Bridge course

Organized by

Department of Physics

for

B.Sc.-I

Lecture-1: Optics

by

Dr. J. V. Thombare,
Assistant Professor,
Department of Physics,
Vidnyan Mahavidyalaya, Sangola.
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Department of Physics

Bridge Course

Structure

- Total Lectures: **04**
- Duration of Course: **09/07/2018 to 14/07/2018**
- Background Knowledge Test: **14/07/2018**
- Nature of Test: **50** multiple choice questions of **2** marks each.

Syllabus

Lecture 1. Optics:
Optical instruments and their uses, Phenomenon of Reflection, refraction and absorption, Interference, Diffraction
(On 09/07/2018 by Dr. Thombare J. V.)

Lecture 2. Light: Introduction to light, Interaction of light with matter etc
(On 10/07/2018 by Dr. Thombare J. V.)

Lecture 3. Introduction to mechanics:
Scalars, vectors, Newton's laws, Kepler's law of planetary motion, Moment of Inertia.
(On 12/07/2018 by Mr. Kambale A.M.)

Lecture 4. Properties of matter:
Elasticity, Surface Tension, Viscosity, Thermal properties etc.
(On 13/07/2018 by Mr. Kambale A.M.)

Lecture 1: Optics

- Optical instruments and their uses,
- Phenomenon of Reflection,
- Phenomenon of refraction and ,
- Phenomenon of absorption,
- Interference,
- Diffraction

Optical Instruments and their Use

Bridge Microscope

Travelling Microscope

Optical Microscope

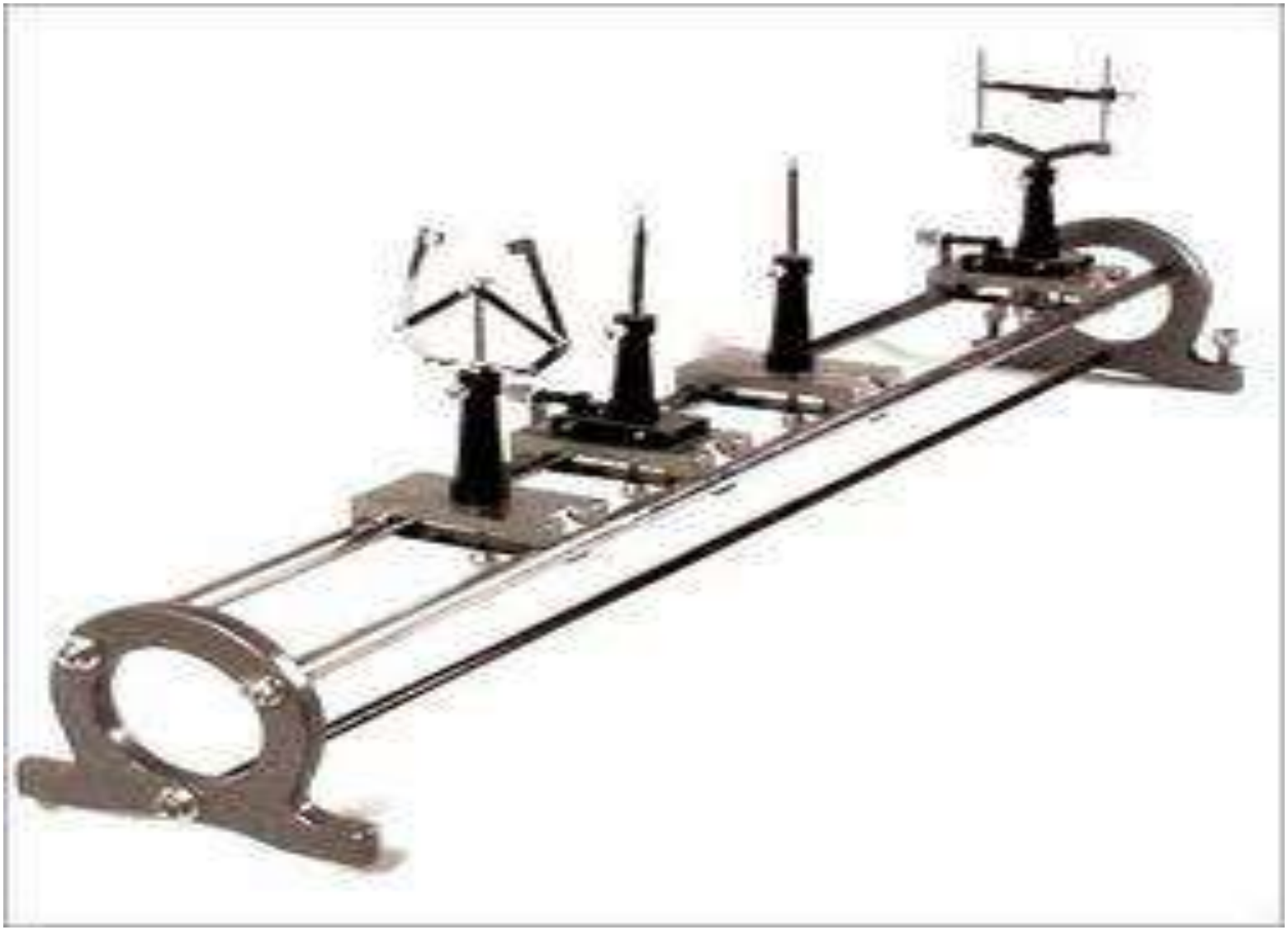
Uses:

