automata and develop them into a mathematical (and less magical) view towards algorithmic design and in general computation itself.
- The course should in addition clarify the practical view towards the applications of the seide as in the engineering part of CS.

- To study database programming using Java.
- To study web development concept using Servlet and JSP
- To learn socket programming concept using Networking.
- To learn Multithreaded Programming.
- To learn GUI programming using different types of python modules.
- To study database programming using MySQL.
- To study Web server programming using CGI and XML.
- To study Statistical Data analysis and Generating Reports using pandas and matplotlib modules.

- To learn cryptographic tools.
- To learn security issues regarding user Authentication.
- To understand the various access control mechanisms.
- To learn various types of malicious softwares and Denial-of-Serviceattacks.
    - To learn the process of translating a modern high-level language to executable code.
    - To learn an understanding of the fundamental principles in compiler design and to provide the skills needed for building compilers for various situations that one may encounter in a career in Computer Science.
    - To develop an awareness of the function and complexity of modern compilers.
    - To apply the code generation algorithms to get the machine code for the optimized code.
    - To represent the target code in anyone of the code formats
    - To understand the machine dependent code
- To draw the flow graph for the intermediate codes
- To understand the Asp.net architecture.
- To learn the various web server controls and validation controls.
- To know the concept of master page,themes and site navigation.

- To understand the state management techniques and its types.
- To learn Ajax client and server site technology.
- To know the web services
- To learn the different data transactions using ADO.NET

- Reduce the amount of code you write to build rich user interface applications.
- Increase there liability and maintain ability of UI by using data binding.
- Retrieve data from back-end server , manipulate it and display it with ease.
- Modularize your code with the custom services and directives.
- Providing two way binding of data.
- Create Single Page Applications (SPA).
- To understand Android plat form
- To learn about mobile devices types and different modern mobile operating systems.
- To learn activity creation and Android User Interface designing.
- To learn basic sofIntent,Broadcast and Internet services.
- To learn about different wire less mobile data transmission.
- To understand and learn how to integrate basic phone features , multimedia, camera and location based services in Android Application.
- To learn about different systems for mobile application development , deployment and distribution in Mobile market place(Android, IOS).
- To understand and carry out functional test strategies for mobile applications.

Course Outcomes: Upon successful completion of this course,studentswill beable to-

- Familiarize with contemporary issues in network technologies.
- Know the layered model approach explained in OSI and TCP/IP network models
- Identify different types of network devices and their functions within a network.
- Know the Basic routing mechanisms, IP addressing scheme andinternet working concepts.
- Familiarizewith IPand TCP Internetprotocols.
- Understand major concepts involved in design of WAN , LAN and wireless networks.
- Know the basics of network configuration and maintenance.
- Know the fundamentals of network security issues.
- Understand the basic concepts and application inTheory of Computation.
- Apply this basic knowledge of Theory of Computation in the computer field tosolve computational problems and in the field of compiler also.
- To understand .Net Framework.
- To learn computer programming using the Visual programming language with object-oriented Programming principles.
- To understand the concepts of Exception handling mechanism and Input output programming paradigms.
- Emphasis is on event-driven programming methods, including creating and manipulating objects, classes, and using object-oriented tools such as theclass debugger.
- Design, create , build ,and debug Visual programming applications.
- Explore Visual Programming Integrated Development Environment(IDE).
- Implement syntax rules in Visual programming.
- Explain variables and data types used in program development.
- Write and apply decision structures for determining different operations.
- Write and apply loop structures to perform repetitive tasks.
- Write and apply procedures, sub-procedures, and functions to create manageable code.
- Design, create , build, and debug Java applications.
- Explore Integrated Development Environment(IDE).

- Design , Create, Build, and Debug Python applications.
- Develop an understanding of information assurance as practiced in computer operating systems, distributed systems ,networks and representative applications.
- Gain familiarity with prevalent network and distributed system attacks ,defenses against them, and forensics to investigate the after math.
- Develop a basic understanding of cryptography, how it has evolved, and some key encryption techniques used today.
- Develop an understanding of security policies(such as authentication ,integrity and confidentiality),as well as protocols to implement such policies in the form of message exchanges.
- To gives you with both theoretical and practical knowledge that is crucial in order to implement a programming language.
- It gives you a new level of understanding of a language in order to make better useofthelanguage(optimization is just one example).