



'Sangola Taluka Shetkari Shikshan Prasarak Mandal Sangola's

DR. GANPATRAO DESHMUKH MAHAVIDYALAYA SANGOLA

(Arts & Science, E.C.S. & B.C.A.)

Tal. Sangola Dist. Solapur Pin. 413 307 (Maharashtra)

(Affiliated to P.A. H. Solapur University)

Off. (02187) 220508

Mob. No. 9850792244

Email : vidnyanms@yahoo.co.in

Website : www.vmssangola.org

Principal : **Dr. S.M. Mulani**

M.A.Ph.D. (Geography)

(Third Cycle Accredited by NAAC
with 'B' Grade (CGPA of 2.24)



Ref. No.

Date : / / 20



PROJECT CERTIFICATE/PROJECT REPORTS-2022-23

Name list and certificate of students participating in field project, research project, project under study tour, project under internship entrepreneurship in different disciplines in the college during the academic year 2022-23 is attached.

Dr. S.S. Dhasade
Coordinator, IQAC

Dr. Ganpatrao Deshmukh Mahavidyalaya,
Sangola Tal. Sangola Dist. Solapur

Principal

Dr. Ganpatrao Deshmukh Mahavidyalaya
Sangola Tal. Sangola Dist. Solapur



1.3.3 - Number of students undertaking project work/field work/ internships-2022-23

Documents

Botany

- 1) Project Reports/Tour reports
- 2) Certificates of students
- 3) Syllabus of Botany in which field project, experiential learning is included

https://vmssangola.org/naac202122/Aug/2023_24_1.3.2.pdf

physics

- 1) Project Reports
- 2) Certificates of students
- 3) Syllabus of physics in which field project, experiential learning is included

https://vmssangola.org/naac202122/Aug/2023_24_1.3.2-1.pdf

Zoology

- 1) Certificates of students
- 2) Syllabus of Zoology in which field project, experiential learning is included

[https://vmssangola.org/naac202122/Aug/2023 24 1.3.2-2.pdf](https://vmssangola.org/naac202122/Aug/2023%2024%201.3.2-2.pdf)

Chemistry

- 1) Project Reports
- 2) Syllabus of chemistry in which field project, experiential learning is included

[https://vmssangola.org/naac202122/Aug/2023 24 1.3.2-3.pdf](https://vmssangola.org/naac202122/Aug/2023%2024%201.3.2-3.pdf)

Geography

- 1) Project Reports/Tour reports
- 2) Certificates of students
- 3) Syllabus of Geography in which field project, experiential learning is included

[https://vmssangola.org/naac202122/Aug/2023 24 1.3.2-4.pdf](https://vmssangola.org/naac202122/Aug/2023%2024%201.3.2-4.pdf)



Mridula
मृदुला बायोटेक अॅण्ड रिसर्च सेंटर

उपलब्ध सुविधा :

- माती तपासणी • सूत्रकृमी तपासणी
- शेतीचे पाणी • पान-देढ
- पिण्याचे पाणी • सेंद्रीय खते
- मुख्य अन्नद्रव्ये • सूक्ष्म अन्नद्रव्ये



मृदुला लॅबोरेटरीज्

स्थायी व फिरती मृदचाचणी प्रयोगशाळा

लॅब : शेतीवाडी, नवीन वसाहत, शिवाजीनगर, सांगोला ☎ 9890168213, 9890164480

ऑफिस : महाराष्ट्र शॉपिंग सेंटर, गाळा नं. ७, नेहरू चौक, सांगोला ☎ 9404279913

Date: August 2, 2023

To Whomever it may concern

The 56 students of B.Sc. III year chemistry of Vidnyan Mahavidyalay Sangola have visited the Mridula laboratory during 01/02/2023 to 29/04/2023 for internship of the course water and soil analysis. In this tenure they have learned how to analyze the different parameters of water and soil samples using the instrumentation available in our laboratory. They have successfully learned the procedures to analyse the different water and soil parameters. They have also discussed about the latest research regarding the same. This program was held under the MOU between

1) Vidnyan Mahavidyalay Sangola

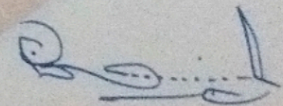
And

2) Mridula Laboratory Sangola

The internship was successfully conducted during 01/02/2023 to 29/04/2023.

LAB-INCHARGE

P.S. : This report should not be used for court affair.



TECHNICAL ADVISOR

Prof. Dr. Ashok Shinde

M.Sc. (Agri) Hort. P.hd



PROJECT REPORT

ON

CAKE SHOP MANAGEMENT SYSTEM

Submitted to

PUNYASHOLK AHILYADEVI HOLKAR SOLAPUR

UNIVERSITY, SOLAPUR

IN FULFILMENT FOR THE DEGREE OF

BCA-III (Computer Science) By

Miss. Navale Kajal Pandurang.

And

Mr. Bhandage Amar Aaba.

UNDER THE GUIDANCE OF

Mr. Sargar.B.R

Through

VIDNYAN MAHAVIDYALAYA, SANGOLA.

Year - 2022-2023

**SANGOLA TALUKA SHETKARI
SHIKASHAN PRASARAK MANDAL'S
VIDNYAN MAHAVIDYALAYA SANGOLA**

CERTIFICATE

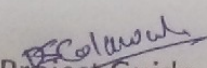
THIS IS CERTIFY THAT

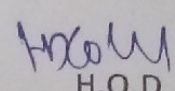
Miss. Navale Kajal Pandurang.

And

Mr. Bhandage Amar Aaba.

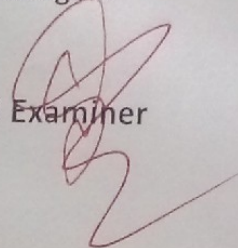
Has been completed the project that title is the **Cake Shop Management System** Satisfactory impartial fulfilment of BCA-III Course of Punyashlok Ahilyadevi Holkar Solapur University, Solapur for the academic Year 2022-2023.


Project Guide


H.O.D
Dept. Of Computer Science

Place: - Sangola

Date: -

External Examiner


PROJECT REPORT

ON

CAKE SHOP MANAGEMENT SYSTEM

Submitted to

PUNYASHOLK AHILYADEVI HOLKAR SOLAPUR

UNIVERSITY, SOLAPUR

IN FULFILMENT FOR THE DEGREE OF

BCA-III (Computer Science)

Miss. Navale Kajal Pandurang

And

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UNDER THE GUIDANCE OF

Mr. Sargar.B.R

Through:

VIDNYAN MAHAVIDYALAYA, SANGOLA.

Year - 2022-2023

PROJECT REPORT

ON

CAKE SHOP MANAGEMENT SYSTEM

Submitted to

PUNYASHOLK AHILYADEVI HOLKAR SOLAPUR

UNIVERSITY, SOLAPUR

IN FULFILMENT FOR THE DEGREE OF

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Miss. Navale Kajal Pandurang.

And

Mr. Bhandage Amar Aaba.

UNDER THE GUIDANCE OF

Mr. Sargar.B.R

Through

VIDNYAN MAHAVIDYALAYA, SANGOLA.

Year - 2022-2023

**SANGOLA TALUKA SHETKARI
SHIKASHAN PRASARAK MANDAL'S
VIDNYAN MAHAVIDYALAYA SANGOLA**

CERTIFICATE

THIS IS CERTIFY THAT

Miss. Navale Kajal Pandurang.

And

Mr. Bhandage Amar Aaba.

Has been completed the project that title is the **Cake Shop Management System** Satisfactory impartial fulfilment of **BCA-III** Course of **Punyashlok Ahilyadevi Holkar Solapur University**, Solapur for the academic Year **2022- 2023**.

Project Guide
Project Guide

H.O.D.
H.O.D
Dept. Of Computer Science

Place: - Sangola

Date: -

External Examiner

Project Report
ON
"PAINT APPLICATION"

Submitted to
Punyashlok Ahilyadevi Holkar Solapur University



In fulfillment for the Post Graduation of
BSC(Entire Computer Science)- III
BY

Miss.Rutuja Kakekar And
Miss.Avantika Dhandore

Under the guidance of
Miss.Kasbe.S.V

Through

Vindyan Mahavidyalya Sangola.

2022-2023

S.T.U.S.Mandale
Vindyan Mahavidyalya Sangola

Project Report
ON
"PAINT APPLICATION"

Submitted to
Punyashlok Ahilyadevi Holkar Solapur University



In fulfillment for the Post Graduation of

BSC(Entire Computer Science)- III

BY

Miss.Rutuja Kakekar And

Miss.Avantika Dhandore

Under the guidance of

Miss.Kasbe.S.V

Through

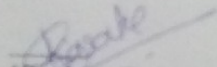
Vindyan Mahavidyalya Sangola.

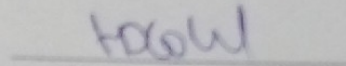
2022-2023

**S.T.U.S.Mandals .
Vindyan Mahavidyalya Sangola**

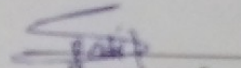
CERTIFICATE

*This is to certify that Miss.Rutuja Kakekar And
Miss.Avantika Dhandore Has successfully completing the project
titled "PAINT APPLICATION"
in satisfactory manner as partial fulfillment for the course of
BSC(Entire Computer Science)- III for the session 2022-2023 of
the University of Solapur.*


[Project Guide]


[Head of Department]

Examiner 1


Examiner 2

ACKNOWLEDGEMENT

*We sincerely thanks to all whose blessing and wishes have
enabled us to complete the task of project development.*

PROJECT REPORT

ON

HOSPITAL MANAGEMENT SYSTEM

Submitted to

PUNYASHLOK AHILYADEVI HOLKAR SOLAPUR

UNIVERSITY, SOLAPUR

IN FULFILMENT FOR THE DEGREE OF

BCS-III (Computer Science) By

Miss: - Jyoti Baban Babar.

Miss: - Pratiksha Vitthal Bansode.

UNDER THE GUIDANCE OF

Miss: - Kasabe S.V

Through

VIDNYAN MAHAVIDYALAYA, SANGOLA.

Year - 2022-2023

PROJECT REPORT

ON

HOSPITAL MANAGEMENT SYSTEM

Submitted to

PUNYASHLOK AHILYADEVI HOLKAR SOLAPUR

UNIVERSITY, SOLAPUR

IN FULFILMENT FOR THE DEGREE OF

BCS-III (Computer Science) By

Miss: - Jyoti Baban Babar.

Miss: - Pratiksha Vitthal Bansode.

UNDER THE GUIDANCE OF

Miss: - Kasabe S.V

Through

VIDNYAN MAHAVIDYALAYA, SANGOLA.

Year - 2022-2023

SANGOLA TALUKA SHETKARI SHIKASHAN PRASARAK MANDAL'S

VIDNYAN MAHAVIDYALAYA SANGOLA

CERTIFICATE

THIS IS CERTIFY THAT

Miss: - Jyoti Baban Babar.

And

Miss: - Pratiksha Vitthal Bansode.

Has been completed the project that title is the "**Hospital management system**" Satisfactory impartial fulfilment of **BCS-III** Course of **Punyasholk Ahilyadevi Holkar Solapur University, Solapur** for the academic Year **2022- 2023**.

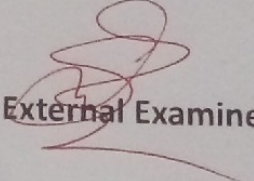
Project Guide

Dept. Of Computer Science

H.O.D

Place: - Sangola

Date: -


External Examiner



Sangola Taluka Shetakari Shikshan Prasarak Mandal's

VIDNYAN MAHAVIDYALAYA

SANGOLA

[Affiliated to Purnyashlok Ahilyadevi Holkar Solapur University, Solapur]

Project Report

On

COURIER MANAGEMENT SYSTEM

Year 2022-23

Submit By

Mr. Suyash Shashikant Burle

Mr. Ganesh Sanjay Ghadage



Sangola Taluka Shetakari Shikshan Prasarak Mandal's

VIDNYAN MAHAVIDYALAYA

SANGOLA

(Affiliated to Punyashlok Ahilyadevi Holkar Solapur University, Solapur)

Project Report

On

COURIER MANAGEMENT SYSTEM

Year 2022-23

Submit By

Mr. Suyash Shashikant Burle

Mr. Ganesh Sanjay Ghadage

SANGOLA TALUKA SHETKARI SHIKASHAN PRASARAK MANDAL'S
VIDNYAN MAHAVIDYALAYA SANGOLA

CERTIFICATE

THIS IS CERTIFY THAT

Mr: - Suyash Shashikant Burle.

And

Mr: - Ganesh Sanjay Ghadage.

Has been completed the project that title is the "Courier Management System" Satisfactory
impartial fulfilment of BCS-III Course of Panyasholk Ahilyadevi Holkar Solapur University, Solapur
for the academic Year 2022- 2023.

Project Guide

Dept. Of Computer Science

H.O.D

Place: - Sangola

Date: -

External Examiner

PROJECT REPORT

OR

HR MANAGEMENT SYSTEMS

Submitted to

PUNYASHLOK ABHYADEVI HOLKAR SOLAPUR

UNIVERSITY, SOLAPUR

IN FULFILMENT FOR THE DEGREE OF

BCS-III (Computer Science) By

Miss: -Kalebag Pooja Balkrusnn.

And

Miss: -Mali Prajakta Lingappa.

UNDER THE GUIDANCE OF

Miss: - Kasabe S.V

Through

VIDYAN MAHAVIDYALAYA, SANGOLA.

Year - 2022-2023

SANGOLA TALUKA SHETKARI SHIKASHAN PRASARAK MANDAL'S
VIDNYAN MAHAVIDYALAYA SANGOLA

CERTIFICATE

THIS IS CERTIFY THAT

Miss: - Kalebag Pooja Balkrushna

And

Miss:- Mali Prajakta Lingappa

Has been completed the project that title is the "HR Managemant System" Satisfactory
impartial fulfilment of BCS-III Course of Punyashlok Ahilyadevi Holkar Solapur University, Solapur
for the academic Year 2022- 2023.

Sangola
Project Guide

Dept. Of Computer Science

H.O.D
H.O.D

Place: - Sangola

Date: -

[Signature]
External Examiner



'Sangola Taluka Shetkari Shikshan Prasarak Mandal Sangola's

DR. GANPATRAO DESHMUKH MAHAVIDYALAYA SANGOLA

(Arts & Science, E.C.S. & B.C.A.)

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Principal : **Dr. S.M. Mulani**

M.A.Ph.D. (Geography)

(Third Cycle Accredited by NAAC
with 'B' Grade (CGPA of 2.24))

Ref. No.

Date : / /20



1.3.2 - Number of courses that include experiential learning through project work/field work/internship during the year-2022-23

290 student studied course on experiential learning through project work/field work/internship from different courses included in Physics, Chemistry, Botany, Zoology, BCA, ECS, Geography

- 1) Project on Study of Biodiversity in different places of Maharashtra like Lead Botanical Garden, Shivaji University, Kolhapur, Rankala Water Body/ Lake, Nursery of Datta Shirol Sugar Mill, Shirol, Social Forest Panhala, Rankala Water Body/ Lake etc. etc Satara, Mhasawe, Kaas Plateau, Bamnoli Back Water of Koyna, Mahabaleshwar, Panchgani, Wai
- 2) Project on study of chemical industries from Satara Maharashtra Industrial Development Corporation
- 3) Project on Insect Diversity In at Akola Near MAN river
- 4) Project on Butterfly Diversity and Bird information
- 5) Project on preparation of thin films
- 6) Sanitation and solid waste planning

Dr. S.S. Dhasade
Coordinator, IQAC

Dr. Ganpatrao Deshmukh Mahavidyalaya,
Sangola Tal. Sangola Dist. Solapur

Principal

Dr. Ganpatrao Deshmukh Mahavidyalaya
Sangola Tal. Sangola Dist. Solapur





1.3.2 - Number of courses that include experiential learning through project work/field work/internship during the year- 2022-23

Documents

Geography

- 1) Project Reports/Tour reports
- 2) Certificates of students
- 3) Syllabus of Geography in which field project, experiential learning is included



VIDNYAN MAHAVIDYALYA SANGOLA

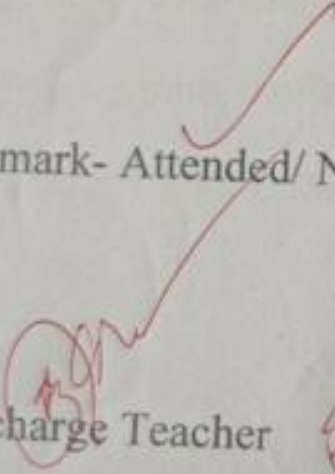
Department of Geography

Tour Report

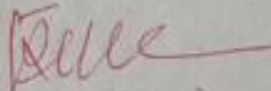
"CERTIFICATE"

This is to certify that Shri / Smt. Chavan Navnath
Narayan attended study tour arranged by
Department of Geography from 13 May 2023 and visited places
Mahabaleshwar , Pachgani Pratapgad .

Remark- Attended/ Not Attended


In charge Teacher

Examined
23/05/2023


Head

Dept. of Geography

Vidnyan Mahavidyalaya, Sangola

प्रस्तावना

भूगोल विषयामध्ये अभिक्षेत्रीय भिन्नतेचा अभ्यास केला जातो. २० व्या शतकामध्ये वेगवेगळ्या तांत्रिक प्रगतीमुळे भूगोल विषयाचा विस्तार अत्यंत जलद गतीने घडून आला आहे. भूपृष्ठावर वेगवेगळ्या प्रदेशामध्ये प्राकृतिक घटक व मानवीघटक जीवनामध्ये भिन्नता आढळून येते. या भिन्नतेचा अभ्यास भूगोल शास्त्रामध्ये केला जातो. नैसर्गिक घटक व मानव निर्माण घटक यांच्या भिन्नः वैशिष्ट्याचा अभ्यास सहलीद्वारे समजण्यास मदत होते.

वरील घटकाचा अभ्यास करित असताना या मधील बारकावे निरीक्षण करून नोंदी घेवून वेगवेगळ्या संदर्भग्रंथाच्या सहाय्याने पुस्तकाच्या साहाय्याने केलेला प्रादेशिक अभ्यास अधिक परिणामकारक असतो. म्हणून भूगोल शास्त्रांच्या अभ्यासामध्ये अभ्यास सहलीचा समावेश केला आहे.

भूगोल अभ्यासातील सहलीचे महत्व

भूगोल तज्ञांच्या मते भूगोल शास्त्राची प्रयोगशाळा ही चार " भितींच्या आत नसून संपूर्ण पृथ्वी हीच भूगोलाची प्रयोगशाळा आहे. भूगोल अभ्यासकाला या 'सर्व प्रयोगशाळेमध्ये फिरणे अशक्य असते, म्हणून एखादा छोटा प्रदेश निवडून या प्रदेशातील वेगवेगळ्या भौगोलिक घटकांचे निरीक्षण करून अभ्यास केल्यास तो किती तरी पटीने पुस्तकीजाना पैक्षा अधिक महत्वाचा असतो विद्यार्थ्यांना अशा प्रकारच्या नैसर्गिक व ज्ञाना सांस्कृतिक पर्यावरणाला वेगवेगळ्या ठिकाणी भेटी देता आल्याने आणि त्यातून भूगोल शास्त्र शिकता यावा म्हणून भूगोल विषयात सहलीचे महत्व वाढविले आहे.

नियमित जीवनां मध्ये कोणत्या ही प्रकारचा बदल मानवाला विरंगुळा देवू शकतो. चार भितींच्या प्रयोगशाळेमधून विद्यार्थ्यांच्या अभ्यास सहलीकरिता बाहेर नेहल्यास अभ्यासाची रुची वाढते. अशा प्रकारच्या बदल अभ्यास सहलमधून शक्य होतो. एकदा पर्यटक फिरत असताना सर्वसामान्यांमध्ये नैसर्गिक सांस्कृतिक पर्यावरणकडे किंवा प्रेक्षणीय स्थळाकडे पाहून फक्त समाधान मानतो.

परंतु भूगोल शास्त्र अभ्यासक पाहलेल्या सर्व भौगोलिक घटकांचे सूक्ष्मनिरीक्षण करत असतात, प्रत्येक भागात येणारे वेगवेगळे भूप्रदेश नैसर्गिक वनस्पती, जमीन, लोकसंख्या त्याच्या चालीरीती, वाहतूक, दळण-वळण, उद्योगधंदे इ. घटकातील भिन्नतेचे निरीक्षण करून त्याची थोडक्यात नोंदी केल्या जातात. अभ्यास सहली वरून परत आल्यावर वेगवेगळे संदर्भ ग्रंथ व पुस्तके वापरून अहवाल तयार करावा लागतो. अशा प्रकारे केलेला अहवाल व अभ्यास पुस्तकी असावा.

भूगोल शास्त्रामध्ये भूगोलाचा अभ्यास करण्यासाठी सहली शिवाय दुसरा पर्याय नाही, म्हणून हंबोल्ट, कार्लरिटर, रॅटझेल व्हीडाल डीलालारा या भूगोल शास्त्रांनी प्रदीर्घप्रवास करून त्यातील निरीक्षणाच्या आधारे भूगोल शास्त्राच्या अभ्यासमध्ये भर घातली आहे. अभ्यास सहलीमुळे विद्यार्थ्यांना नवीन प्रदेशाचे ज्ञान मिळते. सहलीमुळे विशिष्टची भौगोलिक घटकाची जिज्ञासा वाढून प्रादेशिक भिन्नतेनुसार भौगोलिक घटक प्राकृतिक रचना, भौगोलीक घटक, प्राकृती करचना, भौगोलिक घटक मधील हवामन, वनस्पती, प्राणी, वसाहती, वाहतूक, दळण-वळण यामधील प्रदेशानुसार बदल झालेला आढळून येतो. या वर्षी आमच्या महाविद्यालयातील भूगोल विभागाचे महाबळेश्वर येथे अभ्यास सहल आयोजित केली होती. वरील ठिकाणी आम्ही प्रत्यक्ष भेट देवून केलेल्या निरीक्षण आणि नोंदीवरून पुढील अहवाल तयार केला आहे.

सहलीचा हेतू

भूगोलया विषयाचा अभ्यास प्रादेशिक निरीक्षण, प्रवासवर्णनाने, छायाचित्रण, वेगवेगळ्या मोहिम यांच्या माध्यमातून केला जातो. पृथ्वी ही भूगोलाची प्रयोगशाळा आहे. भूगोलाच्या विद्यार्थ्यांना सर्व पृथ्वी फिरणे आवश्यक आहे. म्हणून छोटा प्रदेश निवडून त्यामधील विविध घटकांची माहिती, निरीक्षणे, छायाचित्रणे नोंदी घेवून केलेल्या अभ्यास परिपूर्ण होतो,

त्या प्रदेशामधील भौगोलिक, सांस्कृतिक, आर्थिक व औद्योगिक व महत्वाच्या घटका मधील फरक समजून घेणे तो प्रदेश इतराच्या पेक्षा वेगळा कसा आहे हे समजण्यास मदत होते, प्रादेशिक भिन्नते विषयी ज्ञान मिळविणे हा विषय अभ्यास असलीचा असतो .

सहलमार्गातील भौगोलीक परिस्थिती

१) प्राकृतिकरचना :

महाबळेश्वर शहर १७९२३७ उत्तर अक्षांश आणि ७३,६५८६ पूर्व रेखांशवर वसलेले आहे.

याची सरासरी उंची १३५३ मीटर (४४३फुट) आहे.

२) हे पुणे शहराच्या दक्षिण बाजूस १२० किमी आणि मुंबईपासून २८५ किमी अंतरावर

आहे. १५० किमी अंतरावर आहे. सर्वात ऊच ठिकाण ९४३९ मी आहे. जे विल्सन

सनराईज पॉइंट म्हणून ओळखला जातो. जूने महाबळेश्वर आणि शिडोलचा भाग अशा

खेडेगावाचे शहर निर्माण झाले आहे.