- To see the object with high magnification,
- Also, it helps to measure the dimension of object ,
- The Least count of Travelling microscope is 0.001 cm

Uses:

1. To study Angle of Prism
2. To study RP of prism
3. To calculate grating element
4. To determine wavelength of source used
5. To determine RI of glass.
6. LC may be different like 1 min or 0.5 min depend on used instrument

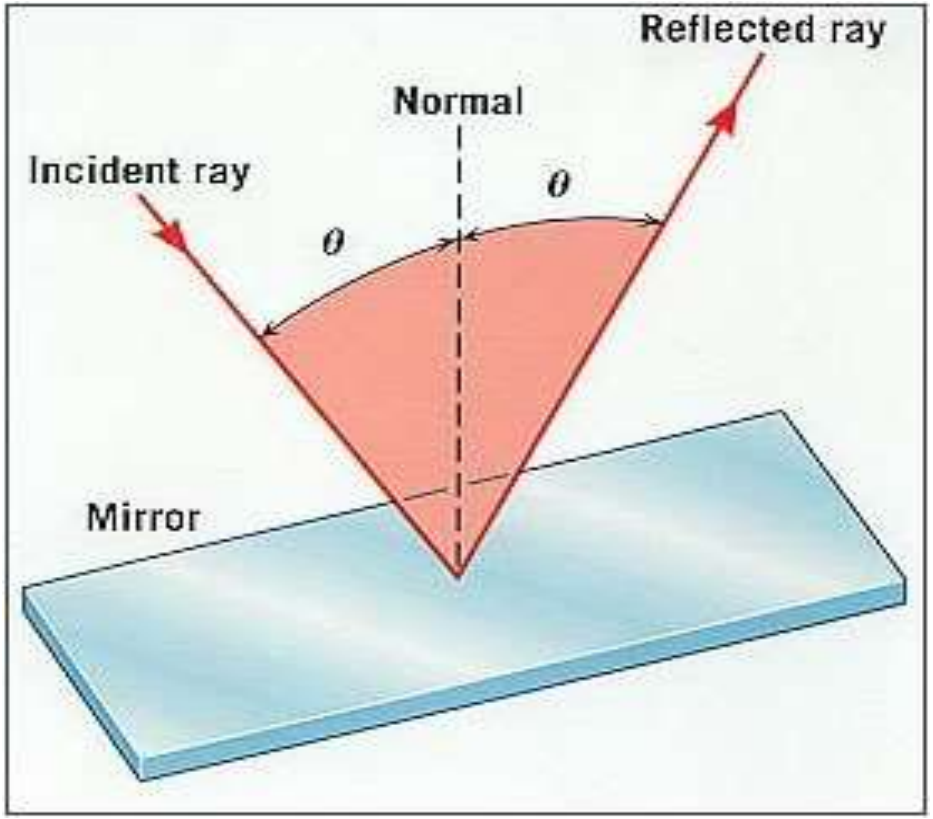
Spectrometer



Optical bench

Reflection of light

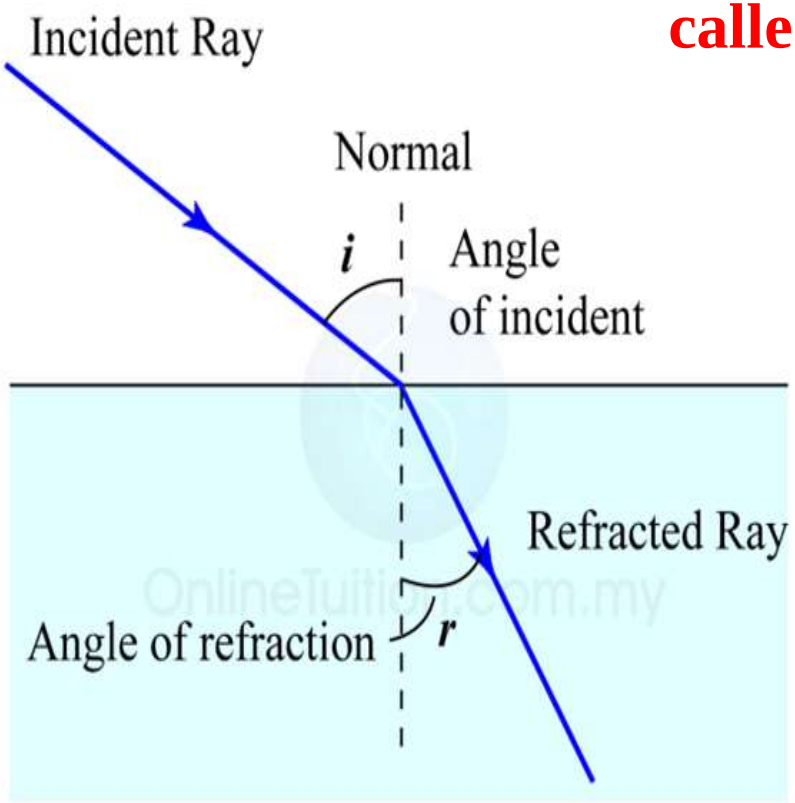
Reflection is defined as the change in direction of light at an interface in-between two different media so that the wave-front returns into a medium from which it was originated

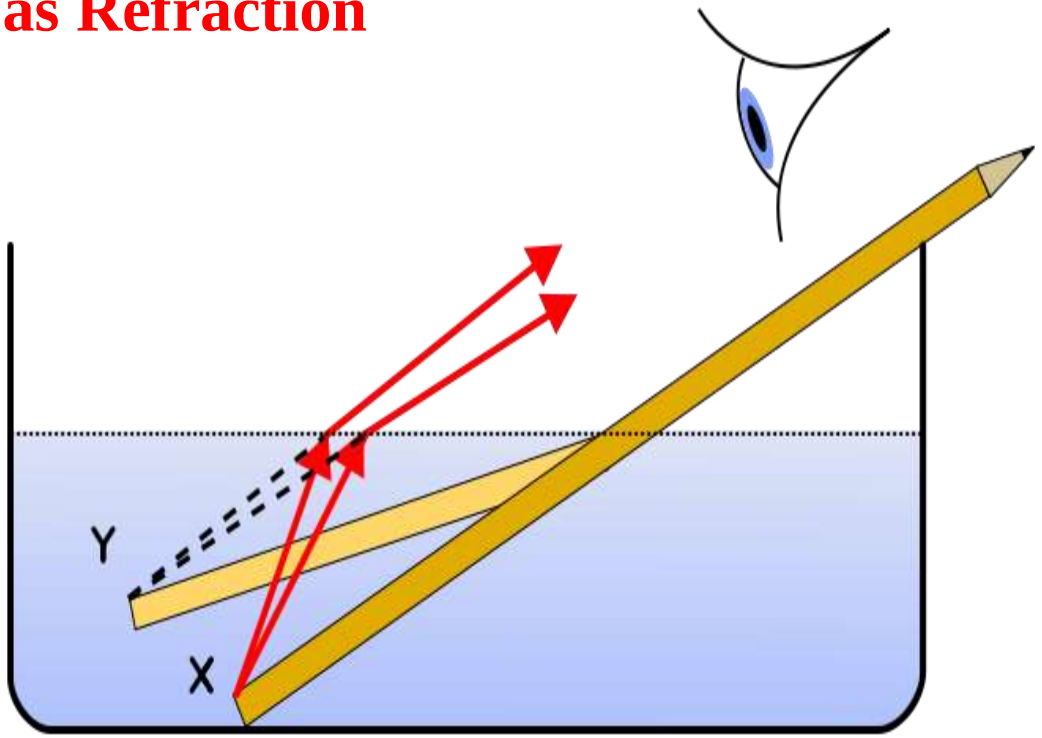


- **Angle of incidence equal to angle of reflection**
- **Incident ray and reflected ray travels in same medium**

Refraction of light

The bending of light when it passes from one medium to another is called as Refraction