कृष्णा नदी उगम ही येथे झालेला आहे. जी महाराष्ट्र, कर्नाटक, तेलंगना या

राज्यातून वाहते. जूने महाबळेश्वर मधील पुरान कालीन महादेव मंदिराच्या जवळील

गोमुखतून उगम झालेला आहे. अशी दतकथा आहे. शिवायवेना आणि कोयना या

उपनद्या म्हणजे शिव आणि ब्रम्हा असे म्हटले जाते. आणखी मनोरंजन गोष्ट म्हणजे

कृष्णा नदी शिवाय अजून चार नद्या गोमुखातून उगम पावल्या आहेत. त्या म्हणजे

कोयणा, वेना, सावेत्री व गायत्री या नद्या आहेत.

महाबळेश्वर हवामान स्ट्राबेरीसाठी योग्य आहे. त्या भागात

उत्पादन मोठ्या प्रमाणात घेतले जाते. भारत देशाच्या एकूण ८५%

स्ट्राबेरीचे उत्पादन आहे.

हवामान

अभ्यास सहलसाठी नियोजन केलेल्या महाराष्ट्रातील प्रदेशामध्ये एकूण वर्षातील हवामान वेगवेगळे असलेले दि सून येते. महाराष्ट्राचे सर्वसाधारण हवामान मोसमी प्रकारचे आहे परंतु वर्षभराचा विचार केल्यास महाराष्ट्रात वर्षभर हवामानाची परिस्थिती सारखी नसते.

• ईशान्य मान्सून हवामान - शीत ऋतू व उष्ण ऋतू

• नैऋत्य मान्सून हवामान - वर्षा ऋतू व शरद ऋतू

• महाराष्ट्रात मान्सून काळात शीत ऋतू व उष्ण ऋतू आढळतात.

महाबळेश्वर शहर १७.९२३७ उत्तर अक्षांश आणि ७३.६५९६ पूर्व रेखांश वर वसलेले आहे.

याची सरासरी उंची १३५३ मीटर (४४३९ फुट) हे पूर्ण शहराच्या पश्चिम दक्षिणबाजूस १२०

किमी आणि मुंबई पासून २८५ किमी अंतरावर आहे. मकोन पेठ, जुने क्षेत्र महाबळेश्वर

आणि शिंडोलचा भाग अशा तीन खेडेगावांचा भाग मिळून हे शहर वसले आहे.

महाबळेश्वरचे हवामान स्ट्रॉबेरीसाठी योग्य आहे.

नैसर्गिक वनस्पती

नैसर्गिक वनस्पतीचा हवामान आणि जमीन यांच्याशी प्रनिष्ट संबंध असतो, म्हणून हवामानातील बदलत्या घटका नुसार आणि मृदा प्रकारानुसार नैसर्गिक वनस्पती प्रकार ही बदलत जातात. महाबळेश्वरला जाताना आमच्या सहलीचा मार्गहा काही मोसमी जंगला मधून गेला. सांगोल्या पासून सातारा पर्यंत वनस्पतीचे प्रमाण इतकेसे जास्त आढळले नाही. हवामानातील साग, आंबा, नारळ, स्ट्रॉबेरी ही फळपीके महत्वाची आहेत.

या भागात पाऊसाचे प्रमाण जास्त असल्याने जंगलाची मोठ्या प्रमाणात वाढ झालेली आहे. अभ्यास सहलीसाठी निवडलेल्या प्रदेशमध्ये वनस्पतीच्या प्रकारामध्ये त्यांच्या वैशिष्ट्यांमध्ये मोठी भिन्नता आढळून आली. सांगोल्या पासून दहिवडी पर्यंत बहुतांश पाऊसाचे प्रमाण कमी असल्यामुळे आम्हास काटेरी, खुरटया वनस्पती आढळल्या त्यामुळे बाभुळ, बोर, चिंच, केकत, निवडुंग इत्यादी वनस्पती दिसून आल्या.

महाबळेश्वरला जाते वेळी अनेक घाट लागले. त्या घाटामध्ये वनस्पतीचे प्रमाण हे अधिक होते. बहुतांश सातार्यामधील महाबळेश्वर हे थंड हवेचे ठिकाण असल्याने स्ट्रॉबेरीची लागवडही माठ्याप्रमाणत केली जाते.

शेती

महाबळेश्वर मधील लोकांचा मुख्य व्यवसाय शेती आहे. त्याचप्रमाणे शेतीवर आधारित व्यवसाय देखील मोठ्या प्रमाणात वाढले आहे. महाबळेश्वरमध्ये मुख्य शेती म्हणजे स्ट्रॉबेरीची लागवड, स्ट्रॉबेरीसाठी ज्या वातावरणाची आवश्यकता असते ते वातावरण उपलब्ध असल्याने येथे मोठ्या प्रमाणात या पिकाची लागवड केली जाते. त्याचबरोबर स्ट्रॉबेरी पासून तयार होणारी अनेक पिये बाजारपेठेत उपलब्ध केली जातात.

तसेच महाबळेश्वर मधील बाजारपेठ ही फार मोठ्या प्रमाणात प्रसिद्ध आहे. येथे लोकरीचे कपडे, स्वेटर, चमड्याचे पट्टे, चमड्याची वस्तू इ. वस्तू मिळतात. तेथील लोक शेती बरोबर उद्योग धंद्यावर पण जास्ती भर देतात.

प्राणीजीवन

महाबळेश्वर मधील बराचसा भाग हा जंगलानी व्यापलेला आहे. या जंगलामध्ये बरेचसे प्राणी आढळतात. गवे, रेडे, हरणे, रानडुकर, माकडे, कोल्हे, लांडगे, काळवीट यासारखे प्राणी येथे आढळून आलेले दिसतात. तसेच अनेक प्रकारचे पक्षी उदा. चिमण्या, कावळे, घुबड, मोपट, मोर इ. नजरेस पडते.

बहुतांश भाग हा जंगलाने व्यापलेला असल्याने तेथे अनेक प्राणी असरा घेतात. जंगलामध्ये राहणाऱ्या प्रण्याबरोबरच तेथील लोक काही प्रमाणात पाळीव प्राणी ही पाळतात जेणेकरून त्यांना शेती मध्ये त्यांचा उपयोग व्हावा.

वसाहती

महाबळेश्वर हे थंड हवेचे ठिकाण असल्याने तेथे थंडीचे प्रमाण जास्ती प्रमाणात आढळून येते. महाबळेश्वर हे सुंदर पर्यटन स्थळ आहे. सातारा जिल्ह्यातील महाबळेश्वर हे एक नगरपालिका असणारे तालुक्याचे शहर आहे. सन २०११ चे शिरगणती नुसारयाची लोकसंख्या १२७३७ आहे. पर्यटनाच्या दृष्टीने येथील लोकांनी घरांची रचना केलेली आहे. तिथे हॉटेलचे प्रमाण अधिक प्रमाणात आहे.

श्री क्षेत्र महाबळेश्वर

महाबळेश्वर हे नाव भगवान महादेव (महा बली) यांच्या नावा पासूनच प्राप्त झालेले आहे. जुन्या महाबळेश्वर मध्ये महादेवाचे आहे, यालाच क्षेत्र महाबळेश्वर असेही म्हणतात. महाबळेश्वर पासून ५ कि मी अंतरा वर क्षेत्र महाबळेश्वर आहे. या ठिकाणी अनेक धार्मिक स्थळे आहेत, तसेच १३ व्या शतकातील सर्वात जुने कृष्णाबाई मंदिर आहे. महाबळेश्वर त्याच्या स्ट्राबेरीसाठी जगप्रसिद्ध आहे. तसेच महाबळेश्वर हे शेतता ज्या स्ट्रॉबेरी आणि रास्पबेरी यासाठी सुद्धा प्रसिद्ध आहे. तसेच आपण जेली, मध, जाम आणि बरेच काही विकत घेऊ शकता. एखादा हातमाग, चामड्याच्या वस्तू, कोल्हापुरी पादत्राण ई. वस्तूटाउन बझारमधून खरेदी करू शकतो.

महाबळेश्वरहे ठिकाण महाराष्ट्राच्या सातारा जिल्ह्यातील एक थंड हवेचे ठिकाण व प्रेक्षणीय स्थळ असून, येथे पर्यटक वर्षभर भेट देतात. ब्रिटिश काळापासून महाबळेश्वराला लाभलेला उत्कृष्ट गिरी स्थान हा लौकिक आजही कायम आहे. समुद्रसपाटी पासून १,३७२ मीटर उंची वर पश्चिम घाटांच्या रांगेत वसलेले महाबळेश्वर हे थंड हवेचे व सहलीचे निसर्गरम्य ठिकाण आहे. महाराष्ट्राचे नंदनवन म्हणून ओळखले जाणारे ठिकाण आहे. हे आतिशय थंड हवेचे ठिकाण आहे. महाबळेश्वर हे सुंदर पर्यटन स्थळ आहे. महाबळेश्वर हे महाराष्ट्रातील थंड हवेचे ठिकाण आहे. तसेच महाबळेश्वर हे सह्याद्रीच्या पर्वतरांगां वर समुद्रसपाटी पासून सुमारे ४५०० फुट उंची वर वसलेले आहे. महाबळेश्वरला जुन्या मुंबई प्रांताची उन्हाळ्यातील राजधानी म्हणूनच संबोधले जात होते.

येथील हिरवा निसर्ग, सुंदर बगीचे, उद्याने, श्वास रोखायला लावणारी दृश्ये इत्यादी मुळे पर्यटक मंत्रमुग्ध होतात. ब्रिटीश-कालीन वैभवसंपन्न आणि मनमोहक वाडे, इमारती या आजही त्या वेळच्या ब्रिटीश राजवटीची ओळख करून देतात. मार्च ते जून हा कालावधी महाबळेश्वरला भेट देण्यास योग्य आहे. येथील प्रेक्षणीय ठिकाणांना 'पॉईंट' म्हणतात. बहुतांशी 'पॉईंट' हे डोंगराच्या टोकालाच आहेत.

पंचगंगा मंदिर :

कृष्णा, कोयना, गायत्री, सावित्री, वेण्णा, सरस्वती, आणि भागीरथी या ७ नद्यांचे उगमस्थान आहे की जे पाहिलेच पाहिजे. यापैकी पहिल्या पांच नद्यांचा ओहोळ सतत बाराही महिने वहात असतो. सरस्वतीचा ओहोळ मात्र प्रत्येक ६० वर्षांनी दर्शन देतो. आता तो २०३४ साली दर्शन देईल. भागीरथीचा ओहोळ प्रत्येक १२ वर्षांनी दर्शन देतो. हा आता सन २०१६ मध्ये मराठी श्रावण महिन्यात दर्शन देईल. हे मंदिर ४५०० वर्षापूर्वीचे आहे. येथून बाहेर पडल्यानंतर कृष्णा नदी स्वतंत्र वाहाते. येथे कृष्णाबाई हे स्वतंत्र मंदिर आहे.

कृष्णाबाई मंदिर

पंचगंगा मंदिराचे पाठीमागे अगदी जवळच कृष्णाबाई नावाचे मंदिर आहे की जेथे कृष्णा नदीची पूजा केली जाते. हे सन १८८८ मध्ये कोकणचे राजे 'रत्नगिरीओण' यांनी उंच टेकडीवर बांधले की जेथून पूर्ण कृष्णा दरी पाहता येते. या

आर्थर पॉईंट

महाबळेश्वरातील सर्वात प्रसिद्ध पॉईंट म्हणून ओळखला जातो. या पॉईंटच्या डावीकडे खोल दरीतून कोंकणात जाणारी सावित्री नदी आहे तर उजवीकडे घनदाट जंगले आहेत यालाच ब्रम्हारण्य असेही म्हणतात हि सर्व मनमोहक आणि आकर्षक दृश्ये इतर गोष्टींचा विसर पडायला भाग पाडतात. हवामान जर स्वच्छ असेल तर या पॉईंटवरून रायगड किल्ला तोरणा किल्ला स्पष्ट दिसतात. याच मार्गावर 'टायगर स्प्रिंग', 'इको पॉईंट', 'एलफिस्टन पॉईंट' आहेत.

टायगर स्प्रिंग

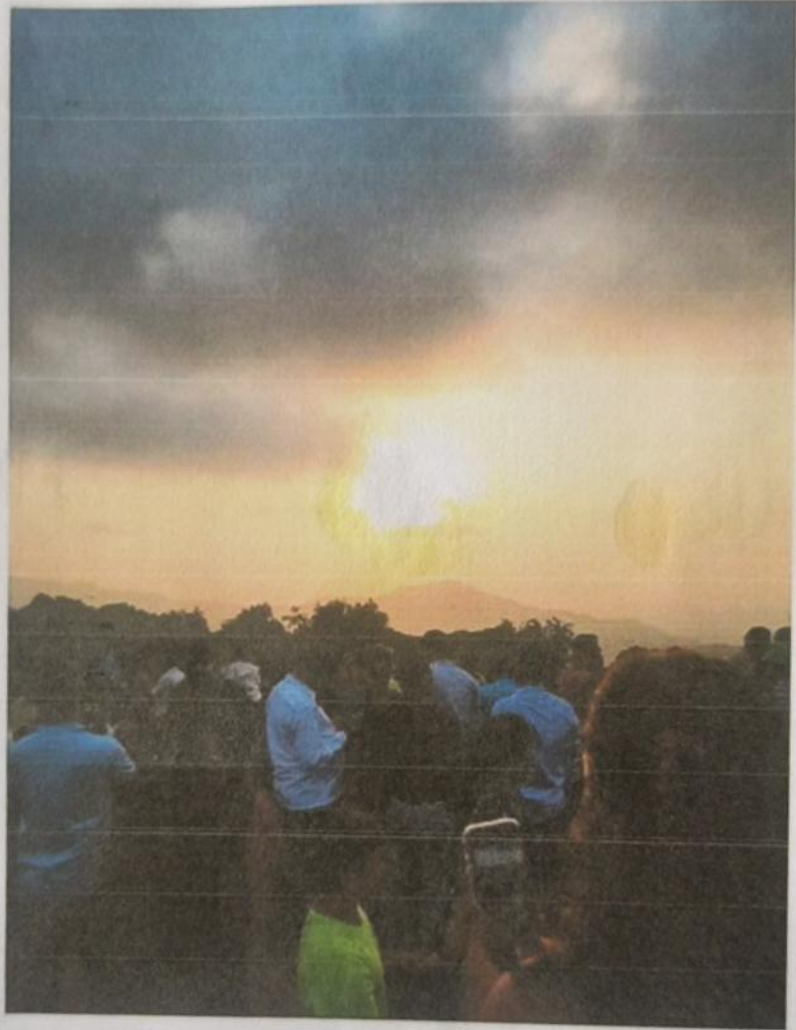
वाघाचा झरा, महाबळेश्वर विहंगावलोकन सावित्री नदीजवळील नैसर्गिक थर्मल झरा, तो आध्यात्मिक शक्तींनी युक्त असल्याचे मानले जाते. या झऱ्याचे पाणी पिणारा वाघ •असल्याने हे नाव पडले. या झऱ्याचे पाणी आहे. चारही बाजूंनी झाडांनी वेढलेले आहे. आर्थर पॉईंटपासून 10 मिनिटांच्या अंतरावर, उथळ पाण्याचा अनुभव घेण्यासाठी आणि निसर्गाच्या भेटीमध्ये एकांतात निवांत वेळ घालवण्यासाठी आदर्श आहेत.

मंदिरात शिव लिंग आणि कृष्णाची मूर्ती आहे. लहानसा ओहोळ गोमुखातून वाहतो आणि तो पाण्याच्या कुंडात पडतो. पूर्ण मंदिराचे छतासह दगडी बांधकाम हे विशेष वैशिष्ट्य आहे. या मंदीराजवळ दलदल झालेली आहे आणि नाशवंत स्थितीत आहे. येथे पर्यटक फार कमी येतात त्याने ते एकटे पडलेले आहे. पण या ठिकाणाहून अतिशय सुंदर असा कृष्णा नदीचा देखावा पाहता येतो.

एल्फिन्स्टन पॉइंट:

एल्फिन्स्टन पॉइंट हे महाबळेश्वरमधील सर्वात उंच ठिकाणांपैकी एक आहे. प्रतापगड किल्ला, कोयना व्हॅली आणि आसपासच्या परिसराच्या विलोभनीय दृश्यासाठी हे प्रसिद्ध आहे. हे ठिकाण सावित्री नदीचे उगमस्थानही आहे. १८३० मध्ये सापडलेल्या, एल्फिन्स्टन पॉइंटचे नाव माउंटस्टुअर्ट एल्फिन्स्टन, बॉम्बे प्रेसिडेन्सीचे तत्कालीन गव्हर्नर यांच्या नावावर आहे.

महाबळेश्वर (सनसेट) पॉइंट



हंटर पॉइंट

महाबळेश्वर काही विलक्षण लोकल ऑफर करतो जे प्रेक्षकांना मंत्रमुग्ध करतात. हे नैसर्गिकरित्या अनेक आकर्षक सौंदर्य स्थळांनी दिलेले आहे जे निसर्गाच्या आश्चर्यकारक पॅनोरमासह एक ऑफर करते. चमकदार दऱ्या आणि खोल जंगले आणि भव्य शिखरांकडे दुर्लक्ष करणारे असंख्य बिंदू आहेत. हंटर पॉइंट हे अशाच आकर्षणांपैकी एक आहे, जे मुख्य शहराच्या हद्दीत वसलेले आहे. 1290 मीटरच्या उंचीवर, हंटर पॉइंट पर्यटकांना वरील सर्व गोष्टींचे विस्मयकारक दृश्य प्रदान करतो. या बुलंद ठिकाणाहून सर्वात मोहक दृश्य म्हणजे भडक कोयना दरी आणि त्याशिवाय चित्रमय दृश्यांसह विस्मयकारक

ईको पॉइंट

आर्थर पॉइंटच्या मार्गावरच मनमोहक, आरोग्यदायक आणि नैसर्गिक दृष्ट्या समृद्ध असा ईको पॉइंट आहे. इथे खोल दऱ्या, उंच पर्वत पहावयास मिळतात.

महाबळेश्वर बाजारपेठ

महाबळेश्वर बाजारपेठ फार प्रसिद्ध आहे. येथे लोकरीचे कपडे, स्वेटर, चमड्याचे पट्टे, चमड्याची पाकीटे इ. वस्तु विविध प्रकारात मिळतात. तसेच येथे चणे फुटाणे प्रसिद्ध आहेत.

मॅप्रो गार्डन

मॅप्रो गार्डन या ठिकाणी स्ट्रॉबेरी तसेच विविध प्रकारचे जाम व ज्यूस ची साधने खरेदी करू शकता. मॅप्रो ही एक जाम फॅक्टरी आहे. येथे स्ट्रॉबेरी शेती, विविध प्रकारची रंगबेरंगी फुले आपणास पाहण्यास मिळतील. तर खाण्याच्या पदार्थासहीत येथे कॅफे सुद्धा आहे.

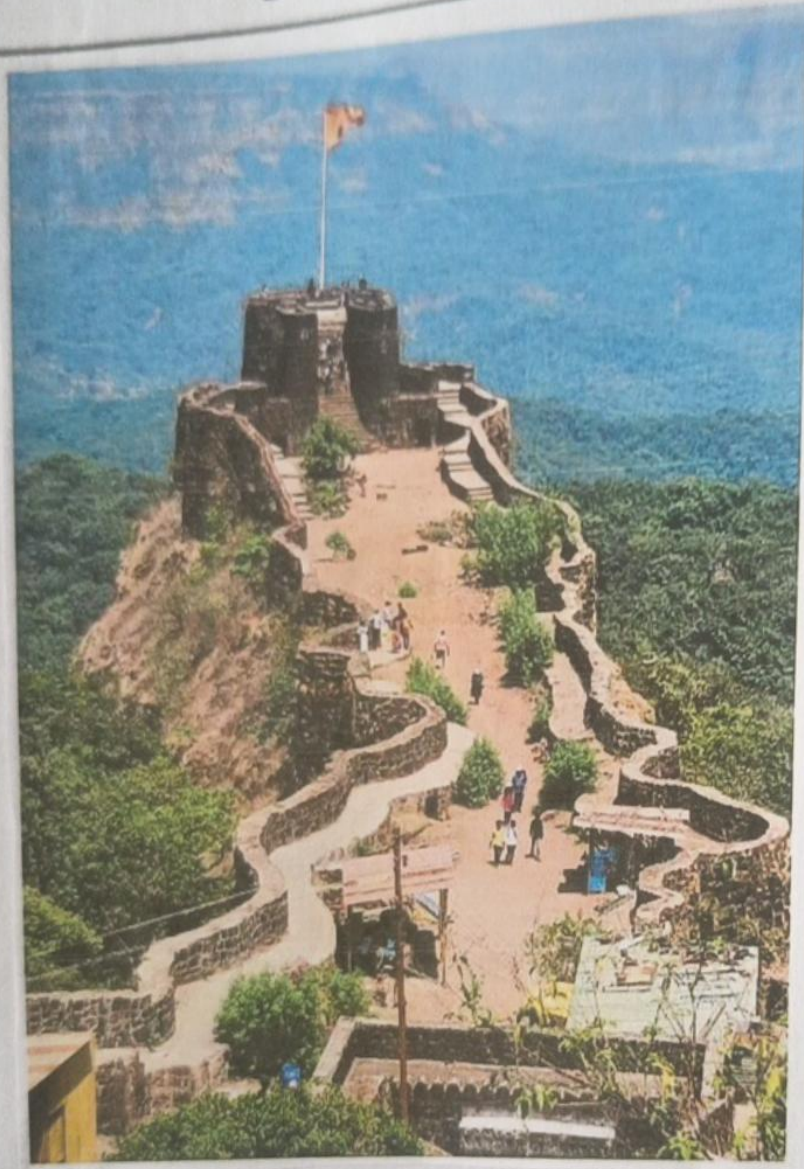
वेण्णा लेक

सन १८४२ साली, सातारचे राजे श्रीमंत छ. आप्पासाहेब महाराज यांनी 'वेण्णा लेक'ची • निर्मिती केली. वेण्णा लेकचा विस्तार सुमारे २८ एकर क्षेत्रात असून त्याची सरासरी खोली १० फुट आहे. तसेच बारमाही वाहणाऱ्या झऱ्यामुळे येथील उदयाने व बगीचे फुलले आहेत.

वेण्णा तलाव

वेण्णा तलाव हे भारतातील महाराष्ट्र राज्यातील महाबळेश्वरमधील पर्यटन आकर्षणांपैकी एक आहे. 1842 मध्ये सातारच्याचे राजा (राजा) श्री अप्पासाहेब महाराज यांनी तलाव बांधला होता. वेण्णा तलावावर बोट्टी, नौका वेण्णा तलावाचे

* पुतापभंड *



प्रतापगड

महाबळेश्वर पासून महाड रस्त्याला २१ कि.मी. अंतरावर प्रतापगड आहे. दि. १० नोव्हें. १६५९ रोजी या किल्ल्यावर छ. शिवाजी महाराज आणि अफजलखान यांच्यात सर्वात मोठी लढाई झाली होती, त्यामुळे या किल्ल्याला अनन्य साधारण महत्व प्राप्त झाले आहे. सन १६५६ मध्ये शिवाजी महाराजांनी ह्या किल्ल्याची स्थापना केली. समुद्रसपाटीपासून सुमारे ३५४३ फुट उंचीवर हा किल्ला आहे. छ. शिवाजी महाराजांनी तुळजा भवानी मातेचे मंदिर या ठिकाणी स्थापले होते. या किल्ल्यावरून कोंकणातील शेकडो किलोमीटर क्षेत्राचे दर्शन घडते.

प्रतापगड किल्ल्याची माहिती

महाराज आणि अफजलखान या दोघांच्या भेटीचा साक्षीदार ठरलेला प्रतापगड आज देखील त्या जाज्वल्य स्मृती आपल्या हृदयात साठवून दिमाखात उभा आहे. सातारा जिल्ह्यात असलेला प्रतापगड गिरिदुर्ग प्रकारातील गड असून सह्याद्रीच्या रांगांमध्ये जावळीच्या खोऱ्यात घनदाट जंगलात प्रतापगड हा किल्ला बांधण्यात आला आहे.