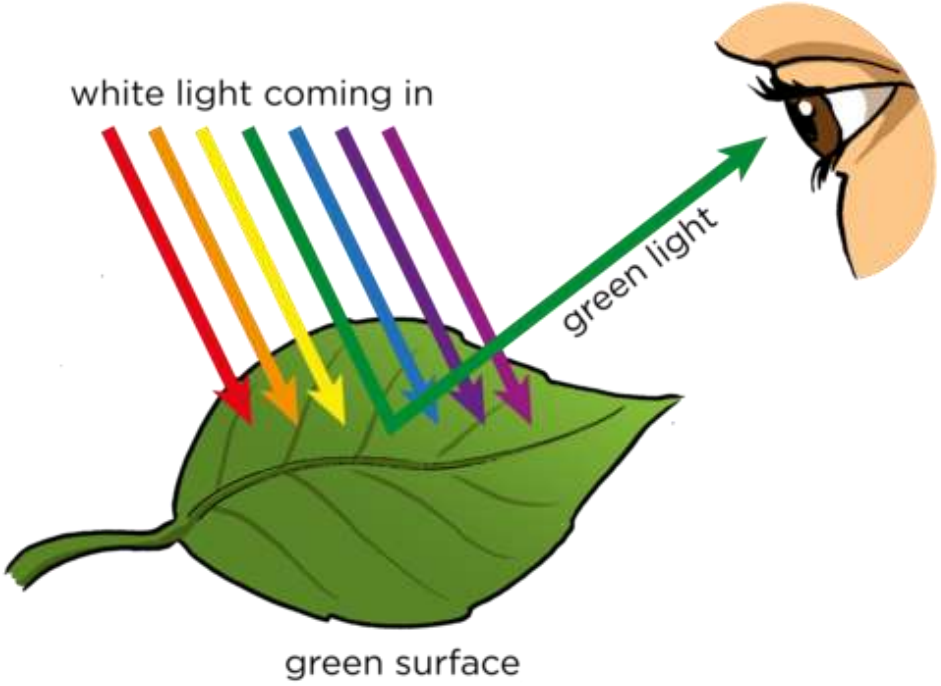


- Snell's law, μ=Sin i/Sin r
- Incident raay and refracted ray are in different medium.
- RI= c /v

Due to refraction

Absorption of light

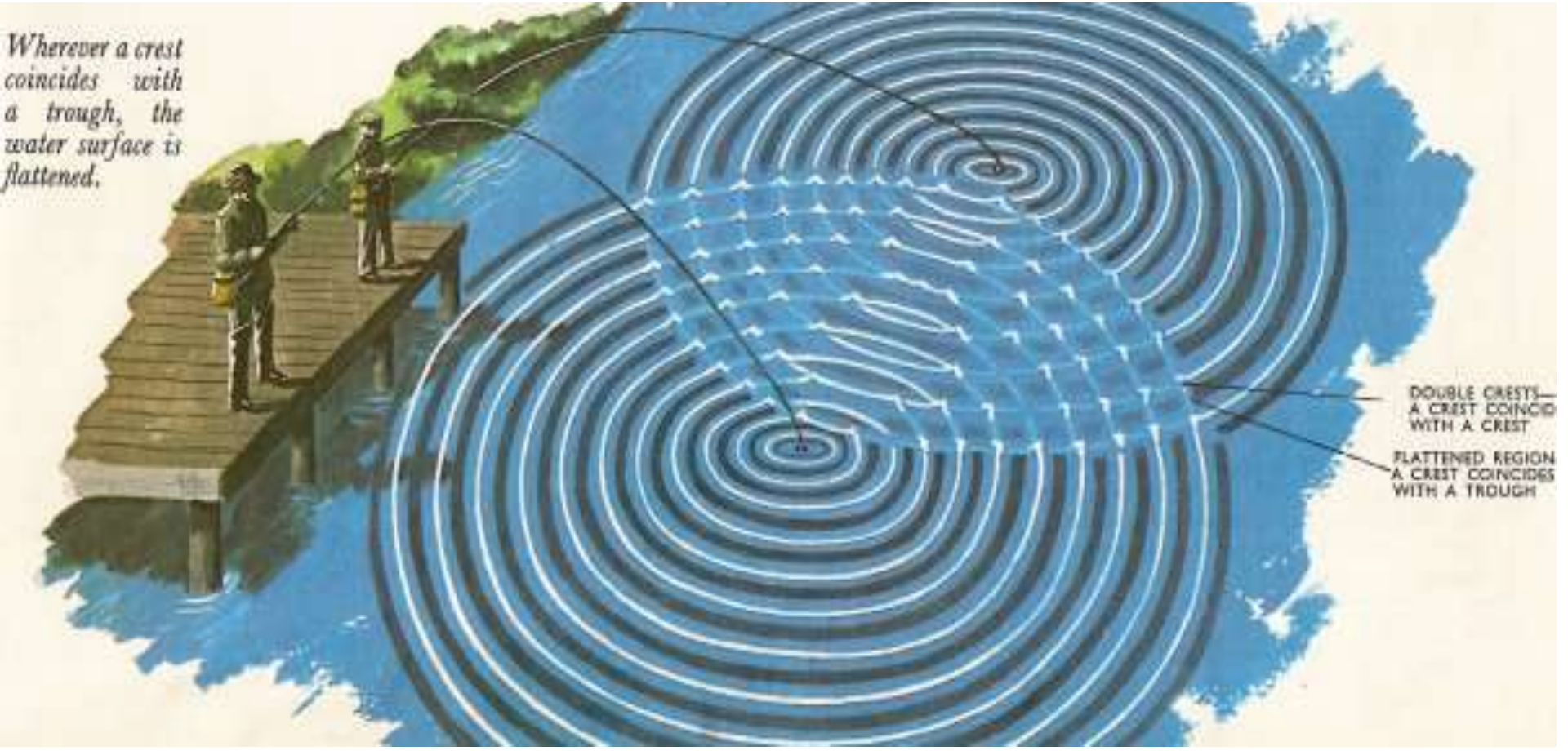
Light absorption is a process by which light is absorbed and converted into energy



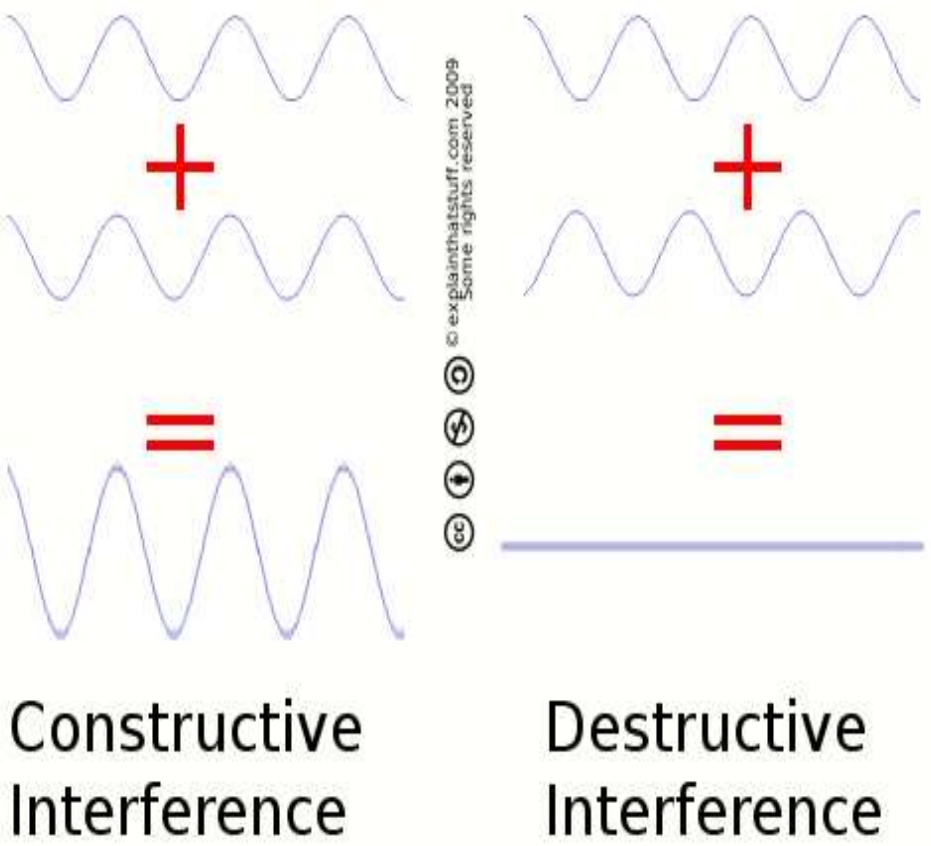
- **Absorption depends on the electromagnetic frequency of the light and object's nature of atoms**