समुद्रसपाटीपासून या किल्ल्याची उंची 1081 मी. असून गडाच्या दोन्ही बाजूंनी 200 ते 250 मी. खोल दरी दिसते. प्रतापगड वाई जवळ जावळीच्या खोऱ्यात



महाबळेश्वर पोलादपूर मार्गावर असून महाबळेश्वरपासून अंतर अवघे 22 की.मी. एवढे आहे. 72 क्रमांकाच्या राज्य महामार्गाने आपल्याला प्रतापगडावर पोहोचता येतं. किनेश्वर व पार या दोन्ही गावांमधील टेंभावर प्रतापगड बांधण्यात आला आहे. गड चढण्या करता तसा फार अवघड नसून गडाच्या पायथ्यापर्यंत वाहनाने पोहोचता येतं. गडावर पायी जाण्याकरता पार आणि कुंभरोशी गावातून पायवाट आहे. या व्यतिरिक्त किल्ल्यावर जायला काही चोरवाटा देखील आहेत.

प्रतापगड किल्ल्याचा इतिहास

जावळी खोरे स्वराज्यात आल्या नंतर महाराजांनी मोरो त्र्यंबक पिंगळे यांना ई.स. 1656 मधे हा गड बांधून घेण्याची आज्ञा दिली. या गडाचे मुख्यकिल्ला आणि बालेकिल्ला असे दोन भाग पडतात. या भागांमध्ये तलाव देखील आहेत, सुरक्षिततेच्या दृष्टीकोनातून गडाच्या चारही बाजूंनी भक्कम तटबंदी आणि बुरुज आहेत. मुख्यकिल्ल्याचे क्षेत्रफळ 3885 चौ. मी. असून बालेकिल्ल्याचे 3660 चौ.मी. इतके आहे. दक्षिण दिशेकडे बुरुज 10 ते 15 मी. उंच आहेत. या बुरुजांपैकी रेडका, अफजल, केदार, राजपहारा या बुरुजांचे अवशेष आजही टिकून असल्याचे दिसतात.

मुख्यकिल्ल्यात तुळजा भवानीचे मंदिर असून ई. स. 1661 मध्ये शिवरायांच्या आज्ञेनुसार मोरो त्र्यंबक पिंगळे यांनी ते स्थापित केले होते. तुळजा भवानीचे मूळ मंदिर दगडी गाभाऱ्याचे असून मंदिरा समोर दोन उंच दगडी दीपमाळा

ग्राहेत. जवळ नगारखान्याची पुरातन इमारत असून 1935 साली या इमारतीचा तीर्णोद्धार करण्यात आला. प्रतापगडावर छत्रपती शिवरायांनी स्वतः बांधून घेतलेले पुरातन शिव मंदिर आहे. किल्ल्याचे खोदकाम करतांना हे शिवलिंग सापडल्याचे सांगितले जाते. युद्धाला जाण्यापूर्वी महाराजांनी शिवलिंगाची स्थापना केली होती. आज प्रतापगडाचे नाव उच्चारताच आठवते ती महाराजांची आणि अफजलखानची ऐतिहासिक भेट, प्रतापगडाचे ऐतिहासिक महत्वं देखील या घटनेमुळेच वाढले. ई.स. 1659 साली झालेल्या या भेटीची नोंद इतिहासात सुवर्णाक्षरांनी करण्यात आली आहे. मोठ्या चतुराईने, धाडसाने, शौर्याने महाराजांनी अफजलखानाचा वध केला.

छत्रपती राजाराम महाराज देखील जिंजीला जात असतांना प्रथम प्रतापगडावर आले होते. 1778 साली नाना फडणीसांनी काही काळ सखाराम बापूंना या गडावर नजरकैद करून ठेवले होते. त्यानंतर 1796 साली दौलतराव शिंदे आणि बाळोबा कुंजीर जेव्हा नाना फडणीसांवर चाल करण्याच्या उद्देशाने आले त्यावेळी नाना प्रतापगडावर आश्रयाला थांबले होते.

पुढे ब्रिटीश आणि मराठ्यांमध्ये झालेल्या युद्धानंतर 1818 ला या गडावर ब्रिटीशांनी आपले वर्चस्व प्रस्थापित केले. भारताला स्वातंत्र्य मिळाल्यानंतर या प्रतापगडावर छत्रपती शिवाजी महाराजांचा 5 मी. उंच असा भव्य अश्वारूढ पुतळा

उभारण्यात आला. या • पुतळ्याचे अनावरण तत्कालीन प्रधानमंत्री पंडित

जवाहरलाल नेहरू यांच्या हस्ते नोव्हेंबर 1957 ला करण्यात आले.

या प्रतापगडावर शिवछत्रपती प्रतिष्ठानने प्रशस्त असे सभागृह उभारले आहे.

तुळजा भवानीच्या मंदिरापासून थोड्या अंतरावर आग्नेय दिशेला अफजल बुरुजा

नजीक अफझलखानाची कबर आहे. या ठिकाणी दरवर्षी उरूस भरत असतो. 1957

मध्ये कुंभरोशी गावापासून ते प्रतापगडाच्या प्रवेशद्वारापर्यंत वाहनासाठी रस्ता तयार

करण्यात आला असून प्रतापगडाच्या पायथ्या पर्यंत वाहनाने पोहोचता येतं. येथे एक

धर्मशाळा देखील बांधण्यात आली आहे.

प्रतापगडाची तटबंदी आज देखील शाबूत आणि मजबूत आहे. पावसाळ्याच्या

दिवसांमध्ये हा संपूर्ण परिसर हिरवाईने नटलेला असतो. महाराजांच्या स्मारकाची

जवाबदारी सातारा जिल्हा परिषदेवर असून येथील बगीच्याची देखरेख ही

वनविभागाची जवाबदारी आहे. प्रतापगडावरून सूर्योदय आणि सूर्यास्त पाहण्याचा

एक वेगळा आणि आल्हाददायक अनुभव प्रत्येकाने घ्यावा असाच आहे.

महाराष्ट्रातील ठिकाणवेण्णा तलावाचे महाराष्ट्रातील ठिकाणवेण्णा तलाव महाबळेश्वर,

महाराष्ट्र समन्वय भारत स्थान 17.934°N 73.665°E •

बेसिन देश

भारत

कमाल लांबी

4 किमी (2.5 मैल)

कमाल रुंदी

१.५ किमी (०.९३ मैल)

सरासरी खोली

80 फूट (24 मी)

अप्रतिम खोली

120 फूट (37 मी) (मध्यभागी)

तलाव झाडांनी वेढलेला आहे. पर्यटक तलावावर बोट राइड किंवा तलावाशेजारी



घोडेस्वारीचा आनंद घेऊ शकतात. तलावाच्या काठावर अनेक लहान-मोठे
जनालय आहेत. महाबळेश्वर शहराची बाजारपेठ आणि एसटी बसस्थानक
तलावापासून सुमारे 2 किमी (1.2 मैल) अंतरावर आहे.

वाईचा ढोल्या गणपती

सातारा जिल्ह्यातील श्री तीर्थक्षेत्र आणि दक्षिण काशी म्हणून ओळखल्या
जाणाऱ्या वाई येथील कृष्णा नदीच्या तीरावर असणारे 'ढोल्या गणपती'चे मंदिर हे
सर्व आबालवृद्ध गणेशभक्तांचे आवडते स्थान आहे. दररोज हजारो भक्त या
मंदिराला भेट देतात. वाईकरांसाठी तर हा आध्यात्मिक ठेवा आहे. गणपतीच्या भव्य
आणि विशाल मूर्तीमुळे या गणपतीला 'ढोल्या गणपती' असे परिचित नाव आहे. हे
मंदिर गणपतराव भिकाजी रास्ते यांनी कृष्णा नदीच्या नदीपात्रातच बांधले आहे.
मंदिराचे विधान चतुरस्र असून, वारंवार येणाऱ्या नदीच्या पुरापासून संरक्षण व्हावे
म्हणून गर्भगृहाच्या पश्चिमेकडील मागील भिंतीची रचना मधोमध त्रिकोणी आकार,
देऊन नावेच्या टोकासारखी म्हणजे मत्स्याकार बांधली आहे. त्यामुळे पुराच्या वेळी
पाणी दुभंगले जाऊन पाण्याचा दाब कमी होते व मंदिर सुरक्षित राहते. गर्भगृहात

अर्धा मीटर उंच चौथऱ्यावर गजाननाची रेखीव बैठी एक मीटर ८० सेमी उंच व दोन मीटर रुंद भव्य डाव्या सोंडेची मूर्ती आहे. तिची स्थापना वैशाख शु. १३ शके १६९१ ला करण्यात आली. मूर्तीचे स्वरूप बाळसेदार असल्याने कदाचित त्याला 'ढोल्या गणपती' असे नामाभिधान प्राप्त झाले असावे. मूर्ती एकसंध काळ्या दगडात कोरलेली असून, हा दगड कर्नाटकातून आणला आहे. सध्या मूर्तीला भगवा रंग दिला आहे. त्यामुळे मूर्तीचे मूळ रूप दिसत नाही. हा गणपती उकिडवा दोन्ही मांड्या रोवून बसला आहे. प्रसन्न मुद्रेतील गणपतीस यज्ञोपवितासह मोजके अलंकार घातले आहेत. त्यात गळ्यातील हार, ब्रजबंद व पायातील तोडे स्पष्ट दिसतात.

मूर्तीच्या मागील प्रभावळ अर्धचंद्राकृती ३ मीटर ६३ सेमी इतकी उंच आहे. गर्भगृहाचे छत ही जणू तत्कालीन स्थापत्यशैलीची किमयाच म्हणावी लागेल. चुना आणि फरशीचा समन्वय साधून वास्तु शास्त्रज्ञांनी छताच्या पाषाणाला खाचा पाडून त्यात दुसऱ्या दगडांना अणकुचीदार टोके करून ती त्यात बसविली आहेत. महागणपतीचे शिखर हे वाईतील सर्व मंदिरांत सर्वांत उंच असून, त्याची पायथ्यापासून कळसापर्यंतची उंची २४ मीटर आहे.

आभार

विज्ञान महाविद्यालय सांगोला B.A भाग 3 भूगोल या विषयाची सहल महाबळेश्वर या ठिकाणी आयोजित केली होती. सहलीचे नियोजन माहविद्यालयाचे प्राचार्य डॉ. फुले सर यांच्या मार्गदर्शनाखाली डॉ. वाघमोडे सर यांनी केले.

मा. प्राचार्य यांनी महाबळेश्वर सहलीस जाण्यासाठी परवानगी देऊन व आमच्या सोबत येवून आवश्यक ते सहकार्य केले. त्याचप्रमाणे प्राचार्य डॉ. फुले सर व डॉ. वाघमोडे सर यांनी प्रथम मार्गातील विविध भौगोलिक घटकांची माहिती दिली.

सहलीवरून परत आल्यानंतर सहल वृत्तांत तयार करण्यासाठी भूगोल विभागातील प्रा. डॉ. फुले सर, डॉ. पाटील सर, डॉ. जुंघळे मॅडम, डॉ. वाघमोडे सर यांचे मोलाचे योगदान झाले.

आम्ही भूगोल विभागाचे सर्व विद्यार्थी प्राचार्य, भूगोल विभाग प्रमुख, भूगोल विभागाचे सर्व प्राध्यापक यांचे आम्ही हार्दिक आभार मानतो.

"धन्यवाद"....

VIDNYAN MAHAVIDYALYA SANGOLA

Department of Geography

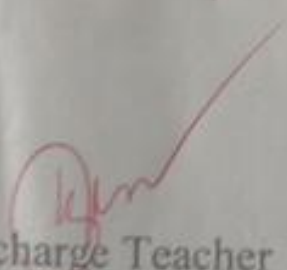
Project Report

"CERTIFICATE"

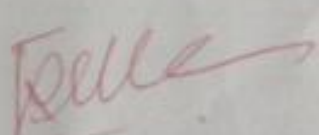
This is to certify that Shri/ Smt. Chavan Nayab
Narayan has satisfactory carried out required
practical work prescribed by

SOLAPUR UNIVERSITY SOLAPUR

For the B.A. part-3 course in Geography and this project report
represents his/her bonafied work in Year 2022-23


In charge Teacher

Examined
23/05/2023
[Signature]


Head

Dept. of Geography

Vidnyan Mahavidyalaya, Sangola

* अनुक्रमानिका *

① पुस्तकालय

② उपदीप्तये

③ वर्गीकरण

④ विश्लेषण

⑤ सादरीकरण

⑥ भूमिकवास्तुके मोठ्या प्रमाणात दुष्परिणाम होऊ शकतात

⑦ महत्त्व

⑧ निष्कर्ष

⑨ निरीक्षण

* प्रस्तावना *

सोबोला शहरातील वाढत्या शहरीकरणामुळे पर्यावरण
प्रदुषणाच्या ह्या समस्या निर्माण झाल्या आहेत. त्यात
कचऱ्याचे शक्यताकरण व त्याची विलंबेवाट ही एक मोठी
सर्वांची तसेच पर्यावरणाच्या दृष्टीने फार महत्त्वाची समस्या
बनली आहे.

सोबोला शहरातील नगरपरिषद मार्फत नागरिकांमध्ये
मोठ्या प्रमाणावर जनजागृती केली जाते. सोबोला
नगरपरिषद मार्फत जनजागृती मधील सारंग जेठ
आहे. सोबोला शहरातील स्वच्छ व सुंदर बनविणे व
घनकचऱ्याचे योग्य व्यवस्थापन करणे ही मुख्य हेतूने
स्वच्छ भारत अभियान राबविले जाते.

या अभियानाची उद्दीष्टे साध्य केली
मळकून दरवर्षी केंद्र सरकार मार्फत देशातील सर्व नागरिक
व ग्रामीण स्थानिक स्वराज्य संघटनांमध्ये विविध निकष
आधारावर स्वच्छ सर्वेक्षण नावाची स्पर्धा आयोजित
केली जाते.

स्वच्छ सर्वेक्षण स्पर्धेचा माध्यमातून सोबोला
शहरातील नगरपालिकेच्या स्वच्छता, घनकचरा आपल्या
शहराचे नावांकुन आणून घेण्यासाठी दरवर्षी चढ -
ओढ पाहण्यास प्रोत्साहन

धनकचऱ्याची निर्मिती धराधरातून हीत
 असलयाने लोकां घेणाऱ्या धनकचऱ्यांचे पुढाण व
 त्याचा पर्जा थावर नियंत्रण ठेवता येत नाहीं परिणामी
 त्याची साठवण वाहतूक व्यवस्था व सावरील प्रक्रिया यांचे
 डिझाईन करणाऱ्यासाठी सांख्यिकी पद्धतीचा वापर करावा
 लागतो

त्यामुळे कचरा यासाठी लागणारे साधन सामग्री
 मनुष्यबळ व आर्थिक तत्त्व वस्तू नगरपालिकेच्या
 आवाक्यातून वारंवार गोळी असते त्यामुळे कचरा
 पेथेपुन भरून वाहणे तेथेच कुठून कुठेही पसणे
 फायात मिसळल्याने पाणी दुषित होते व शहरी परिसरा
 तसकड दिसणे यां जोरी सर्वसामान्य झाल्या आहेत
 धनकचरा स्वतः हुन वाहून जात नाहीं

तो कुठून त्याला लागतो शहरात
 तसेच वेडेगावात निर्माण होणाऱ्या कचऱ्यांचा आढ्यास
 करणे व कचऱ्यांचे योग्य ते व्यवस्थापन व हिलेवाट
 करण पुढार करत येईल त्याचा आढ्यास करणे
 अज काळाची गरज बनली आहे कचऱ्यांमुळे अनेक
 आरोग्य विषयक प्रश्न निर्माण होतात अविष्यातील
 पिढीला भोळ्या समस्यांचा सामना करावा लागेल

उद्दिष्टे

- ① धनकचरा ही संकलपना समजून घेणे
- ② धनकचरा वर्गीकरण करणे.
- ③ धनकचरा अवस्थापनाच्या पद्धती अभ्यासने
- ④ धन कचरा आरोग्य अवस्थापनाचे दुष्परिणाम स्पष्ट करणे
- ⑤ धन कचरा अवस्थापनाचे महत्त्व पटवून देणे

* वर्गीकरण *

घन कचऱ्याचे वर्गीकरण - ०

घनकचऱ्याचे वर्गीकरण कृत्रीक प्रमाणे .

वर्गीकरणाचा मुद्दा

प्रकार

① विघटन

① विघटनशील कचऱा

② अविघटनशील कचऱा

② परिणाम

① धातू परिणाम

② अधातू परिणाम

* धानकचऱ्याचे विश्लेषण *

१) सांगोला शाखातील राकुण घरांची संख्या - १५२९ आहे

२) झोपडपट्ट्यांची संख्या - १० आहे

३) कुचरा गोकुळ कुरणाच्या सुविधा - १
 कुचरा गोकुळ कुरव्यासाठी १० गाड्या
 भांगी ३ ट्रॅक्टर यांची सुविधा आहे

४) राकुण कुचरा कुड्यांची संख्या - १
 ३१ आहेत

५) पेंनॅकिन कुचरा भेदाजे वजन - ४ १.३० टन इतका
 आहे

६) कुचऱ्याचे प्रकार - ० -
 भोला व झुका कुचरा

१) भोला कुचरा

जो कुचरा कुजून त्यात कुंठिणी
 निर्माण होऊन नष्ट होऊ शकतो त्याला भोला
 कुचरा म्हणले जाते

उदा १ स्वथपाक भारतातील थारकडे भयवा
 शिबे भुक्ता कुडाकी फळे पालेभाज्या
 भंड्यांची टरफले भाज्यांच्या साली
 इत्यादी

② सुका कुचरा - १

धारिवाय इविरित सर्व प्रकारच्या।

कुचरा व सुका कुचरा असतो

पॉलिथिनच्या पिशव्या, लॅस्टिकच्या

वस्तु, अमिकोलचे तुकडे, लेपवडी, वस्तु (तास) धिरे

लेड, वेगरे, फुटक्या कुपक्या, व काचेचा ग्लास

विजेचे बल्ब व व्युबच्या कुचा, फारलेले कुपे रबर

काढाची पॅक्स, थोसाएवढ्या जास्त, वर्तमानपत्रांची रूदी,

थोचा सुक्या कुचयात समावेश घेतो

③ E कुचरा - ०-

माक्स की वेडि मोबाईलचे खराब

झालेले स्पेअर पार्ट किंवा सध्याच्या स्थितीत न

चालवारी उपकरणे ही ई-कुचरा वा प्रकारात येतात

इव।

कंप्युटर मोबाईल फोन रेडिओ इलेक्ट्रॉनिक

वेडणी सामता सेपलेले सेल, ब्यागि, अन्य उपकरणे

ही सुद्धा ई-कुचराच त्यामुळे मनुष्याच्या आरोग्या

साठी वांछीर होऊ निर्माण होऊ शकता

④ धनकुचरा - ०-

धनकुचराची निर्मिती धरापासून होत

असल्याने गोळा होणाऱ्या धनकुचराचे प्रमाण

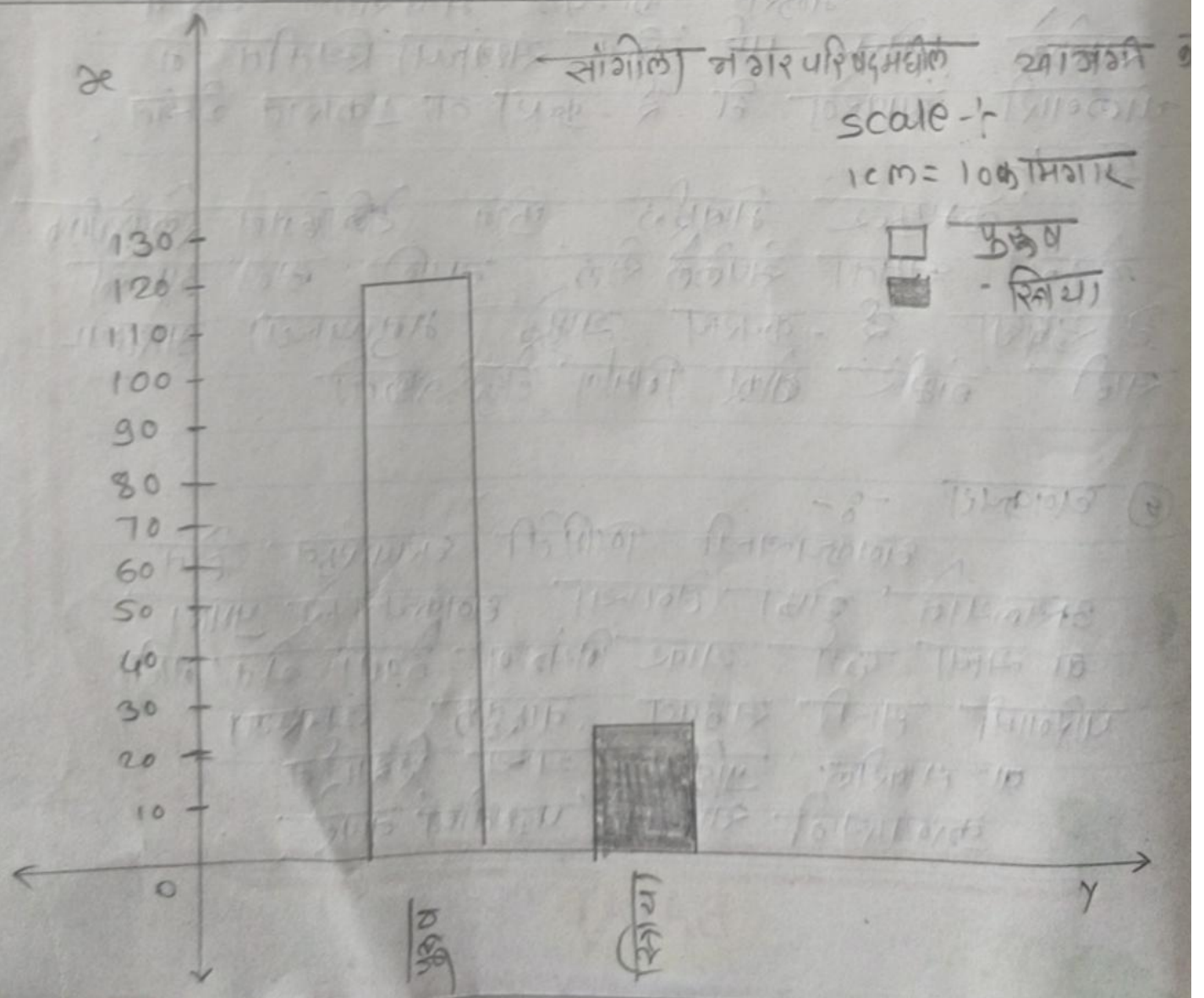
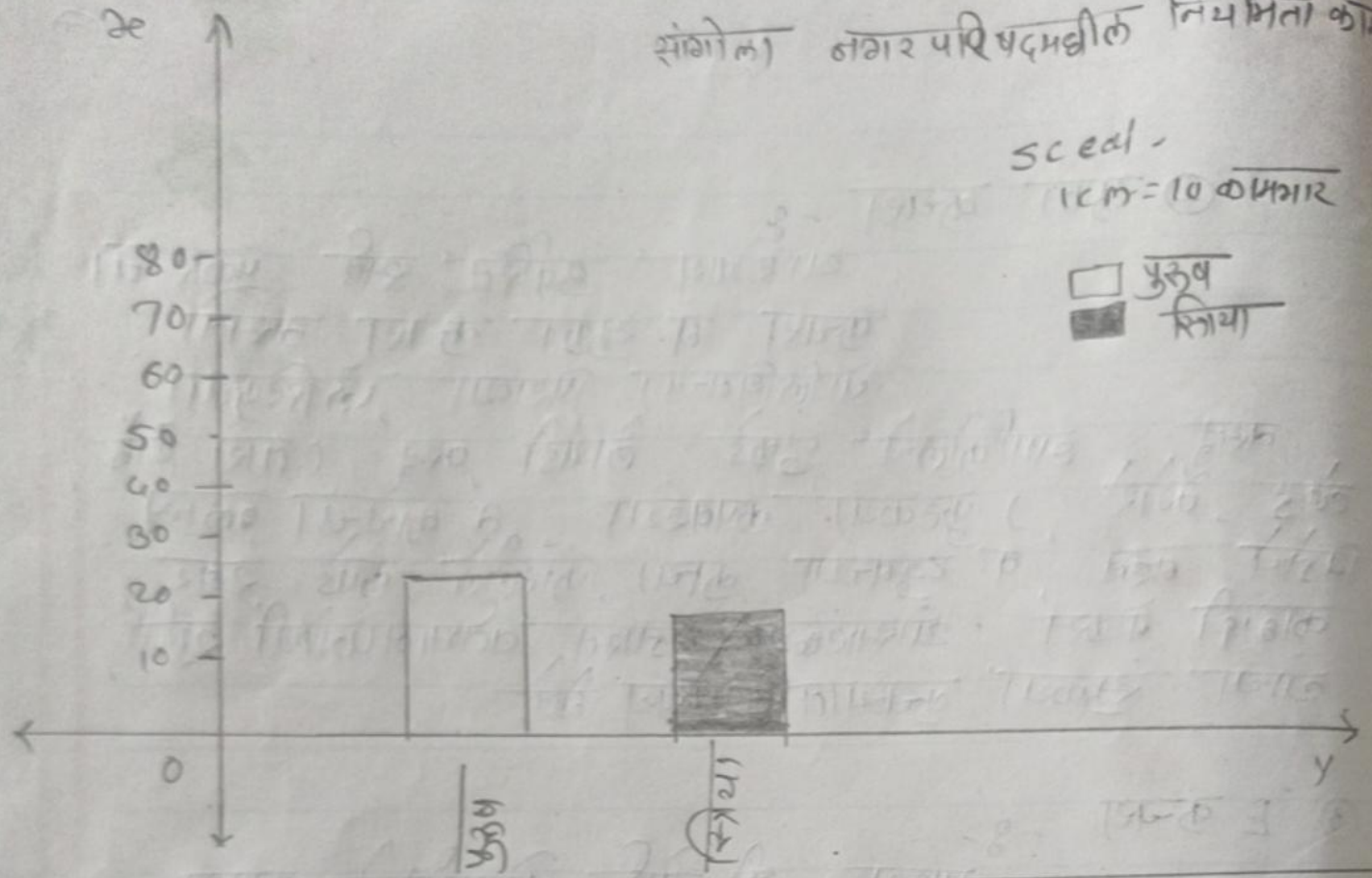
वा त्याचा दर्जा यावर नियंत्रण ठेवता येत नाही

परिणामी त्याची साठवण वाढपुढे व्यक्तीच्या

वा सावरील प्रकिया याचे डिझाईन

करण्यासाठी सांख्यिकी पद्धतीचा वापर

सांगोल नगर परिषदमधील नियमिता का



कृषावा लागतो

* कुचत्याची विल्हेवाट कृषा प्रकारे करता इ.