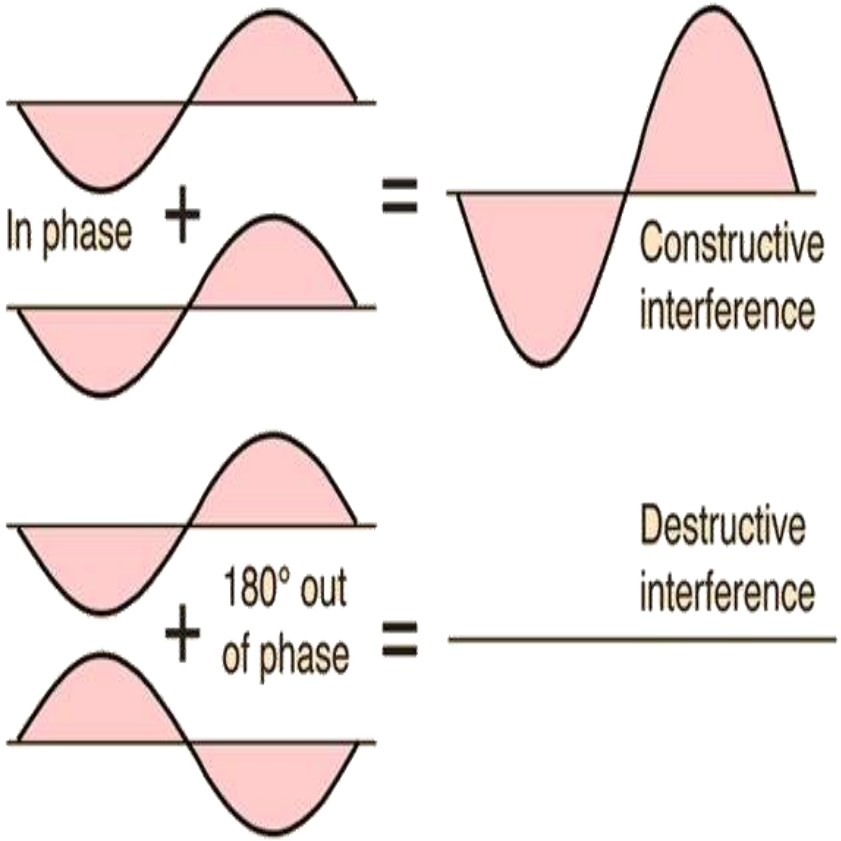
Interference

Interference is a phenomenon in which two waves superpose to form a resultant wave of greater, lower, or the same amplitude.