→ कुचत्याची विल्हेवाट लावण्यासाठी उपाय
सुचवले गेले आहेत. सांगोला शहराच्या
विविध भागातला कुचरा गोळा करणे त्याची
दुरुवण्या राखाण्या ठिकाणी वाहसुक करणे त्या ठिकाणी
राक तर जाकून टाकणे किंवा केपीएच स्वतःसाठी वापरणे
किंवा तसाच टाकून देणे या प्रकारे त्याची
व्यवस्था केली जाते.

* कामगारांची संख्या पुरेशी आहे का इ

→ सांगोला शहरात कायमचे कामगार 20 पुरुष
आणि स्त्रिया - 11 आहेत व Contract base
वरती राकून 130 लोक आहेत आणि महिला,
14 आहेत आणि सांगोला शहरात कामगारा
ची संख्या पुरेशी आहे.

* घटा गाड्यांची सुरुवात केला झाली इ

→ घटा गाड्यांची सुरुवात 2015 पासून सुरु
झाली राकून 13 गाड्या आहेत त्यामध्ये 10 घटा
गाड्या आणि 3 ट्रॅक्टर आहेत.

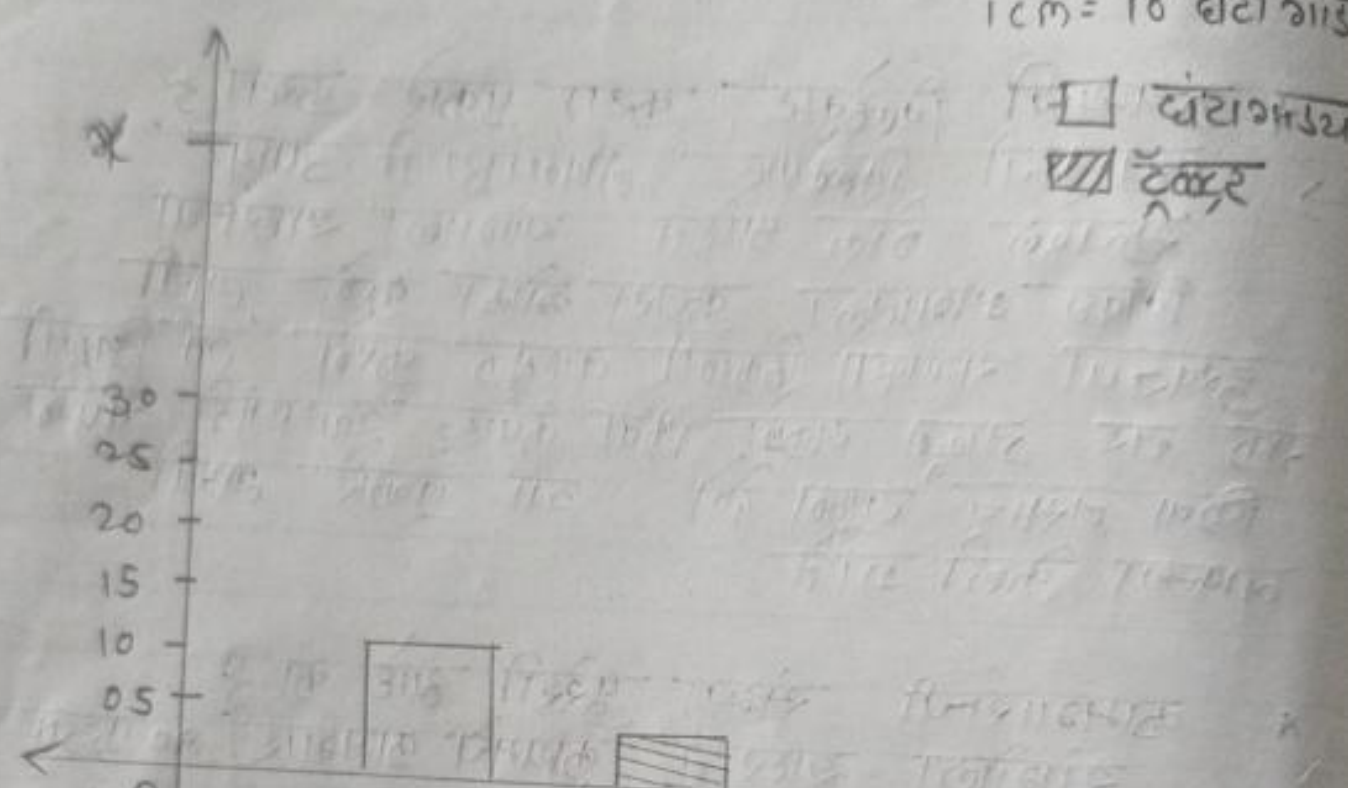
* घटा गाड्या शहराच्या लोकसंख्येनुसार पुरेशा आहेत
का इ

→ सांगोला शहरात घटा गाड्या लोकसंख्येनुसार
पुरेशा आहेत.

घंटा गाड्याची संख्या

Scale

1 cm = 10 घंटा गाड्या



घंटा गाड्या मोजणे हे काम खूप महत्त्वाचे आहे. यातून आपण आपल्या दैनंदिन कार्यांचे वेळापत्रक ठरवू शकतो. यामुळे आपण आपल्या कामांचे वेळोवेळी पूर्तता करू शकतो. यामुळे आपण आपल्या कामांचे वेळोवेळी पूर्तता करू शकतो.

हे काम खूप महत्त्वाचे आहे. यातून आपण आपल्या दैनंदिन कार्यांचे वेळापत्रक ठरवू शकतो. यामुळे आपण आपल्या कामांचे वेळोवेळी पूर्तता करू शकतो. यामुळे आपण आपल्या कामांचे वेळोवेळी पूर्तता करू शकतो.

यातून आपण आपल्या दैनंदिन कार्यांचे वेळापत्रक ठरवू शकतो. यामुळे आपण आपल्या कामांचे वेळोवेळी पूर्तता करू शकतो. यामुळे आपण आपल्या कामांचे वेळोवेळी पूर्तता करू शकतो.

* गोडा केलेल्या कुचऱ्याचे व्यवस्थापन कशा प्रकारे करता इ

→ कुचरा गोडा केल्यानंतर तो योग्य ठिकाणी नैला जाऊ शकतो तिथे, पाण्या पुनर्वापर आणि पुनर्वापर करता येईल जर राखारी वस्तु तुमच्यासाठी खराब झाली असेल

उदा - १ -

दुसरी बाबती ती वेगळ्या प्रकारे वापरू शकते परिणामी कुचरा, वेस्ट प्लॉट, स्क्रूप, ग्रिड, डिंबू इतर ठिकाणी नैला जाणे, आवश्यक, काढे जिथे साधे योग्य, व्यवस्थापन केले जाऊ शकते

* शहरातील सांडपाण्याचे कशा प्रकारे नियोजन केले आहे इ

→ सांडपाण्याचे नियोजन हा पाण्याचे भौतिक, रासायनिक आणि जैविक गुणधर्म हे सामध्ये इतर टाकाऊ घटक सिसकले गेल्याने काळी अस्सलात पाण्याचा वूपर केल्यानंतर सातून उचक - उचक 75% इतक पाणी हे सांडपाणी तयार होत असते सांगोला शहरातील जेव्ही वटारी आहेत तेव्ही वटारी बाठवड्यातून दोन वेळा साफ करतात. सांगोलातील नगर - पालिकेचा आणि राकून पाच राकण्या आहे

combination unjath साहित्यजनचा प्रमाण वाढवले जात म्हणजे कुरकी वगैरे लावणे सातून साहित्यजन सुर्यप्रकाश परतला का त्याचा इलेनपाईन वाढतो

* सांगोलामधील दरवर्षी निर्माण होणारा इतर कचरा

इतर प्रकारचा कचरा

दरवर्षी
(लाख टन)

① धारवृत्ती कचरा

75

② विषारी

18

③ दवायुक्त व्यापक कचरा

0.11

④ इ - कचरा

0.20

⑤ राकूण कचरा

9.30

* धनकुचरा भवस्थापनाची 7 तत्वे -१

① पुनर्विचार

② वापर कुभी करणे

③ पुनर्विचार

④ यत्कीकरण

⑤ संशोधन

⑥ निपमन / जगजावृती

⑦ वापर करू नकारणे

* धनकुचरा व्यवस्थापन पद्धती - ४

सर्व व्यवस्थापनाची सुरुवात घराधारतून सुरु होवता. पाहीजे धनकपात्यात व्यवस्थापनात कुठ्यासाठी धनकुचरा वेगळा करणे महत्त्वाचे आहे. धनकुचरा वेगळा कुठ्यासाठी खालील प्रमाणे वेगवेगळ्या रंगा असणाऱ्या कुड्यांचा वापर केला जाऊ शकतो.

① सफेद :-

पुन्हा वापरण्या येण्याजोगा कुचरा

② हिरवा :- कुजगारा / झील कुचरा

③ आंबा :-

न कुजगारा / सुका कुचरा

सर्वात प्रथम या कुचराची वर्गवारी केली पाहीजे. सातुन कुजगारा कुचरा, धरचा धरी कुजकुन खत करता येतो, इश्लेल्या कुचरा सार्वजनिक अवस्थिने उपलब्ध घरातील कुचराला वर्गवारीसाठी निरनिराळ्या रंगाचे डबे वादल्या वापराव्यात.

* निरिदाने *

धनकचरा व्यवस्थापन करत भासताना प्रमुख
तीन प्रकार आहेत .

1) कचरा कमी करणे - Reduce

2) पुनः वापर करणे - Reuse

3) पुनः चक्रीकरण करणे - Recycle.

Exam Seat No.:

Horticultural Term Paper on
"FLOWERING SHRUBS"

Submitted by

Miss. Bandgar Vaishnavi Kamlakar
Dept. of Botany, V. M. Sangola

Guided by

Dr. R. S. Suryavanshi
Assoc. Prof. & Head, Dept. of Botany, V. M. Sangola

SUBMITTED TO

DEPARTMENT OF BOTANY
VIDNYAN MAHAVIDYALAYA, SANGOLA

JUNE - 2023

Vidnyan Mahavidyalaya, Sangola

Dept. of Botany



The project report entitled, "**FLOWERING SHRUBS**" submitted by
Miss. Bandgar Vaishnavi Kamlakar of Class B. Sc. II
of Botany department at
Vidnyan Mahavidyalaya, Sangola
has been completed satisfactorily.

Head

Examiners 1)

2)

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Sr. No.	Title	Page No.
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2	✍ Introduction	03
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4	✍ <i>Celosia cristata</i>	04
5	✍ <i>Chlorophytum variegatum</i>	04
6	✍ <i>Coleus</i> Sp.	04
7	✍ <i>Dracaena marginata</i>	05
8	✍ <i>Nephrolepis exaltata</i>	05
9	✍ <i>Haemanthus katarinae</i>	05
10	✍ <i>Hibiscus rosa-sinensis</i>	05
11	✍ <i>Ixora coccinea</i>	06
12	✍ <i>Passiflora caerulea</i>	06
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Acknowledgment

I express my sincere thanks to Dr. Suryavanshi R. S. Head dept. Botany Vidnyan Mahavidyalaya Sangola for Valuable guidelines and encouragement for preparing the Project report.

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I express my vote of thanks to Shree. Jangale P. T. for Giving helps whenever we were in need.

I express my thanks to Principal Dr. Mulani S. M. for constant encouragement.

Student Signature
(Miss. Bandgar Vaishnavi Kamlakar)

Introduction:

Horticulture is the art of cultivating plants in gardens to produce food and medicinal ingredients, or for comfort and ornamental purposes. Horticulturists are agriculturists who grow flowers, fruits and nuts, vegetables, and herbs, as well as ornamental trees and lawns.

The study and practice of horticulture have been traced back thousands of years. Horticulture contributed to the transition from nomadic human communities to sedentary, or semi-sedentary, horticultural communities. Horticulture is divided into several categories which focus on the cultivation and processing of different types of plants and food items for specific purposes. To conserve the science of horticulture, multiple organizations worldwide educate, encourage, and promote the advancement of horticulture.

Horticultural crops comprise mainly fruits, vegetables, ornamental, aromatic, plantation, and medicinal plants. These crops perform a major role in agriculture prosperity and the economy of the nation. Horticulture produces possessing vegetables and fruits is a crucial source of diet and nutrition.

1. SADAPHULI

Botanical Name: *Catharanthus roseus*

Family : Apocynaceae

Vern Name : Sadaphuli

The periwinkle like flowers form at the stem tips and may cover much of the shiny foliage. It bears white lavender or rose flowers with a darker coloured throat. It is compact and the leaves have a pale midrib.



2. COCKSCOMB

Botanical Name: *Celosia cristata*

Family : Asteraceae

Vern. Name : Cock's comb

It bears its red or yellow plumes in summer. It has convoluted flower head, red coloured stem, and simple showy leaves.



3. SONG OF INDIA

Botanical Name: *Chlorophytum variegatum*

Family : Liliaceae

Vern. Name : Song of India

It is quick growing with attractive arching leaves, and in spring and summer the cascading wiry stem produce small white flowers followed by tiny plantlets left on the mother plant. These plantlets grow to give an attractive display, especially in a hanging basket.



4. COLEUS

Botanical Name: *Coleus Sp.*

Family : Lamiaceae

Vern. Name : Coleus

The usual height is 1-2 feet. Most have nettle like leaves. There is no basic colour, every conceivable mixture can be found.



5. DRACAENA

Botanical Name: *Dracaena marginata*

Family : Asparagaceae

Vern. Name : Dracaena

It is a favourite specimen plant. Its tall snake like trunk branches with age and grown up to ten feet high. The green colour predominates in the variety tricolour a band of yellow separates the green and red trips and the overall effect is greenish gold.



6. FERN

Botanical Name: *Nephrolepis exaltata*

Family : Nephrolepidaceae

Vern : Fern

It ranges up to 1-2 feet. There are varieties with a double herringbone pattern, each leaflet being divided like a herringbone. The leaflets are sometimes divided even further, to give a feathery or lacy effect.



7. MAY FLOWER

Botanical Name: *Haemanthus katherinae*

Family : Amaryllidaceae

Vern. Name : May flower

It is the most popular evergreen. The red flowers appear in summer. Offsets are not produced. A stout stalk bears the giant flower head above the few large leaves, at the base.



8. JASWAND

Botanical Name: *Hibiscus rosa-sinensis*

Family : Malvaceae

Vern. Name : Jaswand

Hibiscus is an excellent specimen plant for the sunny windowsill. It is large papery flowers with proper care there will be a succession of blooms from spring to autumn. A Hibiscus bush can live for 20 years or more and may be kept small by regular pruning. Hibiscus has numerous named varieties in white, yellow, orange pink and red.



9. IXORA

Botanical Name: *Ixora coccinea*

Family : Rubiaceae

Vern. Name : Ixora



A 3-4 feet shrub with glossy leather leaves.

From late spring to autumn, it bears large bunch of flowers. It possesses large flower heads in white, yellow, salmon, pink or red will last throughout the summer months.

10. KRISHNA-KAMAL

Botanical Name: *Passiflora caerulea*

Family : Passifloraceae

Vern. Name : Krishna-Kamal



The Passiflora flower has an intricate structure despite the delicacy of the flower there is nothing delicate about the plant. It is a rampant climber which will outgrow its welcome if it is not cut back hard each spring. The stems bear deeply lobed leaves, tendril, and short-lived flowers all summer long. attractive display, especially in a hanging basket.

References

- 1.D. G. Hessayon- The House Plant Expert.
- 2.GopalswamyAyangar- Complete Gardening in India.
- 3.M.K. Khan- Horticulture and Gardening.
4. J.S. Aroa- Introductory Ornamental Horticulture.

rsd - rds-rsd

Exam Seat No.:

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Dept. of Botany, V. M. Sangola

Guided by

Dr. R. S. Suryavanshi
Assoc. Prof. & Head, Dept. of Botany, V. M. Sangola

SUBMITTED TO

DEPARTMENT OF BOTANY
VIDNYAN MAHAVIDYALAYA, SANGOLA

JUNE - 2023

Vidnyan Mahavidyalaya, Sangola

Dept. of Botany



The project report entitled, "**FLOWERING SHRUBS**" submitted by
Miss. Devale Pranali Raosaheb of Class B. Sc. II
of Botany department at
Vidnyan Mahavidyalaya, Sangola
has been completed satisfactorily.

Head

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Horticultural crops comprise mainly fruits, vegetables, ornamental, aromatic, plantation, and medicinal plants. These crops perform a major role in agriculture prosperity and the economy of the nation. Horticulture produces possessing vegetables and fruits is a crucial source of diet and nutrition.

1. SADAPHULI

Botanical Name: *Catharanthus roseus*

Family : Apocynaceae

Vern Name : Sadaphuli



The periwinkle like flowers form at the stem tips and may cover much of the shiny foliage. It bears white lavender or rose flowers with a darker coloured throat. It is compact and the leaves have a pale midrib.

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It bears its red or yellow plumes in summer. It has convoluted flower head, red coloured stem, and simple showy leaves.

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It is quick growing with attractive arching leaves, and in spring and summer the cascading wiry stem produce small white flowers followed by tiny plantlets left on the mother plant. These plantlets grow to give an attractive display, especially in a hanging basket.

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The usual height is 1-2 feet. Most have nettle like leaves. There is no basic colour, every conceivable mixture can be found.

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It is a favourite specimen plant. Its tall snake like trunk branches with age and grown up to ten feet high. The green colour predominates in the variety tricolour a band of yellow separates the green and red trips and the overall effect is greenish gold.



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Botanical Name: *Nephrolepis exaltata*

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It ranges up to 1-2 feet. There are varieties with a double herringbone pattern, each leaflet being divided like a herringbone. The leaflets are sometimes divided even further, to give a feathery or lacy effect.



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rsd - rds-rsd

Exam Seat No.:

Horticultural Term Paper on
"FLOWERING SHRUBS"

Submitted by

Miss. Ghadage Dipali Kakaso
Dept. of Botany, V. M. Sangola

Guided by

Dr. R. S. Suryavanshi
Assoc. Prof. & Head, Dept. of Botany, V. M. Sangola

SUBMITTED TO

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Exam Seat No.:

Horticultural Term Paper on
"FLOWERING SHRUBS"

Submitted by

Miss. Ghorpade Tejasvi Tanaji
Dept. of Botany, V. M. Sangola

Guided by

Dr. R. S. Suryavanshi
Assoc. Prof. & Head, Dept. of Botany, V. M. Sangola

SUBMITTED TO

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1. SADAPHULI

Botanical Name: *Catharanthus roseus*

Family : Apocynaceae

Vern Name : Sadaphuli



The periwinkle like flowers form at the stem tips and may cover much of the shiny foliage. It bears white lavender or rose flowers with a darker coloured throat. It is compact and the leaves have a pale midrib.

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Family : Asteraceae

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It bears its red or yellow plumes in summer. It has convoluted flower head, red coloured stem, and simple showy leaves.

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Family : Liliaceae

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It is quick growing with attractive arching leaves, and in spring and summer the cascading wiry stem produce small white flowers followed by tiny plantlets left on the mother plant. These plantlets grow to give an attractive display, especially in a hanging basket.

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Botanical Name: *Coleus Sp.*

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The usual height is 1-2 feet. Most have nettle like leaves. There is no basic colour, every conceivable mixture can be found.

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It is a favourite specimen plant. Its tall snake like trunk branches with age and grown up to ten feet high. The green colour predominates in the variety tricolour a band of yellow separates the green and red trips and the overall effect is greenish gold.



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Botanical Name: *Nephrolepis exaltata*

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rsd - rds-rsd

Exam Seat No.:

Horticultural Term Paper on
"FLOWERING SHRUBS"

Submitted by

Miss. Lavate Apeksha Shankar
Dept. of Botany, V. M. Sangola

Guided by

Dr. R. S. Suryavanshi
Assoc. Prof. & Head, Dept. of Botany, V. M. Sangola

SUBMITTED TO

DEPARTMENT OF BOTANY
VIDNYAN MAHAVIDYALAYA, SANGOLA

JUNE - 2023

Vidnyan Mahavidyalaya, Sangola

Dept. of Botany



The project report entitled, "**FLOWERING SHRUBS**" submitted by
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rsd - rds-rsd

Exam Seat No.:

Horticultural Term Paper on
"FLOWERING SHRUBS"

Submitted by

Miss. Ligade Rutuja Vishnu
Dept. of Botany, V. M. Sangola

Guided by

Dr. R. S. Suryavanshi
Assoc. Prof. & Head, Dept. of Botany, V. M. Sangola

SUBMITTED TO

DEPARTMENT OF BOTANY
VIDNYAN MAHAVIDYALAYA, SANGOLA

JUNE - 2023

Vidnyan Mahavidyalaya, Sangola

Dept. of Botany



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Horticultural Term Paper on
"FLOWERING SHRUBS"

Submitted by

Miss. Metkari Dhanashri Dnyaneshwar
Dept. of Botany, V. M. Sangola

Guided by

Dr. R. S. Suryavanshi
Assoc. Prof. & Head, Dept. of Botany, V. M. Sangola

SUBMITTED TO

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Dept. of Botany, V. M. Sangola

Guided by

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SUBMITTED TO

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1. SADAPHULI

Botanical Name: *Catharanthus roseus*

Family : Apocynaceae

Vern Name : Sadaphuli



The periwinkle like flowers form at the stem tips and may cover much of the shiny foliage. It bears white lavender or rose flowers with a darker coloured throat. It is compact and the leaves have a pale midrib.

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Botanical Name: *Celosia cristata*

Family : Asteraceae

Vern. Name : Cock's comb



It bears its red or yellow plumes in summer. It has convoluted flower head, red coloured stem, and simple showy leaves.

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Botanical Name: *Chlorophytum variegatum*

Family : Liliaceae

Vern. Name : Song of India



It is quick growing with attractive arching leaves, and in spring and summer the cascading wiry stem produce small white flowers followed by tiny plantlets left on the mother plant. These plantlets grow to give an attractive display, especially in a hanging basket.

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Botanical Name: *Coleus Sp.*

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Botanical Name: *Dracaena marginata*

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It is a favourite specimen plant. Its tall snake like trunk branches with age and grown up to ten feet high. The green colour predominates in the variety tricolour a band of yellow separates the green and red trips and the overall effect is greenish gold.



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Botanical Name: *Nephrolepis exaltata*

Family : Nephrolepidaceae

Vern : Fern

It ranges up to 1-2 feet. There are varieties with a double herringbone pattern, each leaflet being divided like a herringbone. The leaflets are sometimes divided even further, to give a feathery or lacy effect.



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Botanical Name: *Haemanthus katherinae*

Family : Amaryllidaceae

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Botanical Name: *Ixora coccinea*

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rsd - rds-rsd

Exam Seat No.:

Horticultural Term Paper on
"FLOWERING SHRUBS"

Submitted by

Miss. Patil Shubhangi Kundlik
Dept. of Botany, V. M. Sangola

Guided by

Dr. R. S. Suryavanshi
Assoc. Prof. & Head, Dept. of Botany, V. M. Sangola

SUBMITTED TO

DEPARTMENT OF BOTANY
VIDNYAN MAHAVIDYALAYA, SANGOLA

JUNE - 2023

Vidnyan Mahavidyalaya, Sangola

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rsd - rds-rsd

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Horticultural Term Paper on
"FLOWERING SHRUBS"

Submitted by

Miss. Pawar Radhika Ashok
Dept. of Botany, V. M. Sangola

Guided by

Dr. R. S. Suryavanshi
Assoc. Prof. & Head, Dept. of Botany, V. M. Sangola

SUBMITTED TO

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rsd - rsd-rsd

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"FLOWERING SHRUBS"

Submitted by

Miss. Pawar Rutuja Balu
Dept. of Botany, V. M. Sangola

Guided by

Dr. R. S. Suryavanshi
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SUBMITTED TO

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It is quick growing with attractive arching leaves, and in spring and summer the cascading wiry stem produce small white flowers followed by tiny plantlets left on the mother plant. These plantlets grow to give an attractive display, especially in a hanging basket.



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Botanical Name: *Coleus Sp.*

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It is a favourite specimen plant. Its tall snake like trunk branches with age and grown up to ten feet high. The green colour predominates in the variety tricolour a band of yellow separates the green and red trips and the overall effect is greenish gold.



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Botanical Name: *Nephrolepis exaltata*

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It ranges up to 1-2 feet. There are varieties with a double herringbone pattern, each leaflet being divided like a herringbone. The leaflets are sometimes divided even further, to give a feathery or lacy effect.



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Botanical Name: *Haemanthus katherinae*

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Botanical Name: *Hibiscus rosa-sinensis*

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Botanical Name: *Ixora coccinea*

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A 3-4 feet shrub with glossy leather leaves.

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rsd - rsd-rsd

Exam Seat No.:

Horticultural Term Paper on
"FLOWERING SHRUBS"

Submitted by

Miss. Shinde Jotsna Shrimant
Dept. of Botany, V. M. Sangola

Guided by

Dr. R. S. Suryavanshi
Assoc. Prof. & Head, Dept. of Botany, V. M. Sangola

SUBMITTED TO

DEPARTMENT OF BOTANY
VIDNYAN MAHAVIDYALAYA, SANGOLA

JUNE - 2023

Vidnyan Mahavidyalaya, Sangola

Dept. of Botany



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Exam Seat No.:

Horticultural Term Paper on
"FLOWERING SHRUBS"

Submitted by

Miss. Swami Akshta Appyya
Dept. of Botany, V. M. Sangola

Guided by

Dr. R. S. Suryavanshi
Assoc. Prof. & Head, Dept. of Botany, V. M. Sangola

SUBMITTED TO

DEPARTMENT OF BOTANY
VIDNYAN MAHAVIDYALAYA, SANGOLA

JUNE - 2023

Vidnyan Mahavidyalaya, Sangola

Dept. of Botany



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rsd - rds-rsd

Exam Seat No.:

Horticultural Term Paper on
"FLOWERING SHRUBS"

Submitted by

Miss. Waghmare Prachi Raju
Dept. of Botany, V. M. Sangola

Guided by

Dr. R. S. Suryavanshi
Assoc. Prof. & Head, Dept. of Botany, V. M. Sangola

SUBMITTED TO

DEPARTMENT OF BOTANY
VIDNYAN MAHAVIDYALAYA, SANGOLA

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Botanical Name: *Ixora coccinea*

Family : Rubiaceae

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A 3-4 feet shrub with glossy leather leaves.

From late spring to autumn, it bears large bunch of flowers. It possesses large flower heads in white, yellow, salmon, pink or red will last throughout the summer months.

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rsd - rds-rsd

Exam Seat No.:

Horticultural Term Paper on
"FLOWERING SHRUBS"

Submitted by

Mr. Bandgar Vikas Shivaji
Dept. of Botany, V. M. Sangola

Guided by

Dr. R. S. Suryavanshi
Assoc. Prof. & Head, Dept. of Botany, V. M. Sangola

SUBMITTED TO

DEPARTMENT OF BOTANY
VIDNYAN MAHAVIDYALAYA, SANGOLA

JUNE - 2023

Vidnyan Mahavidyalaya, Sangola

Dept. of Botany



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SUBMITTED TO

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rsd - rds-rsd

Exam Seat No.:

Horticultural Term Paper on
"FLOWERING SHRUBS"

Submitted by

Mr. Kolawale Aniket Hanmant
Dept. of Botany, V. M. Sangola

Guided by

Dr. R. S. Suryavanshi
Assoc. Prof. & Head, Dept. of Botany, V. M. Sangola

SUBMITTED TO

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Submitted by

Mr. Maske Akash Aba
Dept. of Botany, V. M. Sangola

Guided by

Dr. R. S. Suryavanshi
Assoc. Prof. & Head, Dept. of Botany, V. M. Sangola

SUBMITTED TO

DEPARTMENT OF BOTANY
VIDNYAN MAHAVIDYALAYA, SANGOLA

JUNE - 2023

Vidnyan Mahavidyalaya, Sangola

Dept. of Botany



The project report entitled, "**FLOWERING SHRUBS**" submitted by

Mr. Maske Akash Aba of Class B. Sc. II

of Botany department at

Vidnyan Mahavidyalaya, Sangola

has been completed satisfactorily.

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Examiners 1)

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Introduction:

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The study and practice of horticulture have been traced back thousands of years. Horticulture contributed to the transition from nomadic human communities to sedentary, or semi-sedentary, horticultural communities. Horticulture is divided into several categories which focus on the cultivation and processing of different types of plants and food items for specific purposes. To conserve the science of horticulture, multiple organizations worldwide educate, encourage, and promote the advancement of horticulture.

Horticultural crops comprise mainly fruits, vegetables, ornamental, aromatic, plantation, and medicinal plants. These crops perform a major role in agriculture prosperity and the economy of the nation. Horticulture produces possessing vegetables and fruits is a crucial source of diet and nutrition.

1. SADAPHULI

Botanical Name: *Catharanthus roseus*

Family : Apocynaceae

Vern Name : Sadaphuli

The periwinkle like flowers form at the stem tips and may cover much of the shiny foliage. It bears white lavender or rose flowers with a darker coloured throat. It is compact and the leaves have a pale midrib.



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Family : Asteraceae

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The usual height is 1-2 feet. Most have nettle like leaves. There is no basic colour, every conceivable mixture can be found.



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Botanical Name: *Dracaena marginata*

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It is a favourite specimen plant. Its tall snake like trunk branches with age and grown up to ten feet high. The green colour predominates in the variety tricolour a band of yellow separates the green and red trips and the overall effect is greenish gold.



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Botanical Name: *Nephrolepis exaltata*

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It ranges up to 1-2 feet. There are varieties with a double herringbone pattern, each leaflet being divided like a herringbone. The leaflets are sometimes divided even further, to give a feathery or lacy effect.



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Botanical Name: *Haemanthus katherinae*

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rsd - rds-rsd

Exam Seat No.:

Horticultural Term Paper on
"FLOWERING SHRUBS"

Submitted by

Mr. Metakari Vikram Dattatraya
Dept. of Botany, V. M. Sangola

Guided by

Dr. R. S. Suryavanshi
Assoc. Prof. & Head, Dept. of Botany, V. M. Sangola

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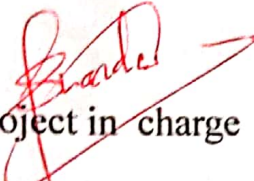
rsd - rds-rsd

Exam Seat No.-224797


Date 25-5-202

CERTIFICATE

This is certify that Mr. Koli Sushant Sanjayy..... B.Sc.-111(Zoology)
has satisfactory completed the project entitled INSECT DIVERSITY IN AT
AKOLA NEAR MAN RIVER , Tal — Sangola , Dist — Solapur (M.S)"for
partial completion of B.Sc.III (Zoology) degree of University of PAH, Solapur
during the year 2022-2023


Project in charge


Examiner


Head
Dept. of Zoology
Head of Dept.
Vidnyan Mahavidyalaya Sangola
Tal.Sangola Dist.Solapur

Exam Seat No.- 168019


Date - 25/05/23

CERTIFICATE

This is certify that Mr. Shingare Raviraj Madhukas B.Sc.-II (Zoology) has satisfactory completed the project entitled "Bird Diversity at Market Yard Campus of Sangola city , Tal - Sangola , Dist - Solapur (M.S)" for partial completion of B.Sc.II (Zoology) degree of University of PAH, Solapur during the year 2022-2023


Project in charge


Examiners
25-5-2023


Head
Dept. of Zoology
Head of the Dept.
Mahavidyalaya, Sangola
Tal. Sangola, Dist. Solapur

Exam Seat No.- 226829


Date - 22-5-2023

CERTIFICATE

This is certify that Miss/Mr. Missal Neha Ramchandra
----- B.Sc.-III (Zoology) has satisfactory completed the project entitled " Bird
Diversity at Vidnyan Mahavidyalya Campus of Sangola city , Tal - Sangola ,
Dist - Solapur (M.S)"for partial completion of B.Sc.III (Zoology) degree of
University of PAH, Solapur during the year 2022-2023


Project in charge


Examiners


Head
Dept. of Zoology
Head of the Dept.
Vidnyan Mahavidyalya
Tal. Sangola Dist. Solapur

Exam Seat No.-


Date - 23/5/23

CERTIFICATE

This is certify that Mr. Aniket Chandrakant Wakate. B.Sc.-II (Zoology) has satisfactory completed the project entitled " Bird Diversity at Market Yard Campus of Sangola city , Tal - Sangola , Dist - Solapur (M.S)" for partial completion of B.Sc.II (Zoology) degree of University of PAH, Solapur during the year **2022-2023**


Project in charge


23-5-2023.
Examiners


Head
Dept. of Zoology
Vidya Pratishthan
Tal. Sangola Dist. Solapur

Exam Seat No.- 226458



Date - 22/5/2023

CERTIFICATE

This is certify that Miss/Mr. Waghmode Prajakta Daydu

----- B.Sc.-III (Zoology) has satisfactory completed the project entitled " Bird Diversity at Vidnyan Mahavidyalya Campus of Sangola city , Tal - Sangola , Dist - Solapur (M.S)"for partial completion of B.Sc.III (Zoology) degree of University of PAH, Solapur during the year 2022-2023


Project in charge


Examiners 25-5-2023

Head
Dept. of Zoology
Vidya Head of the Dept.
Tal Sangol Dist Solapur

Exam Seat No.-


Date - 25-5-2023

CERTIFICATE

This is certify that Mr. ~~Miss~~ Misal Kajal pandurang B.Sc.-III (Zoology) has satisfactory completed the project entitled " Bird Diversity at Market Yard Campus of Sangola city , Tal – Sangola , Dist – Solapur (M.S)" for partial completion of B.Sc. III (Zoology) degree of University of PAH, Solapur during the year 2022-2023


Project in charge


Examiners


Head of the Dept.
Dept. of Zoology
Vidyan Mahavidyalaya, Sangr
Tal. Sangola, Dist. Solapur

Exam Seat No.- 224651.


Date - 24/5/23.

CERTIFICATE

This is certify that Mr. miss. Pashica. S. Ganibhae..... B.Sc.-III(Zoology) has satisfactory completed the project entitled " Bird Diversity at Market Yard Campus of Sangola city , Tal - Sangola , Dist - Solapur (M.S)" for partial completion of B.Sc.II (Zoology) degree of University of PAH, Solapur during the year 2022-2023


Project in charge


25-5-2023
Examiners


Head
Dept. of Zoology
Vidyan Mahavidyalaya Sangol
Tal. Sangola Dist. Solapur
Head of the Dept.

Exam Seat No.- 210997

Date - 24-5-2023


CERTIFICATE

This is certify that Miss/Mr. Shinde Arati Prakash

----- B.Sc.-III (Zoology) has satisfactory completed the project entitled " Bird Diversity at Vidnyan Mahavidyalya Campus of Sangola city , Tal - Sangola , Dist - Solapur (M.S)"for partial completion of B.Sc.III (Zoology) degree of University of PAH, Solapur during the year 2022-2023


Project in charge


25-5-2023
Examiners



Head
Dept. of Zoology
Head of the Dept.
Vidnyan Mahavidyalaya Sangola
Tal. Sangola Dist. Solapur

Exam Seat No.- 212139


Date - 24/5/2023

CERTIFICATE

This is certify that Miss/Mr. Linge komal siddeshwar,
----- B.Sc.-III (Zoology) has satisfactory completed the project entitled " Bird
Diversity at Vidnyan Mahavidyalya Campus of Sangola city , Tal - Sangola ,
Dist - Solapur (M.S)" for partial completion of B.Sc.III (Zoology) degree of
University of PAH, Solapur during the year 2022-2023


Project in charge


Examiners 25/5/2023


Head
Dept of Zoology
Head of the Dept
Vidnyan Mahavidyalaya, Sangola
Tal. Sangola Dist. Solapur

Exam Seat No.- 224798


Date -24-5-23

CERTIFICATE

This is certify that Miss Kadkar Sandhya Yashwant B.Sc.-III (Zoology) has satisfactory completed the project entitled " Bird Diversity at Market Yard Campus of Sangola city , Tal – Sangola , Dist – Solapur (M.S)" for partial completion of B.Sc.II (Zoology) degree of University of PAH, Solapur during the year 2022-2023


Project in charge


Examiners 25-5-2023


Head
Dept. of Zoology
Head of the Dept.
Vidyan Mahavidyalaya, Sangola
Tal. Sangola Dist. Solapur


Exam Seat No.-


Date - 24/05/2023

CERTIFICATE

This is certify that Miss/Mr. Mayan Prashant Samadham
----- B.Sc.-III (Zoology) has satisfactory completed the project entitled " Bird
Diversity at Vidnyan Mahavidyalya Campus of Sangola city , Tal - Sangola ,
Dist - Solapur (M.S)"for partial completion of B.Sc.III (Zoology) degree of
University of PAH, Solapur during the year 2022-2023



Project in charge

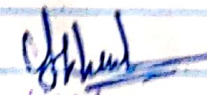

Examiners
25-5-2023

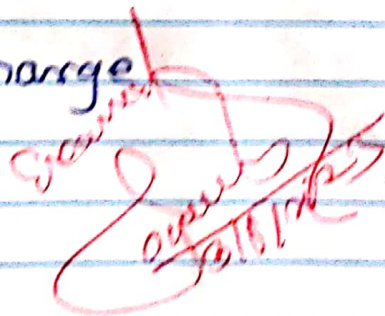

Head
Head of the Dept.
Vidnyan Mahavidyalaya, Sangola
Tal. Sangola, Dist. Solapur

CERTIFICATE

This is to certify that,
Miss. Sonali Dhondiram Yedag,
has satisfactorily completed the project
of zoology on the topic of 'Bird
information' prescribed by purnyashlok
Abhilyadevi Halkare Solapur University
Solapur for B.Sc II during 2022-23.


Teacher in charge


Head of Department
Dept. of Zoology
Tal. Sangli - Dist. Solapur



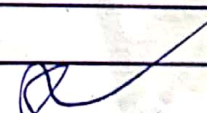
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Date _____

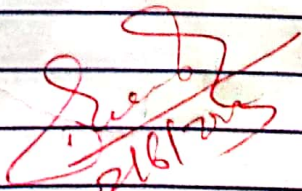
Page No. _____

CERTIFICATE

This is to certify that,
Miss. Metkari Dhanashri Dnyaneshwar
has Satisfactory Completed the project
of Zoology on the topic of "Butterfly
Biodiversity" prescribed by punyashlok
Ahilyadevi Holkar Solapur university Solapur
For B.Sc-II during 2022-23.


Teacher in charge


Head of Department
Vidyan Mahavidyalaya, Sangola
Tal. Sangola, Dist. Solapur



CERTIFICATE

This is to Certify that,
Miss. Shinde Sonali Sitaram
has Satisfactory completed the project
of zoology on the topic of "Bird Informa
tion" prescribed by Purnyashlok Abhigadevi
Holkar Solapur university Solapur for
B.Sc-II during 2022-23.


Teacher in charge.

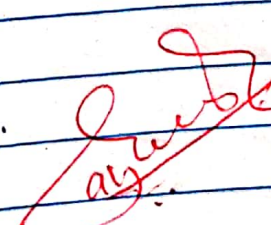
Head of Department.

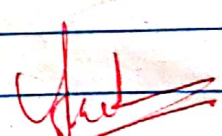
Dept. of Zoology
Vidyan Mahavidyalaya, Sangol
Tal. Sangli, Dist. Solapur

Certificate

This is to certify that, Mr. Mr. Metkari Vikram Dattatraya has satisfactorily completed the project of Zoology on the topic 'Lumpy Skin Disease' prescribed by Purnyachlok Ahilyadevi Holkar Solapur University, Solapur for B.Sc. II during 2022-23


Teacher
in charge.




Head
Dept. of Zoology
Vidya Mahavidyalaya, Sangola
Tal. Sangola, Dist. Solapur
Head of
Department.

Certificate

This is to certify that miss.
Bandgar shubhangi pitambar.
Exam seat no. 036802 of B.Sc
II have attended during of
PRN (~~2672~~) (2672).

Teacher incharge:-

Examiner -

Head
Department
of Zoology.

Date : _____

Page : _____


6

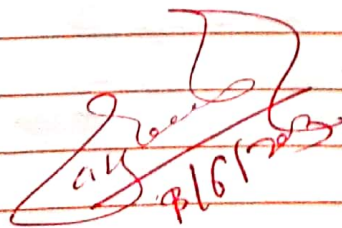
Topic : _____

CERTIFICATE

This is to certify that,
Miss. Shewatkar Komal Madhukar
has satisfactorily completed the project
of Zoology on the topic Genetic Disorders
prescribed by Punyashlok Ahilyadevi Holkar
Solapur University Solapur for Bsc II
during 2022-23.

~~Teacher in charge~~


Head of Department.
Dept. of Zoology
Vidyan Mahavidyalaya, Sangola
Tal. Sangola Dist. Solapur


7/6/23


TOPIC: _____

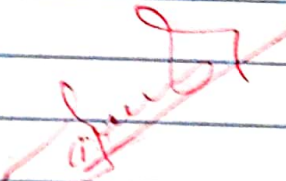
DATE :- _____


CERTIFICATE

This is to certify that Miss. Khandekar Kajal Shivaji has satisfactorily completed that project of zoology on the topic of information prescribed by Punyashlok Ahilyadevi Holkar Solapur University Solapur for B.Sc-II during 2022-23.

Bird of Biodiversity


Teacher
incharge


Examiner


Head
Dept. of Zoology
Vidyanilaya, Sangola
Tal. Sangli Dist. Solapur
Dept. of zoology

FOR EDUCATIONAL USE

A-1

Exam Seat No.:

Horticultural Term Paper on
“PERENNIAL PLANTS”

Submitted by

Miss. Autade Kavita Popat
Dept. of Botany, V. M. Sangola

Guided by

Dr. R. S. Suryavanshi
Assoc. Prof. & Head, Dept. of Botany, V. M. Sangola

SUBMITTED TO

DEPARTMENT OF BOTANY
VIDNYAN MAHAVIDYALAYA, SANGOLA

JUNE - 2023

Vidnyan Mahavidyalaya, Sangola

Dept. of Botany



The project report entitled, “**PERENNIAL PLANTS**” submitted by **MISS.**

AUTADE KAVITA POPAT of Class B. Sc. II

Botany department, Vidnyan Mahavidyalaya, Sangola

has been completed satisfactorily in 2022-23.

Head

Examiners 1)

2)

CONTENT		
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9	✍ Hibiscus	07
10	✍ Blackberry	07
11	✍ Mango	08
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Acknowledgment

I express my sincere thanks to Dr. Suryavanshi R. S. Head dept. Botany Vidnyan Mahavidyalaya Sangola for Valuable guidelines and encouragement for preparing the Project report.

I also thankful to Ass. Prof. Dr. Mrs. Gaikwad S. A and Assoc. Prof. Mr. Hake M. A., Assist. Prof. Ligade V. V. and Assist. Prof. Ghadage S. U. for giving continuous help in completion of this project Report.

I express my vote of thanks to Shree. Jangale P. T. for Giving helps whenever we were in need.

I express my thanks to Principal Dr. Mulani S. M. for constant encouragement.

Student Signature

Introduction:

Horticulture is the art of cultivating plants in gardens to produce food and medicinal ingredients, or for comfort and ornamental purposes. Horticulturists are agriculturists who grow flowers, fruits and nuts, vegetables, and herbs, as well as ornamental trees and lawns.

The study and practice of horticulture have been traced back thousands of years. Horticulture contributed to the transition from nomadic human communities to sedentary, or semi-sedentary, horticultural communities. Horticulture is divided into several categories which focus on the cultivation and processing of different types of plants and food items for specific purposes. To conserve the science of horticulture, multiple organizations worldwide educate, encourage, and promote the advancement of horticulture.

Horticultural crops comprise mainly fruits, vegetables, ornamental, aromatic, plantation, and medicinal plants. These crops perform a major role in agriculture prosperity and the economy of the nation. Horticulture produces possessing vegetables and fruits is a crucial source of diet and nutrition.

PERENNIALL PLANTS: Introduction: - A perennial plants are those plants which lives more than two years. The term is often used to differentiate a plant from short lived annual and biennials.

1. APPLE

Botanical name: - *Pyrus malus*

Family: - Rosaceae

Vernacular name: - Apple

Description: -

The apple is a hardy, deciduous woody perennial tree that grows in all temperature zone. Apples grow best where there is cold in winter, moderate summer temperature and medium to high humidity.

Apples can grow from 10-30 feet tall. They are fast growing, but growth slows with age. Apple trees can live for one hundred years or more.

Uses: -

1. Apple is a nutritious fruit it contains vitamin E, B1 and B6.
2. 2]Apples are also a rich source of polyphenols, an important group of antioxidants. Antioxidants are compounds that protect our cell from free radical harmful molecules which causes heart disease and cancer.
3. 3] Apples are high in fiber and fibres. Antioxidant rich apples may help to protect our lungs from oxidative damage.
4. 5]Apple skin and seeds contain various phytochemicals, particularly polyphenols which are good for health.



2. PINEAPPLE

Botanical Name: *Ananas comosus*

Vernacular name: - Ananas comosus

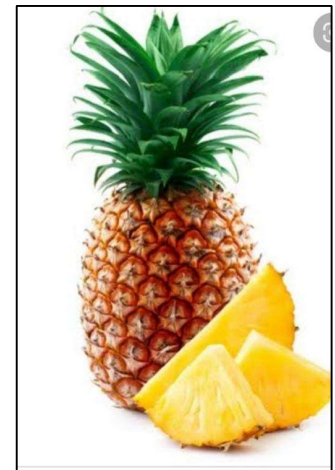
Family Name: -Bromeliaceae

Description:

A tropical American plant bearing a large fleshy edible fruit with a terminal tuft of stiff leaves; widely cultivated in the tropics. Large sweet fleshy tropical fruit with a terminal tuft of stiff leaves; widely cultivated.