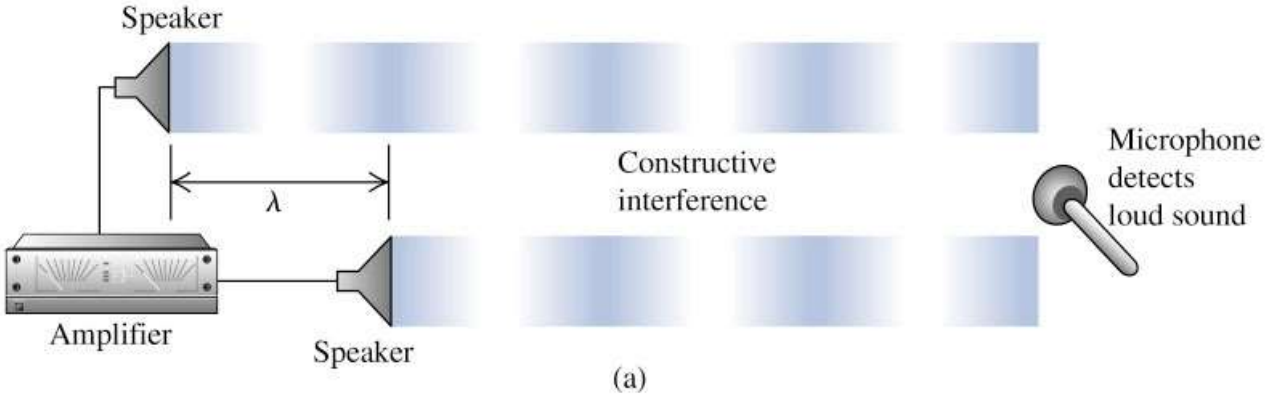
Types of Interference



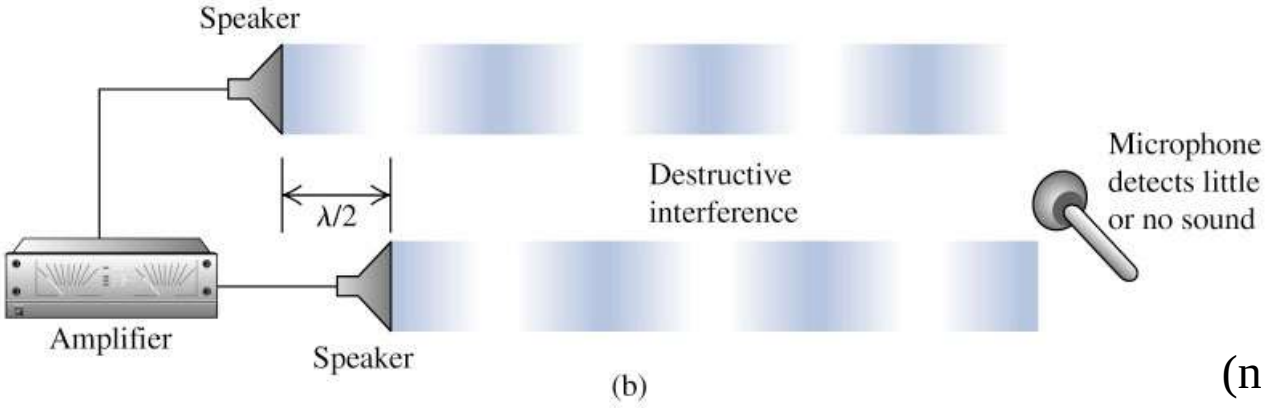


Conditions for constructive and destructive interference

First, consider case for sound waves, emitted by 2 loudspeakers:



Path difference = nλ
Constructive Interference

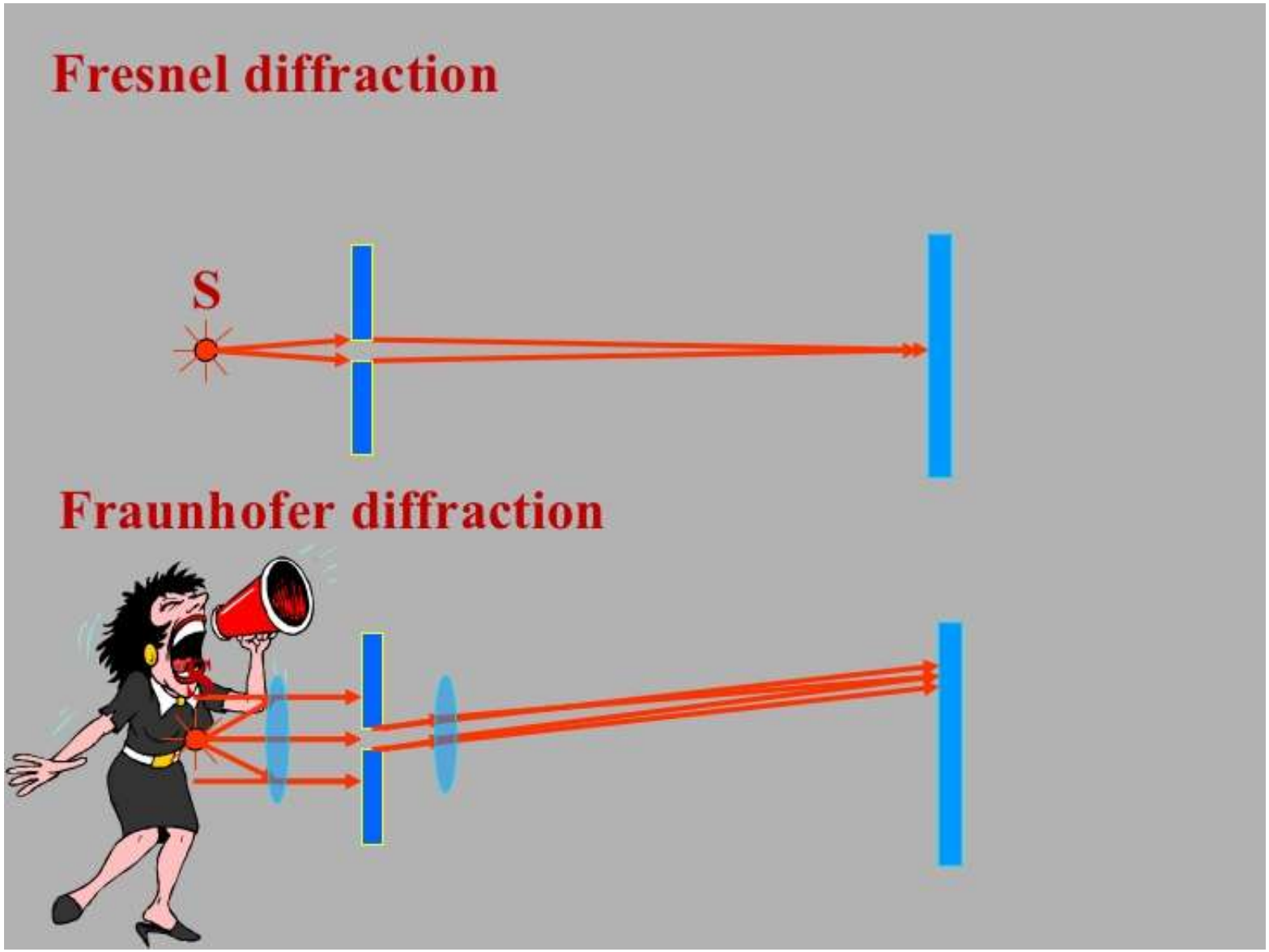


Path difference =(n+1/2)λ
Destructive Interference

(n = any integer, m = odd integer)

Diffraction

Bending of light at the edges of an obstacle is called diffraction.