Uses:

1. walked down the highway into the darkness again, carrying booty duffel bags in my left hand and feeding myself the tasteless pineapple fries pie with my right.
2. She didn't understand how such a lonely, depressed spirit could produce a horn of plenty that shot out pineapple and birthday cakes.
3. She ran back inside and emerged with a small pineapple that she pressed into master's hand.
4. If a ten- thousand- dollar lottery ticket could buy a can of pineapple who knew what a diamond ring was worth.



3. GUAVA

Botanical Name: *Psidium guajava*

Common Name: Guava

Family: Myrtaceae



Description:

The fruits are round to pear-shaped and measure up to 7.6 cm in diameter; their pulp contains many small hard seeds (more abundant in wild forms than in cultivated varieties). The fruit has a yellow skin and white, yellow, or pink flesh. The musky, at times pungent, odour of the sweet pulp is not always appreciated.

Uses:

1. It is helpful in treating diabetes.
2. It improves eyesight.
3. It slows down the appearance of cataract.
4. It helps in preventing breast, oral and prostate cancers.

5. HOLLYHOCK

Botanical Name: *Alcea rosea*

Family: Mallows

Common Name: Hollyhocks

Description:

Alcea rosea, or Hollyhocks, are herbaceous flowering plants that reseed themselves and can produce colonies of plants that return to the garden year after year. They are typically found in cultivated areas and rarely in "the wild". Their original habitat is unknown, but the plant is probably a cultigen that started out in Turkey. Note that it is sometimes listed in nursery catalogs under *Althaea*.



Uses:

1. Hollyhock is a plant.
2. The seed, root, stem, leaf, and flower are used as medicine. Hollyhock is used for pain, stomach ulcers, wound healing, diabetes, and many other conditions, but there is no good scientific evidence to support these uses.
3. The flower is used to make medicinal tea.
4. People use hollyhock for preventing and treating breathing disorders and digestive tract problems.
5. Some people apply hollyhock directly to the skin for treating ulcers and painful swelling.

6. CHIKKU

Botanical Name: *Achras sapota*

Family: Sapotaceae

Common Name: Chikku

Description:

It is a long-lived evergreen, native to southern Mexico, Central America, and Caribbean. Occurrence is in coastal ecoregion, where it is a subdominant plant species.



Uses

1. Rich in vitamin A and C
2. -Energy provided
3. Anti-inflammatory
4. Controls blood pressure
5. Good for moms-to-be

7. LEMON

Botanical name: *Citrus Limon*

Common name: Lemon

Family: Rutaceae

Descriptions:

The lemon is a round, slightly elongated fruit, it has a strong and resistant skin with an intense bright yellow colour when it is totally ripe, giving off a special aroma when it is cut. The pulp is pale yellow, juicy, and acid divided into gores. The lemons are a species of small evergreen, trees in the flowering plant family Rutaceae, native of Asia, primarily Northeast India.



Uses:

1. Lemons are rich in vitamin C.
2. Prevent kidney stone.
3. Help control weight.
4. Improve digestive health.
5. Support heart health.

8. HIBISCUS

Botanical Name: *Hibiscus rosa-sinesis*

Family: mallow family (malvaceae)

Vernacular: Hibiscus

Description:

Hibiscus is a genus of flowering Plants in the mallow family. Malvaceae genus the is quite large comprising several hundred species. That are native to warm temperature Subtropical. tropical. regions throughout the world. Other names include hardy hibiscus, rose of Sharon & tropical hibiscus.

Uses:

1. It is used for blacking Shoes.
2. It is used to dye hair.
3. In Hawaiians eat the row flowers to aid the digestion
4. Chinese people pickle them.

Blackberry

Botanical name: *Rubus*

Family: *Rosaceae*

Common name: *Blackberry*

Description:

What distinguishes the blackberry from its raspberry relatives is whether or not the torus (receptacle or stem). "Picks with "the fruit. When picking a blackberry fruit, the torus stays with the fruit. With a raspberry, the torus remain on the plant, leaving a hollow core in the raspberry fruit,

The term bramble, a word referring to any impenetrable thicket, has in some circles traditionally been applied specifically to the blackberry or its products. (5) though in the United States it applies to all members of the genus *rubus*. In small parts of the western US, the term caneberry is used to refer to blackberries and raspberries as a group rather than the term bramble. Briar is also sometimes used to refer to plant, though this name is used for other thorny thickets as well.

Uses:

Seed composition: blackberries contains numerous large seeds that are not always preferred by consumer. The seeds contain oil rich in omega-3 (alpha-linolenic acid) and omega-6 (linoleic acid) fats as well as protein, dietary fiber, carotenoids, ellagitannins, and ellagic acid. Culinary use: The ripe fruit is commonly used in desserts, jams, jelly, wine and liqueurs. It may be mixed with other berries and fruits for pies and crumbles. Blackberries are also used to produce candy.



Mango

Botanical name:. *Mangifera Indica*

Common name: Mango

Family:Anacardiaceae



Description:.

The fruit varies greatly in size and character. Its form is oval, round, heart shaped, kidney-shaped or long and slender. The smallest mangoes are no longer than plums, while other's may weight 1.8 to 2.3 kg. Some varieties are vividly coloured with shades of red and yellow, while other's are dull green. Mango is called king of fruit. Mango is sweet tropical fruit. Ripe mangoes are juicy, fleshy and delicious. The yellow colour of mangoes is due to presence of Carotene.

Uses:

- 1) Raw mango is used for making pickles.
- 2) Mango tree leaves are used for medicinal purpose.
- 3) Mango contain immune-boosting nutrients.
- 4) It helps prevent diabetes.
- 5) Mango leaves helps in keeping body energetic.
- 6) Mango is rich in proteins, nutrients and vitamin C.

Reference:

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7. Bechtold, Thomas; Mussak, Rita (6 April 2009). Handbook of Natural Colorants. John Wiley & Sons. p. 155. ISBN 9780470744963.

२२२ - २२२ - २२२

Exam Seat No.:

Horticultural Term Paper on
“PERENNIAL PLANTS”

Submitted by

Miss. Bansode Tejaswini Mahadev
Dept. of Botany, V. M. Sangola

Guided by

Dr. R. S. Suryavanshi
Assoc. Prof. & Head, Dept. of Botany, V. M. Sangola

SUBMITTED TO

DEPARTMENT OF BOTANY
VIDNYAN MAHAVIDYALAYA, SANGOLA

JUNE - 2023

Vidnyan Mahavidyalaya, Sangola

Dept. of Botany



The project report entitled, “**PERENNIAL PLANTS**” submitted by **MISS.**

BANSODE TEJASWINI MAHADEV of Class B. Sc. II

Botany department, Vidnyan Mahavidyalaya, Sangola

has been completed satisfactorily in 2022-23.

Head

Examiners 1)

2)

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Family: - Rosaceae

Vernacular name: - Apple

Description: -

The apple is a hardy, deciduous woody perennial tree that grows in all temperature zone. Apples grow best where there is cold in winter, moderate summer temperature and medium to high humidity.

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Uses: -

1. Apple is a nutritious fruit it contains vitamin E, B1 and B6.
2. 2]Apples are also a rich source of polyphenols, an important group of antioxidants. Antioxidants are compounds that protect our cell from free radical harmful molecules which causes heart disease and cancer.
3. 3] Apples are high in fiber and fibres. Antioxidant rich apples may help to protect our lungs from oxidative damage.
4. 5]Apple skin and seeds contain various phytochemicals, particularly polyphenols which are good for health.



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Botanical Name: *Ananas comosus*

Vernacular name: - Ananas comosus

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Description:

A tropical American plant bearing a large fleshy edible fruit with a terminal tuft of stiff leaves; widely cultivated in the tropics. Large sweet fleshy tropical fruit with a terminal tuft of stiff leaves; widely cultivated.

Uses:

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3. The flower is used to make medicinal tea.
4. People use hollyhock for preventing and treating breathing disorders and digestive tract problems.
5. Some people apply hollyhock directly to the skin for treating ulcers and painful swelling.

6. CHIKKU

Botanical Name: *Achras sapota*

Family: Sapotaceae

Common Name: Chikku

Description:

It is a long-lived evergreen, native to southern Mexico, Central America, and Caribbean. Occurrence is in coastal ecoregion, where it is a subdominant plant species.



Uses

1. Rich in vitamin A and C
2. Energy provider
3. Anti-inflammatory
4. Controls blood pressure
5. Good for moms-to-be

7. LEMON

Botanical name: *Citrus Limon*

Common name: Lemon

Family: Rutaceae

Descriptions:

The lemon is a round, slightly elongated fruit, it has a strong and resistant skin with an intense bright yellow colour when it is totally ripe, giving off a special aroma when it is cut. The pulp is pale yellow, juicy, and acid divided into gores. The lemons are a species of small evergreen, trees in the flowering plant family Rutaceae, native of Asia, primarily Northeast India.



Uses:

1. Lemons are rich in vitamin C.
2. Prevent kidney stone.
3. Help control weight.
4. Improve digestive health.
5. Support heart health.

8. HIBISCUS

Botanical Name: *Hibiscus rosa-sinesis*

Family: mallow family (malvaceae)

Vernacular: Hibiscus

Description:

Hibiscus is a genus of flowering Plants in the mallow family. Malvaceae genus the is quite large comprising several hundred species. That are native to warm temperature Subtropical. tropical. regions throughout the world. Other names include hardy hibiscus, rose of Sharon & tropical hibiscus.

Uses:

1. It is used for blacking Shoes.
2. It is used to dye hair.
3. In Hawaiians eat the row flowers to aid the digestion
4. Chinese people pickle them.

Blackberry

Botanical name: *Rubus*

Family: *Rosaceae*

Common name: *Blackberry*

Description:

What distinguishes the blackberry from its raspberry relatives is whether or not the torus (receptacle or stem). "Picks with "the fruit. When picking a blackberry fruit, the torus stays with the fruit. With a raspberry, the torus remain on the plant, leaving a hollow core in the raspberry fruit,

The term bramble, a word referring to any impenetrable thicket, has in some circles traditionally been applied specifically to the blackberry or its products. (5) though in the United States it applies to all members of the genus *rubus*. In small parts of the western US, the term caneberry is used to refer to blackberries and raspberries as a group rather than the term bramble. Briar is also sometimes used to refer to plant, though this name is used for other thorny thickets as well.

Uses:

Seed composition: blackberries contains numerous large seeds that are not always preferred by consumer. The seeds contain oil rich in omega-3 (alpha-linolenic acid) and omega-6 (linoleic acid) fats as well as protein, dietary fiber, carotenoids, ellagitannins, and ellagic acid. Culinary use: The ripe fruit is commonly used in desserts, jams, jelly, wine and liqueurs. It may be mixed with other berries and fruits for pies and crumbles. Blackberries are also used to produce candy.



Mango

Botanical name:. *Mangifera Indica*

Common name: Mango

Family:Anacardiaceae



Description:.

The fruit varies greatly in size and character. Its form is oval, round, heart shaped, kidney-shaped or long and slender. The smallest mangoes are no longer than plums, while other's may weight 1.8 to 2.3 kg. Some varieties are vividly coloured with shades of red and yellow, while other's are dull green. Mango is called king of fruit. Mango is sweet tropical fruit. Ripe mangoes are juicy, fleshy and delicious. The yellow colour of mangoes is due to presence of Carotene.

Uses:

- 1) Raw mango is used for making pickles.
- 2) Mango tree leaves are used for medicinal purpose.
- 3) Mango contain immune-boosting nutrients.
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Exam Seat No.:

Horticultural Term Paper on
“PERENNIAL PLANTS”

Submitted by

Miss. Bhosale Balika Vishnu
Dept. of Botany, V. M. Sangola

Guided by

Dr. R. S. Suryavanshi
Assoc. Prof. & Head, Dept. of Botany, V. M. Sangola

SUBMITTED TO

DEPARTMENT OF BOTANY
VIDNYAN MAHAVIDYALAYA, SANGOLA

JUNE - 2023

Vidnyan Mahavidyalaya, Sangola

Dept. of Botany



The project report entitled, “**PERENNIAL PLANTS**” submitted by **MISS.**

BHOSALE BALIKA VISHNU of Class B. Sc. II

Botany department, Vidnyan Mahavidyalaya, Sangola

has been completed satisfactorily in 2022-23.

Head

Examiners 1)

2)

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Student Signature

Introduction:

Horticulture is the art of cultivating plants in gardens to produce food and medicinal ingredients, or for comfort and ornamental purposes. Horticulturists are agriculturists who grow flowers, fruits and nuts, vegetables, and herbs, as well as ornamental trees and lawns.

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Horticultural crops comprise mainly fruits, vegetables, ornamental, aromatic, plantation, and medicinal plants. These crops perform a major role in agriculture prosperity and the economy of the nation. Horticulture produces possessing vegetables and fruits is a crucial source of diet and nutrition.

PERENNIALL PLANTS: Introduction: - A perennial plants are those plants which lives more than two years. The term is often used to differentiate a plant from short lived annual and biennials.

1. APPLE

Botanical name: - *Pyrus malus*

Family: - Rosaceae

Vernacular name: - Apple

Description: -

The apple is a hardy, deciduous woody perennial tree that grows in all temperature zone. Apples grow best where there is cold in winter, moderate summer temperature and medium to high humidity.

Apples can grow from 10-30 feet tall. They are fast growing, but growth slows with age. Apple trees can live for one hundred years or more.

Uses: -

1. Apple is a nutritious fruit it contains vitamin E, B1 and B6.
2. 2]Apples are also a rich source of polyphenols, an important group of antioxidants. Antioxidants are compounds that protect our cell from free radical harmful molecules which causes heart disease and cancer.
3. 3] Apples are high in fiber and fibres. Antioxidant rich apples may help to protect our lungs from oxidative damage.
4. 5]Apple skin and seeds contain various phytochemicals, particularly polyphenols which are good for health.



2. PINEAPPLE

Botanical Name: *Ananas comosus*

Vernacular name: - Ananas comosus

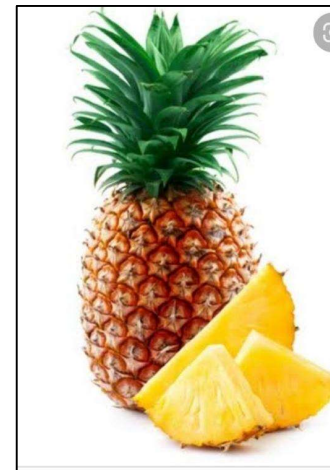
Family Name: -Bromeliaceae

Description:

A tropical American plant bearing a large fleshy edible fruit with a terminal tuft of stiff leaves; widely cultivated in the tropics. Large sweet fleshy tropical fruit with a terminal tuft of stiff leaves; widely cultivated.

Uses:

1. walked down the highway into the darkness again, carrying booty duffel bags in my left hand and feeding myself the tasteless pineapple fries pie with my right.
2. She didn't understand how such a lonely, depressed spirit could produce a horn of plenty that shot out pineapple and birthday cakes.
3. She ran back inside and emerged with a small pineapple that she pressed into master's hand.
4. If a ten- thousand- dollar lottery ticket could buy a can of pineapple who knew what a diamond ring was worth.



3. GUAVA

Botanical Name: *Psidium guajava*

Common Name: Guava

Family: Myrtaceae



Description:

The fruits are round to pear-shaped and measure up to 7.6 cm in diameter; their pulp contains many small hard seeds (more abundant in wild forms than in cultivated varieties). The fruit has a yellow skin and white, yellow, or pink flesh. The musky, at times pungent, odour of the sweet pulp is not always appreciated.

Uses:

1. It is helpful in treating diabetes.
2. It improves eyesight.
3. It slows down the appearance of cataract.
4. It helps in preventing breast, oral and prostate cancers.

5. HOLLYHOCK

Botanical Name: *Alcea rosea*

Family: Mallows

Common Name: Hollyhocks

Description:

Alcea rosea, or Hollyhocks, are herbaceous flowering plants that reseed themselves and can produce colonies of plants that return to the garden year after year. They are typically found in cultivated areas and rarely in "the wild". Their original habitat is unknown, but the plant is probably a cultigen that started out in Turkey. Note that it is sometimes listed in nursery catalogs under *Althaea*.



Uses:

1. Hollyhock is a plant.
2. The seed, root, stem, leaf, and flower are used as medicine. Hollyhock is used for pain, stomach ulcers, wound healing, diabetes, and many other conditions, but there is no good scientific evidence to support these uses.
3. The flower is used to make medicinal tea.
4. People use hollyhock for preventing and treating breathing disorders and digestive tract problems.
5. Some people apply hollyhock directly to the skin for treating ulcers and painful swelling.

6. CHIKKU

Botanical Name: *Achras sapota*

Family: Sapotaceae

Common Name: Chikku

Description:

It is a long-lived evergreen, native to southern Mexico, Central America, and Caribbean. Occurrence is in coastal ecoregion, where it is a subdominant plant species.



Uses

1. Rich in vitamin A and C
2. Energy provider
3. Anti-inflammatory
4. Controls blood pressure
5. Good for moms-to-be

7. LEMON

Botanical name: *Citrus Limon*

Common name: Lemon

Family: Rutaceae

Descriptions:

The lemon is a round, slightly elongated fruit, it has a strong and resistant skin with an intense bright yellow colour when it is totally ripe, giving off a special aroma when it is cut. The pulp is pale yellow, juicy, and acid divided into gores. The lemons are a species of small evergreen, trees in the flowering plant family Rutaceae, native of Asia, primarily Northeast India.



Uses:

1. Lemons are rich in vitamin C.
2. Prevent kidney stone.
3. Help control weight.
4. Improve digestive health.
5. Support heart health.

8. HIBISCUS

Botanical Name: *Hibiscus rosa-sinesis*

Family: mallow family (malvaceae)

Vernacular: Hibiscus

Description:

Hibiscus is a genus of flowering Plants in the mallow family. Malvaceae genus the is quite large comprising several hundred species. That are native to warm temperature Subtropical. tropical. regions throughout the world. Other names include hardy hibiscus, rose of Sharon & tropical hibiscus.

Uses:

1. It is used for blacking Shoes.
2. It is used to dye hair.
3. In Hawaiians eat the row flowers to aid the digestion
4. Chinese people pickle them.

Blackberry

Botanical name: *Rubus*

Family: *Rosaceae*

Common name: *Blackberry*

Description:

What distinguishes the blackberry from its raspberry relatives is whether or not the torus (receptacle or stem). "Picks with "the fruit. When picking a blackberry fruit, the torus stays with the fruit. With a raspberry, the torus remain on the plant, leaving a hollow core in the raspberry fruit,

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Uses:

Seed composition: blackberries contains numerous large seeds that are not always preferred by consumer. The seeds contain oil rich in omega-3 (alpha-linolenic acid) and omega-6 (linoleic acid) fats as well as protein, dietary fiber, carotenoids, ellagitannins, and ellagic acid. Culinary use: The ripe fruit is commonly used in desserts, jams, jelly, wine and liqueurs. It may be mixed with other berries and fruits for pies and crumbles. Blackberries are also used to produce candy.



Mango

Botanical name:. *Mangifera Indica*

Common name: Mango

Family:Anacardiaceae



Description:.

The fruit varies greatly in size and character. Its form is oval, round, heart shaped, kidney-shaped or long and slender. The smallest mangoes are no longer than plums, while other's may weight 1.8 to 2.3 kg. Some varieties are vividly coloured with shades of red and yellow, while other's are dull green. Mango is called king of fruit. Mango is sweet tropical fruit. Ripe mangoes are juicy, fleshy and delicious. The yellow colour of mangoes is due to presence of Carotene.

Uses:

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Exam Seat No.:

Horticultural Term Paper on
“PERENNIAL PLANTS”

Submitted by

Miss. Galave Rasika Dadaso
Dept. of Botany, V. M. Sangola

Guided by

Dr. R. S. Suryavanshi
Assoc. Prof. & Head, Dept. of Botany, V. M. Sangola

SUBMITTED TO

DEPARTMENT OF BOTANY
VIDNYAN MAHAVIDYALAYA, SANGOLA

JUNE - 2023

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Dept. of Botany



The project report entitled, “**PERENNIAL PLANTS**” submitted by **MISS.**

GALAVE RASIKA DADASO of Class B. Sc. II

Botany department, Vidnyan Mahavidyalaya, Sangola

has been completed satisfactorily in 2022-23.

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Family: - Rosaceae

Vernacular name: - Apple

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Family:Anacardiaceae



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Exam Seat No.:

Horticultural Term Paper on
“PERENNIAL PLANTS”

Submitted by

Miss. Gavade Payal Dariba
Dept. of Botany, V. M. Sangola

Guided by

Dr. R. S. Suryavanshi
Assoc. Prof. & Head, Dept. of Botany, V. M. Sangola

SUBMITTED TO

DEPARTMENT OF BOTANY
VIDNYAN MAHAVIDYALAYA, SANGOLA

JUNE - 2023

Vidnyan Mahavidyalaya, Sangola

Dept. of Botany



The project report entitled, “**PERENNIAL PLANTS**” submitted by **MISS.**

GAVADE PAYAL DARIBA of Class B. Sc. II

Botany department, Vidnyan Mahavidyalaya, Sangola

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Horticulture is the art of cultivating plants in gardens to produce food and medicinal ingredients, or for comfort and ornamental purposes. Horticulturists are agriculturists who grow flowers, fruits and nuts, vegetables, and herbs, as well as ornamental trees and lawns.

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Horticultural crops comprise mainly fruits, vegetables, ornamental, aromatic, plantation, and medicinal plants. These crops perform a major role in agriculture prosperity and the economy of the nation. Horticulture produces possessing vegetables and fruits is a crucial source of diet and nutrition.

PERENNIAL PLANTS: Introduction: - A perennial plants are those plants which lives more than two years. The term is often used to differentiate a plant from short lived annual and biennials.

1. APPLE

Botanical name: - *Pyrus malus*

Family: - Rosaceae

Vernacular name: - Apple

Description: -

The apple is a hardy, deciduous woody perennial tree that grows in all temperature zone. Apples grow best where there is cold in winter, moderate summer temperature and medium to high humidity.

Apples can grow from 10-30 feet tall. They are fast growing, but growth slows with age. Apple trees can live for one hundred years or more.

Uses: -

1. Apple is a nutritious fruit it contains vitamin E, B1 and B6.
2. 2]Apples are also a rich source of polyphenols, an important group of antioxidants. Antioxidants are compounds that protect our cell from free radical harmful molecules which causes heart disease and cancer.
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4. 5]Apple skin and seeds contain various phytochemicals, particularly polyphenols which are good for health.



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Botanical Name: *Ananas comosus*

Vernacular name: - Ananas comosus

Family Name: -Bromeliaceae

Description:

A tropical American plant bearing a large fleshy edible fruit with a terminal tuft of stiff leaves; widely cultivated in the tropics. Large sweet fleshy tropical fruit with a terminal tuft of stiff leaves; widely cultivated.

Uses:

1. walked down the highway into the darkness again, carrying booty duffel bags in my left hand and feeding myself the tasteless pineapple fries pie with my right.
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Botanical Name: *Psidium guajava*

Common Name: Guava

Family: Myrtaceae



Description:

The fruits are round to pear-shaped and measure up to 7.6 cm in diameter; their pulp contains many small hard seeds (more abundant in wild forms than in cultivated varieties). The fruit has a yellow skin and white, yellow, or pink flesh. The musky, at times pungent, odour of the sweet pulp is not always appreciated.

Uses:

1. It is helpful in treating diabetes.
2. It improves eyesight.
3. It slows down the appearance of cataract.
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Botanical Name: *Alcea rosea*

Family: Mallows

Common Name: Hollyhocks

Description:

Alcea rosea, or Hollyhocks, are herbaceous flowering plants that reseed themselves and can produce colonies of plants that return to the garden year after year. They are typically found in cultivated areas and rarely in "the wild". Their original habitat is unknown, but the plant is probably a cultigen that started out in Turkey. Note that it is sometimes listed in nursery catalogs under Althaea.



Uses:

1. Hollyhock is a plant.
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Common Name: Chikku

Description:

It is a long-lived evergreen, native to southern Mexico, Central America, and Caribbean. Occurrence is in coastal ecoregion, where it is a subdominant plant species.



Uses

1. Rich in vitamin A and C
2. Energy provider
3. Anti-inflammatory
4. Controls blood pressure
5. Good for moms-to-be

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Botanical name: *Citrus Limon*

Common name: Lemon

Family: Rutaceae

Descriptions:

The lemon is a round, slightly elongated fruit, it has a strong and resistant skin with an intense bright yellow colour when it is totally ripe, giving off a special aroma when it is cut. The pulp is pale yellow, juicy, and acid divided into gores. The lemons are a species of small evergreen, trees in the flowering plant family Rutaceae, native of Asia, primarily Northeast India.



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1. Lemons are rich in vitamin C.
2. Prevent kidney stone.
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8. HIBISCUS

Botanical Name: *Hibiscus rosa-sinesis*

Family: mallow family (malvaceae)

Vernacular: Hibiscus

Description:

Hibiscus is a genus of flowering Plants in the mallow family. Malvaceae genus the is quite large comprising several hundred species. That are native to warm temperature Subtropical. tropical. regions throughout the world. Other names include hardy hibiscus, rose of Sharon & tropical hibiscus.

Uses:

1. It is used for blacking Shoes.
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Blackberry

Botanical name: *Rubus*

Family: *Rosaceae*

Common name: *Blackberry*

Description:

What distinguishes the blackberry from its raspberry relatives is whether or not the torus (receptacle or stem). "Picks with "the fruit. When picking a blackberry fruit, the torus stays with the fruit. With a raspberry, the torus remain on the plant, leaving a hollow core in the raspberry fruit,

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Uses:

Seed composition: blackberries contains numerous large seeds that are not always preferred by consumer. The seeds contain oil rich in omega-3 (alpha-linolenic acid) and omega-6 (linoleic acid) fats as well as protein, dietary fiber, carotenoids, ellagitannins, and ellagic acid. Culinary use: The ripe fruit is commonly used in desserts, jams, jelly, wine and liqueurs. It may be mixed with other berries and fruits for pies and crumbles. Blackberries are also used to produce candy.



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Botanical name:. *Mangifera Indica*

Common name: Mango

Family:Anacardiaceae



Description:.

The fruit varies greatly in size and character. Its form is oval, round, heart shaped, kidney-shaped or long and slender. The smallest mangoes are no longer than plums, while other's may weight 1.8 to 2.3 kg. Some varieties are vividly coloured with shades of red and yellow, while other's are dull green. Mango is called king of fruit. Mango is sweet tropical fruit. Ripe mangoes are juicy, fleshy and delicious. The yellow colour of mangoes is due to presence of Carotene.

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- 1) Raw mango is used for making pickles.
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- 3) Mango contain immune-boosting nutrients.
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Exam Seat No.:

Horticultural Term Paper on
“PERENNIAL PLANTS”

Submitted by

Miss. Gavade Sanjivani Sakharam
Dept. of Botany, V. M. Sangola

Guided by

Dr. R. S. Suryavanshi
Assoc. Prof. & Head, Dept. of Botany, V. M. Sangola

SUBMITTED TO

DEPARTMENT OF BOTANY
VIDNYAN MAHAVIDYALAYA, SANGOLA

JUNE - 2023

Vidnyan Mahavidyalaya, Sangola

Dept. of Botany



The project report entitled, “**PERENNIAL PLANTS**” submitted by **MISS. GAVADE SANJIVANI SAKHARAM** of Class B. Sc. II Botany department, Vidnyan Mahavidyalaya, Sangola has been completed satisfactorily in 2022-23.

Head

Examiners 1)

2)

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Common name: *Blackberry*

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Miss. Imade Shivani Ajay
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IMADE SHIVANI AJAY of Class B. Sc. II

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The fruit varies greatly in size and character. Its form is oval, round, heart shaped, kidney-shaped or long and slender. The smallest mangoes are no longer than plums, while other's may weight 1.8 to 2.3 kg. Some varieties are vividly coloured with shades of red and yellow, while other's are dull green. Mango is called king of fruit. Mango is sweet tropical fruit. Ripe mangoes are juicy, fleshy and delicious. The yellow colour of mangoes is due to presence of Carotene.

Uses:

- 1) Raw mango is used for making pickles.
- 2) Mango tree leaves are used for medicinal purpose.
- 3) Mango contain immune-boosting nutrients.
- 4) It helps prevent diabetes.
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Exam Seat No.:

Horticultural Term Paper on
“PERENNIAL PLANTS”

Submitted by

Miss. Jadhav Sayali Bharat
Dept. of Botany, V. M. Sangola

Guided by

Dr. R. S. Suryavanshi
Assoc. Prof. & Head, Dept. of Botany, V. M. Sangola

SUBMITTED TO

DEPARTMENT OF BOTANY
VIDNYAN MAHAVIDYALAYA, SANGOLA

JUNE - 2023

Vidnyan Mahavidyalaya, Sangola

Dept. of Botany



The project report entitled, “**PERENNIAL PLANTS**” submitted by **MISS.**

JADHAV SAYALI BHARAT of Class B. Sc. II

Botany department, Vidnyan Mahavidyalaya, Sangola

has been completed satisfactorily in 2022-23.

Head

Examiners 1)

2)

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Horticultural crops comprise mainly fruits, vegetables, ornamental, aromatic, plantation, and medicinal plants. These crops perform a major role in agriculture prosperity and the economy of the nation. Horticulture produces possessing vegetables and fruits is a crucial source of diet and nutrition.

PERENNIALL PLANTS: Introduction: - A perennial plants are those plants which lives more than two years. The term is often used to differentiate a plant from short lived annual and biennials.

1. APPLE

Botanical name: - *Pyrus malus*

Family: - Rosaceae

Vernacular name: - Apple

Description: -

The apple is a hardy, deciduous woody perennial tree that grows in all temperature zone. Apples grow best where there is cold in winter, moderate summer temperature and medium to high humidity.

Apples can grow from 10-30 feet tall. They are fast growing, but growth slows with age. Apple trees can live for one hundred years or more.

Uses: -

1. Apple is a nutritious fruit it contains vitamin E, B1 and B6.
2. 2]Apples are also a rich source of polyphenols, an important group of antioxidants. Antioxidants are compounds that protect our cell from free radical harmful molecules which causes heart disease and cancer.
3. 3] Apples are high in fiber and fibres. Antioxidant rich apples may help to protect our lungs from oxidative damage.
4. 5]Apple skin and seeds contain various phytochemicals, particularly polyphenols which are good for health.



2. PINEAPPLE

Botanical Name: *Ananas comosus*

Vernacular name: - Ananas comosus

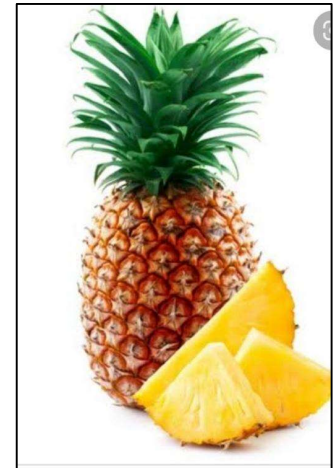
Family Name: -Bromeliaceae

Description:

A tropical American plant bearing a large fleshy edible fruit with a terminal tuft of stiff leaves; widely cultivated in the tropics. Large sweet fleshy tropical fruit with a terminal tuft of stiff leaves; widely cultivated.

Uses:

1. walked down the highway into the darkness again, carrying booty duffel bags in my left hand and feeding myself the tasteless pineapple fries pie with my right.
2. She didn't understand how such a lonely, depressed spirit could produce a horn of plenty that shot out pineapple and birthday cakes.
3. She ran back inside and emerged with a small pineapple that she pressed into master's hand.
4. If a ten- thousand- dollar lottery ticket could buy a can of pineapple who knew what a diamond ring was worth.



3. GUAVA

Botanical Name: *Psidium guajava*

Common Name: Guava

Family: Myrtaceae



Description:

The fruits are round to pear-shaped and measure up to 7.6 cm in diameter; their pulp contains many small hard seeds (more abundant in wild forms than in cultivated varieties). The fruit has a yellow skin and white, yellow, or pink flesh. The musky, at times pungent, odour of the sweet pulp is not always appreciated.

Uses:

1. It is helpful in treating diabetes.
2. It improves eyesight.
3. It slows down the appearance of cataract.
4. It helps in preventing breast, oral and prostate cancers.

5. HOLLYHOCK

Botanical Name: *Alcea rosea*

Family: Mallows

Common Name: Hollyhocks

Description:

Alcea rosea, or Hollyhocks, are herbaceous flowering plants that reseed themselves and can produce colonies of plants that return to the garden year after year. They are typically found in cultivated areas and rarely in "the wild". Their original habitat is unknown, but the plant is probably a cultigen that started out in Turkey. Note that it is sometimes listed in nursery catalogs under Althaea.



Uses:

1. Hollyhock is a plant.
2. The seed, root, stem, leaf, and flower are used as medicine. Hollyhock is used for pain, stomach ulcers, wound healing, diabetes, and many other conditions, but there is no good scientific evidence to support these uses.
3. The flower is used to make medicinal tea.
4. People use hollyhock for preventing and treating breathing disorders and digestive tract problems.
5. Some people apply hollyhock directly to the skin for treating ulcers and painful swelling.

6. CHIKKU

Botanical Name: *Achras sapota*

Family: Sapotaceae

Common Name: Chikku

Description:

It is a long-lived evergreen, native to southern Mexico, Central America, and Caribbean. Occurrence is in coastal ecoregion, where it is a subdominant plant species.



Uses

1. Rich in vitamin A and C
2. -Energy provided
3. Anti-inflammatory
4. Controls blood pressure
5. Good for moms-to-be

7. LEMON

Botanical name: *Citrus Limon*

Common name: Lemon

Family: Rutaceae

Descriptions:

The lemon is a round, slightly elongated fruit, it has a strong and resistant skin with an intense bright yellow colour when it is totally ripe, giving off a special aroma when it is cut. The pulp is pale yellow, juicy, and acid divided into gores. The lemons are a species of small evergreen, trees in the flowering plant family Rutaceae, native of Asia, primarily Northeast India.



Uses:

1. Lemons are rich in vitamin C.
2. Prevent kidney stone.
3. Help control weight.
4. Improve digestive health.
5. Support heart health.

8. HIBISCUS

Botanical Name: *Hibiscus rosa-sinesis*

Family: mallow family (malvaceae)

Vernacular: Hibiscus

Description:

Hibiscus is a genus of flowering Plants in the mallow family. Malvaceae genus the is quite large comprising several hundred species. That are native to warm temperature Subtropical. tropical. regions throughout the world. Other names include hardy hibiscus, rose of Sharon & tropical hibiscus.

Uses:

1. It is used for blacking Shoes.
2. It is used to dye hair.
3. In Hawaiians eat the row flowers to aid the digestion
4. Chinese people pickle them.

Blackberry

Botanical name: *Rubus*

Family: *Rosaceae*

Common name: *Blackberry*

Description:

What distinguishes the blackberry from its raspberry relatives is whether or not the torus (receptacle or stem). "Picks with "the fruit. When picking a blackberry fruit, the torus stays with the fruit. With a raspberry, the torus remain on the plant, leaving a hollow core in the raspberry fruit,

The term bramble, a word referring to any impenetrable thicket, has in some circles traditionally been applied specifically to the blackberry or its products. (5) though in the United States it applies to all members of the genus *rubus*. In small parts of the western US, the term caneberry is used to refer to blackberries and raspberries as a group rather than the term bramble. Briar is also sometimes used to refer to plant, though this name is used for other thorny thickets as well.

Uses:

Seed composition: blackberries contains numerous large seeds that are not always preferred by consumer. The seeds contain oil rich in omega-3 (alpha-linolenic acid) and omega-6 (linoleic acid) fats as well as protein, dietary fiber, carotenoids, ellagitannins, and ellagic acid. Culinary use: The ripe fruit is commonly used in desserts, jams, jelly, wine and liqueurs. It may be mixed with other berries and fruits for pies and crumbles. Blackberries are also used to produce candy.



Mango

Botanical name:. *Mangifera Indica*

Common name: Mango

Family:Anacardiaceae



Description:.

The fruit varies greatly in size and character. Its form is oval, round, heart shaped, kidney-shaped or long and slender. The smallest mangoes are no longer than plums, while other's may weight 1.8 to 2.3 kg. Some varieties are vividly coloured with shades of red and yellow, while other's are dull green. Mango is called king of fruit. Mango is sweet tropical fruit. Ripe mangoes are juicy, fleshy and delicious. The yellow colour of mangoes is due to presence of Carotene.

Uses:

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Exam Seat No.:

Horticultural Term Paper on
“PERENNIAL PLANTS”

Submitted by

Miss. Kamble Rutuja Dipak
Dept. of Botany, V. M. Sangola

Guided by

Dr. R. S. Suryavanshi
Assoc. Prof. & Head, Dept. of Botany, V. M. Sangola

SUBMITTED TO

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JUNE - 2023

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The project report entitled, “**PERENNIAL PLANTS**” submitted by **MISS.**

KAMBLE RUTUJA DIPAK of Class B. Sc. II

Botany department, Vidnyan Mahavidyalaya, Sangola

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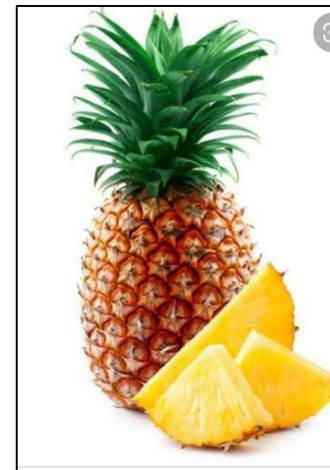
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Common Name: Guava

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Description:

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Common name: *Blackberry*

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“PERENNIAL PLANTS”

Submitted by

Miss. Khandekar Kajal Shivaji
Dept. of Botany, V. M. Sangola

Guided by

Dr. R. S. Suryavanshi
Assoc. Prof. & Head, Dept. of Botany, V. M. Sangola

SUBMITTED TO

DEPARTMENT OF BOTANY
VIDNYAN MAHAVIDYALAYA, SANGOLA

JUNE - 2023

Vidnyan Mahavidyalaya, Sangola

Dept. of Botany



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Vernacular name: - Apple

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Vernacular name: - Ananas comosus

Family Name: -Bromeliaceae

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Botanical Name: *Psidium guajava*

Common Name: Guava

Family: Myrtaceae



Description:

The fruits are round to pear-shaped and measure up to 7.6 cm in diameter; their pulp contains many small hard seeds (more abundant in wild forms than in cultivated varieties). The fruit has a yellow skin and white, yellow, or pink flesh. The musky, at times pungent, odour of the sweet pulp is not always appreciated.

Uses:

1. It is helpful in treating diabetes.
2. It improves eyesight.
3. It slows down the appearance of cataract.
4. It helps in preventing breast, oral and prostate cancers.

5. HOLLYHOCK

Botanical Name: *Alcea rosea*

Family: Mallows

Common Name: Hollyhocks

Description:

Alcea rosea, or Hollyhocks, are herbaceous flowering plants that reseed themselves and can produce colonies of plants that return to the garden year after year. They are typically found in cultivated areas and rarely in "the wild". Their original habitat is unknown, but the plant is probably a cultigen that started out in Turkey. Note that it is sometimes listed in nursery catalogs under *Althaea*.



Uses:

1. Hollyhock is a plant.
2. The seed, root, stem, leaf, and flower are used as medicine. Hollyhock is used for pain, stomach ulcers, wound healing, diabetes, and many other conditions, but there is no good scientific evidence to support these uses.
3. The flower is used to make medicinal tea.
4. People use hollyhock for preventing and treating breathing disorders and digestive tract problems.
5. Some people apply hollyhock directly to the skin for treating ulcers and painful swelling.

6. CHIKKU

Botanical Name: *Achras sapota*

Family: Sapotaceae

Common Name: Chikku

Description:

It is a long-lived evergreen, native to southern Mexico, Central America, and Caribbean. Occurrence is in coastal ecoregion, where it is a subdominant plant species.



Uses

1. Rich in vitamin A and C
2. Energy provider
3. Anti-inflammatory
4. Controls blood pressure
5. Good for moms-to-be

7. LEMON

Botanical name: *Citrus Limon*

Common name: Lemon

Family: Rutaceae

Descriptions:

The lemon is a round, slightly elongated fruit, it has a strong and resistant skin with an intense bright yellow colour when it is totally ripe, giving off a special aroma when it is cut. The pulp is pale yellow, juicy, and acid divided into gores. The lemons are a species of small evergreen, trees in the flowering plant family Rutaceae, native of Asia, primarily Northeast India.



Uses:

1. Lemons are rich in vitamin C.
2. Prevent kidney stone.
3. Help control weight.
4. Improve digestive health.
5. Support heart health.

8. HIBISCUS

Botanical Name: *Hibiscus rosa-sinesis*

Family: mallow family (malvaceae)

Vernacular: Hibiscus

Description:

Hibiscus is a genus of flowering Plants in the mallow family. Malvaceae genus the is quite large comprising several hundred species. That are native to warm temperature Subtropical. tropical. regions throughout the world. Other names include hardy hibiscus, rose of Sharon & tropical hibiscus.

Uses:

1. It is used for blacking Shoes.
2. It is used to dye hair.
3. In Hawaiians eat the row flowers to aid the digestion
4. Chinese people pickle them.

Blackberry

Botanical name: *Rubus*

Family: *Rosaceae*

Common name: *Blackberry*

Description:

What distinguishes the blackberry from its raspberry relatives is whether or not the torus (receptacle or stem). "Picks with "the fruit. When picking a blackberry fruit, the torus stays with the fruit. With a raspberry, the torus remain on the plant, leaving a hollow core in the raspberry fruit,

The term bramble, a word referring to any impenetrable thicket, has in some circles traditionally been applied specifically to the blackberry or its products. (5) though in the United States it applies to all members of the genus *rubus*. In small parts of the western US, the term caneberry is used to refer to blackberries and raspberries as a group rather than the term bramble. Briar is also sometimes used to refer to plant, though this name is used for other thorny thickets as well.

Uses:

Seed composition: blackberries contains numerous large seeds that are not always preferred by consumer. The seeds contain oil rich in omega-3 (alpha-linolenic acid) and omega-6 (linoleic acid) fats as well as protein, dietary fiber, carotenoids, ellagitannins, and ellagic acid. Culinary use: The ripe fruit is commonly used in desserts, jams, jelly, wine and liqueurs. It may be mixed with other berries and fruits for pies and crumbles. Blackberries are also used to produce candy.



Mango

Botanical name:. *Mangifera Indica*

Common name: Mango

Family:Anacardiaceae



Description:.

The fruit varies greatly in size and character. Its form is oval, round, heart shaped, kidney-shaped or long and slender. The smallest mangoes are no longer than plums, while other's may weight 1.8 to 2.3 kg. Some varieties are vividly coloured with shades of red and yellow, while other's are dull green. Mango is called king of fruit. Mango is sweet tropical fruit. Ripe mangoes are juicy, fleshy and delicious. The yellow colour of mangoes is due to presence of Carotene.

Uses:

- 1) Raw mango is used for making pickles.
- 2) Mango tree leaves are used for medicinal purpose.
- 3) Mango contain immune-boosting nutrients.
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Exam Seat No.:

Horticultural Term Paper on
“PERENNIAL PLANTS”

Submitted by

Miss. Kolekar sonali Manik
Dept. of Botany, V. M. Sangola

Guided by

Dr. R. S. Suryavanshi
Assoc. Prof. & Head, Dept. of Botany, V. M. Sangola

SUBMITTED TO

DEPARTMENT OF BOTANY
VIDNYAN MAHAVIDYALAYA, SANGOLA

JUNE - 2023

Vidnyan Mahavidyalaya, Sangola

Dept. of Botany



The project report entitled, “**PERENNIAL PLANTS**” submitted by **MISS.**

KOLEKAR SONALI MANIK of Class B. Sc. II

Botany department, Vidnyan Mahavidyalaya, Sangola

has been completed satisfactorily in 2022-23.

Head

Examiners 1)

2)

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I express my thanks to Principal Dr. Mulani S. M. for constant encouragement.

Student Signature

Introduction:

Horticulture is the art of cultivating plants in gardens to produce food and medicinal ingredients, or for comfort and ornamental purposes. Horticulturists are agriculturists who grow flowers, fruits and nuts, vegetables, and herbs, as well as ornamental trees and lawns.

The study and practice of horticulture have been traced back thousands of years. Horticulture contributed to the transition from nomadic human communities to sedentary, or semi-sedentary, horticultural communities. Horticulture is divided into several categories which focus on the cultivation and processing of different types of plants and food items for specific purposes. To conserve the science of horticulture, multiple organizations worldwide educate, encourage, and promote the advancement of horticulture.

Horticultural crops comprise mainly fruits, vegetables, ornamental, aromatic, plantation, and medicinal plants. These crops perform a major role in agriculture prosperity and the economy of the nation. Horticulture produces possessing vegetables and fruits is a crucial source of diet and nutrition.

PERENNIAL PLANTS: Introduction: - A perennial plants are those plants which lives more than two years. The term is often used to differentiate a plant from short lived annual and biennials.

1. APPLE

Botanical name: - *Pyrus malus*

Family: - Rosaceae

Vernacular name: - Apple

Description: -

The apple is a hardy, deciduous woody perennial tree that grows in all temperature zone. Apples grow best where there is cold in winter, moderate summer temperature and medium to high humidity.

Apples can grow from 10-30 feet tall. They are fast growing, but growth slows with age. Apple trees can live for one hundred years or more.

Uses: -

1. Apple is a nutritious fruit it contains vitamin E, B1 and B6.
2. 2]Apples are also a rich source of polyphenols, an important group of antioxidants. Antioxidants are compounds that protect our cell from free radical harmful molecules which causes heart disease and cancer.
3. 3] Apples are high in fiber and fibres. Antioxidant rich apples may help to protect our lungs from oxidative damage.
4. 5]Apple skin and seeds contain various phytochemicals, particularly polyphenols which are good for health.



2. PINEAPPLE

Botanical Name: *Ananas comosus*

Vernacular name: - Ananas comosus

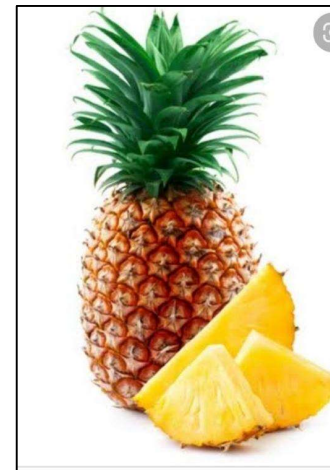
Family Name: -Bromeliaceae

Description:

A tropical American plant bearing a large fleshy edible fruit with a terminal tuft of stiff leaves; widely cultivated in the tropics. Large sweet fleshy tropical fruit with a terminal tuft of stiff leaves; widely cultivated.

Uses:

1. walked down the highway into the darkness again, carrying booty duffel bags in my left hand and feeding myself the tasteless pineapple fries pie with my right.
2. She didn't understand how such a lonely, depressed spirit could produce a horn of plenty that shot out pineapple and birthday cakes.
3. She ran back inside and emerged with a small pineapple that she pressed into master's hand.
4. If a ten- thousand- dollar lottery ticket could buy a can of pineapple who knew what a diamond ring was worth.



3. GUAVA

Botanical Name: *Psidium guajava*

Common Name: Guava

Family: Myrtaceae



Description:

The fruits are round to pear-shaped and measure up to 7.6 cm in diameter; their pulp contains many small hard seeds (more abundant in wild forms than in cultivated varieties). The fruit has a yellow skin and white, yellow, or pink flesh. The musky, at times pungent, odour of the sweet pulp is not always appreciated.

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Family: Mallows

Common Name: Hollyhocks

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Uses:

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Family: Sapotaceae

Common Name: Chikku

Description:

It is a long-lived evergreen, native to southern Mexico, Central America, and Caribbean. Occurrence is in coastal ecoregion, where it is a subdominant plant species.



Uses

1. Rich in vitamin A and C
2. Energy provider
3. Anti-inflammatory
4. Controls blood pressure
5. Good for moms-to-be

7. LEMON

Botanical name: *Citrus Limon*

Common name: Lemon

Family: Rutaceae

Descriptions:

The lemon is a round, slightly elongated fruit, it has a strong and resistant skin with an intense bright yellow colour when it is totally ripe, giving off a special aroma when it is cut. The pulp is pale yellow, juicy, and acid divided into gores. The lemons are a species of small evergreen, trees in the flowering plant family Rutaceae, native of Asia, primarily Northeast India.



Uses:

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2. Prevent kidney stone.
3. Help control weight.
4. Improve digestive health.
5. Support heart health.

8. HIBISCUS

Botanical Name: *Hibiscus rosa-sinesis*

Family: mallow family (malvaceae)

Vernacular: Hibiscus

Description:

Hibiscus is a genus of flowering Plants in the mallow family. Malvaceae genus the is quite large comprising several hundred species. That are native to warm temperature Subtropical. tropical. regions throughout the world. Other names include hardy hibiscus, rose of Sharon & tropical hibiscus.

Uses:

1. It is used for blacking Shoes.
2. It is used to dye hair.
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4. Chinese people pickle them.

Blackberry

Botanical name: *Rubus*

Family: *Rosaceae*

Common name: *Blackberry*

Description:

What distinguishes the blackberry from its raspberry relatives is whether or not the torus (receptacle or stem). "Picks with "the fruit. When picking a blackberry fruit, the torus stays with the fruit. With a raspberry, the torus remain on the plant, leaving a hollow core in the raspberry fruit,

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Seed composition: blackberries contains numerous large seeds that are not always preferred by consumer. The seeds contain oil rich in omega-3 (alpha-linolenic acid) and omega-6 (linoleic acid) fats as well as protein, dietary fiber, carotenoids, ellagitannins, and ellagic acid. Culinary use: The ripe fruit is commonly used in desserts, jams, jelly, wine and liqueurs. It may be mixed with other berries and fruits for pies and crumbles. Blackberries are also used to produce candy.



Mango

Botanical name:. *Mangifera Indica*

Common name: Mango

Family:Anacardiaceae



Description:.

The fruit varies greatly in size and character. Its form is oval, round, heart shaped, kidney-shaped or long and slender. The smallest mangoes are no longer than plums, while other's may weight 1.8 to 2.3 kg. Some varieties are vividly coloured with shades of red and yellow, while other's are dull green. Mango is called king of fruit. Mango is sweet tropical fruit. Ripe mangoes are juicy, fleshy and delicious. The yellow colour of mangoes is due to presence of Carotene.

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Exam Seat No.:

Horticultural Term Paper on
“PERENNIAL PLANTS”

Submitted by

Miss. Margar Bhagyashri Ramchandra
Dept. of Botany, V. M. Sangola

Guided by

Dr. R. S. Suryavanshi
Assoc. Prof. & Head, Dept. of Botany, V. M. Sangola

SUBMITTED TO

DEPARTMENT OF BOTANY
VIDNYAN MAHAVIDYALAYA, SANGOLA

JUNE - 2023

Vidnyan Mahavidyalaya, Sangola

Dept. of Botany



The project report entitled, “**PERENNIAL PLANTS**” submitted by **MISS. MARGAR BHAGYASHRI RAMCHANDRA** of Class B. Sc. II Botany department, Vidnyan Mahavidyalaya, Sangola has been completed satisfactorily in 2022-23.

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Examiners 1)

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Botanical name: - *Pyrus malus*

Family: - Rosaceae

Vernacular name: - Apple

Description: -

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Apples can grow from 10-30 feet tall. They are fast growing, but growth slows with age. Apple trees can live for one hundred years or more.

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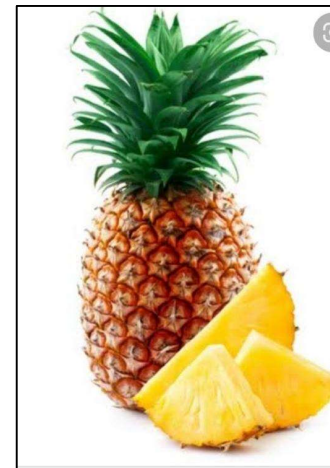
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Exam Seat No.:

Horticultural Term Paper on
“PERENNIAL PLANTS”

Submitted by

Miss. Metkari Sarika Bira
Dept. of Botany, V. M. Sangola

Guided by

Dr. R. S. Suryavanshi
Assoc. Prof. & Head, Dept. of Botany, V. M. Sangola

SUBMITTED TO

DEPARTMENT OF BOTANY
VIDNYAN MAHAVIDYALAYA, SANGOLA

JUNE - 2023

Vidnyan Mahavidyalaya, Sangola

Dept. of Botany



The project report entitled, “**PERENNIAL PLANTS**” submitted by **MISS.**

METKARI SARIKA BIRA of Class B. Sc. II

Botany department, Vidnyan Mahavidyalaya, Sangola

has been completed satisfactorily in 2022-23.

Head

Examiners 1)

2)

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Horticultural crops comprise mainly fruits, vegetables, ornamental, aromatic, plantation, and medicinal plants. These crops perform a major role in agriculture prosperity and the economy of the nation. Horticulture produces possessing vegetables and fruits is a crucial source of diet and nutrition.

PERENNIALL PLANTS: Introduction: - A perennial plants are those plants which lives more than two years. The term is often used to differentiate a plant from short lived annual and biennials.

1. APPLE

Botanical name: - *Pyrus malus*

Family: - Rosaceae

Vernacular name: - Apple

Description: -

The apple is a hardy, deciduous woody perennial tree that grows in all temperature zone. Apples grow best where there is cold in winter, moderate summer temperature and medium to high humidity.

Apples can grow from 10-30 feet tall. They are fast growing, but growth slows with age. Apple trees can live for one hundred years or more.

Uses: -

1. Apple is a nutritious fruit it contains vitamin E, B1 and B6.
2. 2]Apples are also a rich source of polyphenols, an important group of antioxidants. Antioxidants are compounds that protect our cell from free radical harmful molecules which causes heart disease and cancer.
3. 3] Apples are high in fiber and fibres. Antioxidant rich apples may help to protect our lungs from oxidative damage.
4. 5]Apple skin and seeds contain various phytochemicals, particularly polyphenols which are good for health.



2. PINEAPPLE

Botanical Name: *Ananas comosus*

Vernacular name: - Ananas comosus

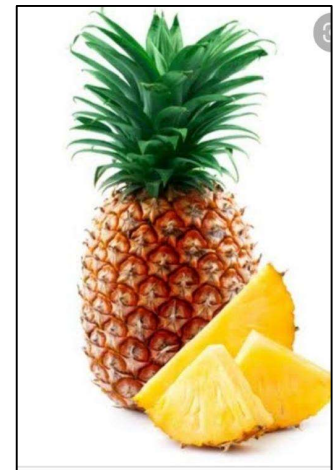
Family Name: -Bromeliaceae

Description:

A tropical American plant bearing a large fleshy edible fruit with a terminal tuft of stiff leaves; widely cultivated in the tropics. Large sweet fleshy tropical fruit with a terminal tuft of stiff leaves; widely cultivated.

Uses:

1. walked down the highway into the darkness again, carrying booty duffel bags in my left hand and feeding myself the tasteless pineapple fries pie with my right.
2. She didn't understand how such a lonely, depressed spirit could produce a horn of plenty that shot out pineapple and birthday cakes.
3. She ran back inside and emerged with a small pineapple that she pressed into master's hand.
4. If a ten- thousand- dollar lottery ticket could buy a can of pineapple who knew what a diamond ring was worth.



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Botanical Name: *Psidium guajava*

Common Name: Guava

Family: Myrtaceae



Description:

The fruits are round to pear-shaped and measure up to 7.6 cm in diameter; their pulp contains many small hard seeds (more abundant in wild forms than in cultivated varieties). The fruit has a yellow skin and white, yellow, or pink flesh. The musky, at times pungent, odour of the sweet pulp is not always appreciated.

Uses:

1. It is helpful in treating diabetes.
2. It improves eyesight.
3. It slows down the appearance of cataract.
4. It helps in preventing breast, oral and prostate cancers.

5. HOLLYHOCK

Botanical Name: *Alcea rosea*

Family: Mallows

Common Name: Hollyhocks

Description:

Alcea rosea, or Hollyhocks, are herbaceous flowering plants that reseed themselves and can produce colonies of plants that return to the garden year after year. They are typically found in cultivated areas and rarely in "the wild". Their original habitat is unknown, but the plant is probably a cultigen that started out in Turkey. Note that it is sometimes listed in nursery catalogs under *Althaea*.



Uses:

1. Hollyhock is a plant.
2. The seed, root, stem, leaf, and flower are used as medicine. Hollyhock is used for pain, stomach ulcers, wound healing, diabetes, and many other conditions, but there is no good scientific evidence to support these uses.
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Botanical Name: *Achras sapota*

Family: Sapotaceae

Common Name: Chikku

Description:

It is a long-lived evergreen, native to southern Mexico, Central America, and Caribbean. Occurrence is in coastal ecoregion, where it is a subdominant plant species.



Uses

1. Rich in vitamin A and C
2. Energy provider
3. Anti-inflammatory
4. Controls blood pressure
5. Good for moms-to-be

7. LEMON

Botanical name: *Citrus Limon*

Common name: Lemon

Family: Rutaceae

Descriptions:

The lemon is a round, slightly elongated fruit, it has a strong and resistant skin with an intense bright yellow colour when it is totally ripe, giving off a special aroma when it is cut. The pulp is pale yellow, juicy, and acid divided into gores. The lemons are a species of small evergreen, trees in the flowering plant family Rutaceae, native of Asia, primarily Northeast India.



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1. Lemons are rich in vitamin C.
2. Prevent kidney stone.
3. Help control weight.
4. Improve digestive health.
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8. HIBISCUS

Botanical Name: *Hibiscus rosa-sinesis*

Family: mallow family (malvaceae)

Vernacular: Hibiscus

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Hibiscus is a genus of flowering Plants in the mallow family. Malvaceae genus the is quite large comprising several hundred species. That are native to warm temperature Subtropical. tropical. regions throughout the world. Other names include hardy hibiscus, rose of Sharon & tropical hibiscus.

Uses:

1. It is used for blacking Shoes.
2. It is used to dye hair.
3. In Hawaiians eat the row flowers to aid the digestion
4. Chinese people pickle them.

Blackberry

Botanical name: *Rubus*

Family: *Rosaceae*

Common name: *Blackberry*

Description:

What distinguishes the blackberry from its raspberry relatives is whether or not the torus (receptacle or stem). "Picks with "the fruit. When picking a blackberry fruit, the torus stays with the fruit. With a raspberry, the torus remain on the plant, leaving a hollow core in the raspberry fruit,

The term bramble, a word referring to any impenetrable thicket, has in some circles traditionally been applied specifically to the blackberry or its products. (5) though in the United States it applies to all members of the genus *rubus*. In small parts of the western US, the term caneberry is used to refer to blackberries and raspberries as a group rather than the term bramble. Briar is also sometimes used to refer to plant, though this name is used for other thorny thickets as well.

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Seed composition: blackberries contains numerous large seeds that are not always preferred by consumer. The seeds contain oil rich in omega-3 (alpha-linolenic acid) and omega-6 (linoleic acid) fats as well as protein, dietary fiber, carotenoids, ellagitannins, and ellagic acid. Culinary use: The ripe fruit is commonly used in desserts, jams, jelly, wine and liqueurs. It may be mixed with other berries and fruits for pies and crumbles. Blackberries are also used to produce candy.



Mango

Botanical name: *Mangifera Indica*

Common name: Mango

Family:Anacardiaceae



Description:

The fruit varies greatly in size and character. Its form is oval, round, heart shaped, kidney-shaped or long and slender. The smallest mangoes are no longer than plums, while other's may weight 1.8 to 2.3 kg. Some varieties are vividly coloured with shades of red and yellow, while other's are dull green. Mango is called king of fruit. Mango is sweet tropical fruit. Ripe mangoes are juicy, fleshy and delicious. The yellow colour of mangoes is due to presence of Carotene.

Uses:

- 1) Raw mango is used for making pickles.
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Reference:

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Submitted by

Miss. Shendge Rupali Bandu
Dept. of Botany, V. M. Sangola

Guided by

Dr. R. S. Suryavanshi
Assoc. Prof. & Head, Dept. of Botany, V. M. Sangola

SUBMITTED TO

DEPARTMENT OF BOTANY
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JUNE - 2023

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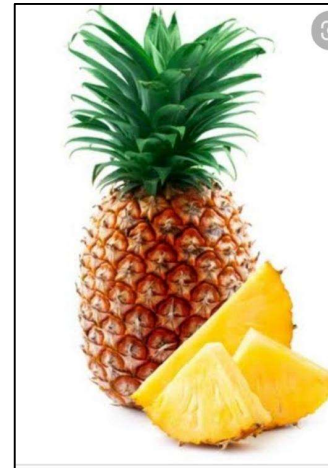
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Dept. of Botany, V. M. Sangola

Guided by

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Assoc. Prof. & Head, Dept. of Botany, V. M. Sangola

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8. HIBISCUS

Botanical Name: *Hibiscus rosa-sinesis*

Family: mallow family (malvaceae)

Vernacular: Hibiscus

Description:

Hibiscus is a genus of flowering Plants in the mallow family. Malvaceae genus the is quite large comprising several hundred species. That are native to warm temperature Subtropical. tropical. regions throughout the world. Other names include hardy hibiscus, rose of Sharon & tropical hibiscus.

Uses:

1. It is used for blacking Shoes.
2. It is used to dye hair.
3. In Hawaiians eat the row flowers to aid the digestion
4. Chinese people pickle them.

Blackberry

Botanical name: *Rubus*

Family: *Rosaceae*

Common name: *Blackberry*

Description:

What distinguishes the blackberry from its raspberry relatives is whether or not the torus (receptacle or stem). "Picks with "the fruit. When picking a blackberry fruit, the torus stays with the fruit. With a raspberry, the torus remain on the plant, leaving a hollow core in the raspberry fruit,

The term bramble, a word referring to any impenetrable thicket, has in some circles traditionally been applied specifically to the blackberry or its products. (5) though in the United States it applies to all members of the genus *rubus*. In small parts of the western US, the term caneberry is used to refer to blackberries and raspberries as a group rather than the term bramble. Briar is also sometimes used to refer to plant, though this name is used for other thorny thickets as well.

Uses:

Seed composition: blackberries contains numerous large seeds that are not always preferred by consumer. The seeds contain oil rich in omega-3 (alpha-linolenic acid) and omega-6 (linoleic acid) fats as well as protein, dietary fiber, carotenoids, ellagitannins, and ellagic acid. Culinary use: The ripe fruit is commonly used in desserts, jams, jelly, wine and liqueurs. It may be mixed with other berries and fruits for pies and crumbles. Blackberries are also used to produce candy.



Mango

Botanical name: *Mangifera Indica*

Common name: Mango

Family:Anacardiaceae



Description:

The fruit varies greatly in size and character. Its form is oval, round, heart shaped, kidney-shaped or long and slender. The smallest mangoes are no longer than plums, while other's may weight 1.8 to 2.3 kg. Some varieties are vividly coloured with shades of red and yellow, while other's are dull green. Mango is called king of fruit. Mango is sweet tropical fruit. Ripe mangoes are juicy, fleshy and delicious. The yellow colour of mangoes is due to presence of Carotene.

Uses:

- 1) Raw mango is used for making pickles.
- 2) Mango tree leaves are used for medicinal purpose.
- 3) Mango contain immune-boosting nutrients.
- 4) It helps prevent diabetes.
- 5) Mango leaves helps in keeping body energetic.
- 6) Mango is rich in proteins, nutrients and vitamin C.

Reference:

1. Henry George Liddell, Robert Scott, A Greek-English Lexicon,
2. Bowles, E. A. (1952). A Handbook of Crocus and Colchicum for Gardeners. D. Van Nostrand Company, Inc. p. 154.
3. John Cannon & Margaret Cannon (2002). Dye Plants and Dyeing (2nd ed.). A & C Black. pp. 76, 80. ISBN 978-0-7136-6374-7.
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Exam Seat No.:

Horticultural Term Paper on
“PERENNIAL PLANTS”

Submitted by

Miss. Waghmare Ankita Jivan
Dept. of Botany, V. M. Sangola

Guided by

Dr. R. S. Suryavanshi
Assoc. Prof. & Head, Dept. of Botany, V. M. Sangola

SUBMITTED TO

DEPARTMENT OF BOTANY
VIDNYAN MAHAVIDYALAYA, SANGOLA

JUNE - 2023

Vidnyan Mahavidyalaya, Sangola

Dept. of Botany



The project report entitled, “**PERENNIAL PLANTS**” submitted by **MISS.**

WAGHMARE ANKITA JIVAN of Class B. Sc. II

Botany department, Vidnyan Mahavidyalaya, Sangola

has been completed satisfactorily in 2022-23.

Head

Examiners 1)

2)

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I express my sincere thanks to Dr. Suryavanshi R. S. Head dept. Botany Vidnyan Mahavidyalaya Sangola for Valuable guidelines and encouragement for preparing the Project report.

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I express my vote of thanks to Shree. Jangale P. T. for Giving helps whenever we were in need.

I express my thanks to Principal Dr. Mulani S. M. for constant encouragement.

Student Signature

Introduction:

Horticulture is the art of cultivating plants in gardens to produce food and medicinal ingredients, or for comfort and ornamental purposes. Horticulturists are agriculturists who grow flowers, fruits and nuts, vegetables, and herbs, as well as ornamental trees and lawns.

The study and practice of horticulture have been traced back thousands of years. Horticulture contributed to the transition from nomadic human communities to sedentary, or semi-sedentary, horticultural communities. Horticulture is divided into several categories which focus on the cultivation and processing of different types of plants and food items for specific purposes. To conserve the science of horticulture, multiple organizations worldwide educate, encourage, and promote the advancement of horticulture.

Horticultural crops comprise mainly fruits, vegetables, ornamental, aromatic, plantation, and medicinal plants. These crops perform a major role in agriculture prosperity and the economy of the nation. Horticulture produces possessing vegetables and fruits is a crucial source of diet and nutrition.

PERENNIALL PLANTS: Introduction: - A perennial plants are those plants which lives more than two years. The term is often used to differentiate a plant from short lived annual and biennials.

1. APPLE

Botanical name: - *Pyrus malus*

Family: - Rosaceae

Vernacular name: - Apple

Description: -

The apple is a hardy, deciduous woody perennial tree that grows in all temperature zone. Apples grow best where there is cold in winter, moderate summer temperature and medium to high humidity.

Apples can grow from 10-30 feet tall. They are fast growing, but growth slows with age. Apple trees can live for one hundred years or more.

Uses: -

1. Apple is a nutritious fruit it contains vitamin E, B1 and B6.
2. 2]Apples are also a rich source of polyphenols, an important group of antioxidants. Antioxidants are compounds that protect our cell from free radical harmful molecules which causes heart disease and cancer.
3. 3] Apples are high in fiber and fibres. Antioxidant rich apples may help to protect our lungs from oxidative damage.
4. 5]Apple skin and seeds contain various phytochemicals, particularly polyphenols which are good for health.



2. PINEAPPLE

Botanical Name: *Ananas comosus*

Vernacular name: - Ananas comosus

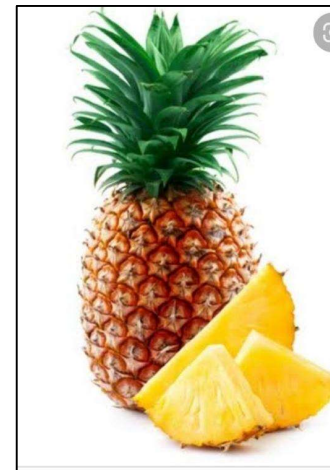
Family Name: -Bromeliaceae

Description:

A tropical American plant bearing a large fleshy edible fruit with a terminal tuft of stiff leaves; widely cultivated in the tropics. Large sweet fleshy tropical fruit with a terminal tuft of stiff leaves; widely cultivated.

Uses:

1. walked down the highway into the darkness again, carrying booty duffel bags in my left hand and feeding myself the tasteless pineapple fries pie with my right.
2. She didn't understand how such a lonely, depressed spirit could produce a horn of plenty that shot out pineapple and birthday cakes.
3. She ran back inside and emerged with a small pineapple that she pressed into master's hand.
4. If a ten- thousand- dollar lottery ticket could buy a can of pineapple who knew what a diamond ring was worth.



3. GUAVA

Botanical Name: *Psidium guajava*

Common Name: Guava

Family: Myrtaceae



Description:

The fruits are round to pear-shaped and measure up to 7.6 cm in diameter; their pulp contains many small hard seeds (more abundant in wild forms than in cultivated varieties). The fruit has a yellow skin and white, yellow, or pink flesh. The musky, at times pungent, odour of the sweet pulp is not always appreciated.

Uses:

1. It is helpful in treating diabetes.
2. It improves eyesight.
3. It slows down the appearance of cataract.
4. It helps in preventing breast, oral and prostate cancers.

5. HOLLYHOCK

Botanical Name: *Alcea rosea*

Family: Mallows

Common Name: Hollyhocks

Description:

Alcea rosea, or Hollyhocks, are herbaceous flowering plants that reseed themselves and can produce colonies of plants that return to the garden year after year. They are typically found in cultivated areas and rarely in "the wild". Their original habitat is unknown, but the plant is probably a cultigen that started out in Turkey. Note that it is sometimes listed in nursery catalogs under *Althaea*.



Uses:

1. Hollyhock is a plant.
2. The seed, root, stem, leaf, and flower are used as medicine. Hollyhock is used for pain, stomach ulcers, wound healing, diabetes, and many other conditions, but there is no good scientific evidence to support these uses.
3. The flower is used to make medicinal tea.
4. People use hollyhock for preventing and treating breathing disorders and digestive tract problems.
5. Some people apply hollyhock directly to the skin for treating ulcers and painful swelling.

6. CHIKKU

Botanical Name: *Achras sapota*

Family: Sapotaceae

Common Name: Chikku

Description:

It is a long-lived evergreen, native to southern Mexico, Central America, and Caribbean. Occurrence is in coastal ecoregion, where it is a subdominant plant species.



Uses

1. Rich in vitamin A and C
2. Energy provider
3. Anti-inflammatory
4. Controls blood pressure
5. Good for moms-to-be

7. LEMON

Botanical name: *Citrus Limon*

Common name: Lemon

Family: Rutaceae

Descriptions:

The lemon is a round, slightly elongated fruit, it has a strong and resistant skin with an intense bright yellow colour when it is totally ripe, giving off a special aroma when it is cut. The pulp is pale yellow, juicy, and acid divided into gores. The lemons are a species of small evergreen, trees in the flowering plant family Rutaceae, native of Asia, primarily Northeast India.



Uses:

1. Lemons are rich in vitamin C.
2. Prevent kidney stone.
3. Help control weight.
4. Improve digestive health.
5. Support heart health.

8. HIBISCUS

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Family: mallow family (malvaceae)

Vernacular: Hibiscus

Description:

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Family:Anacardiaceae



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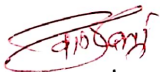
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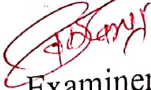
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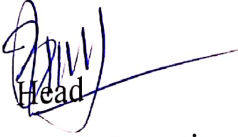
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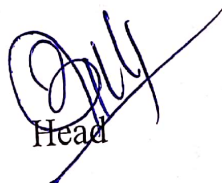
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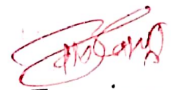
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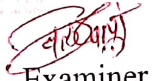
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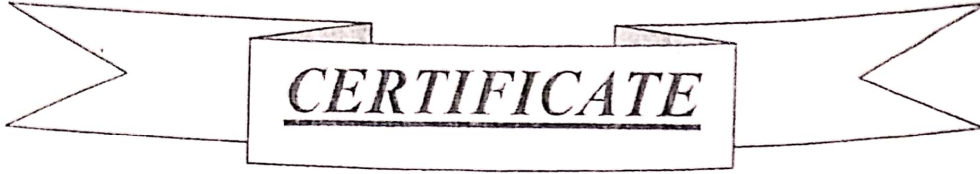
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