Thank you one and all !!!!!!!!

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Lecture-2: Light

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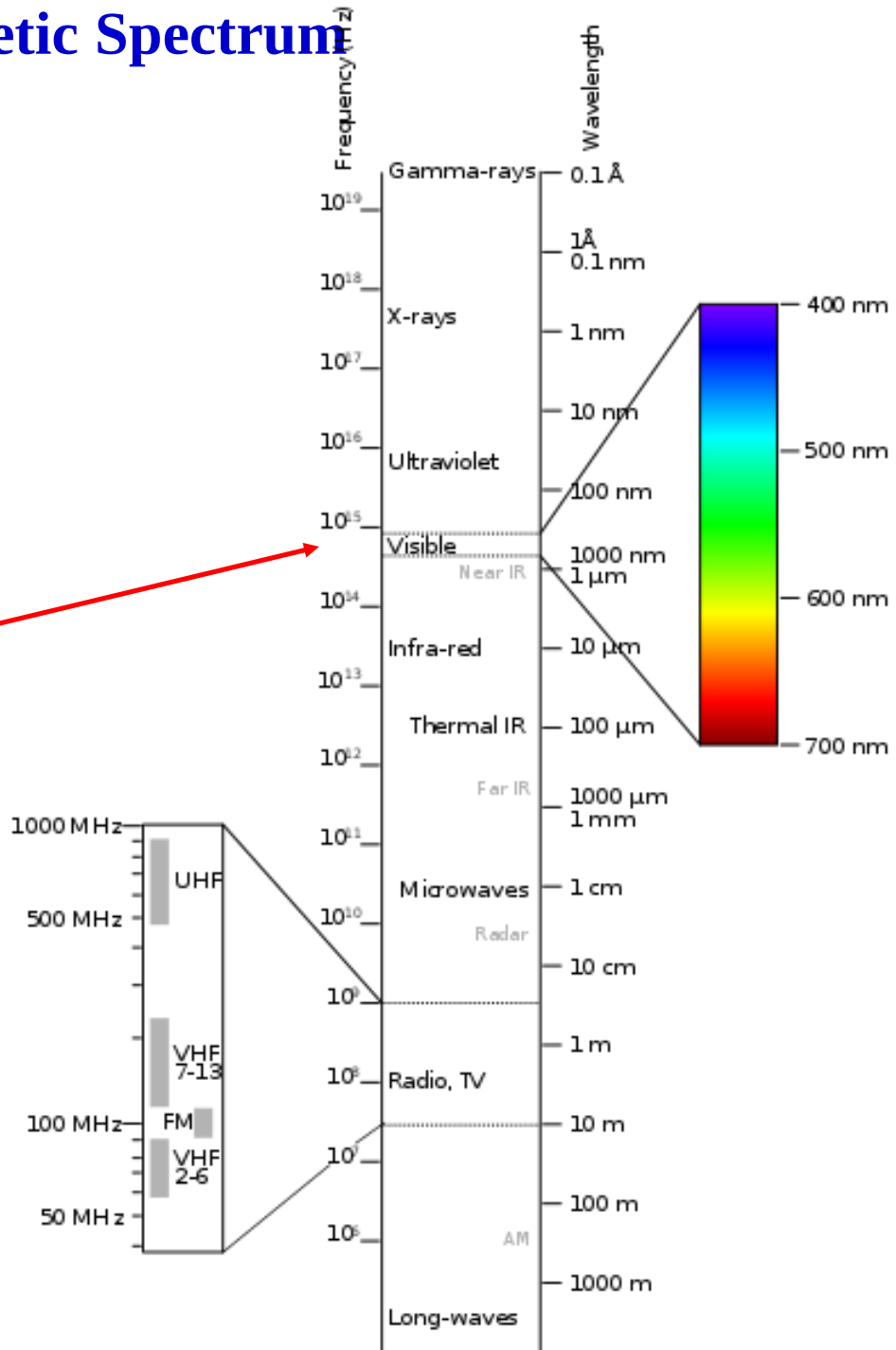
Lecture 2: Light

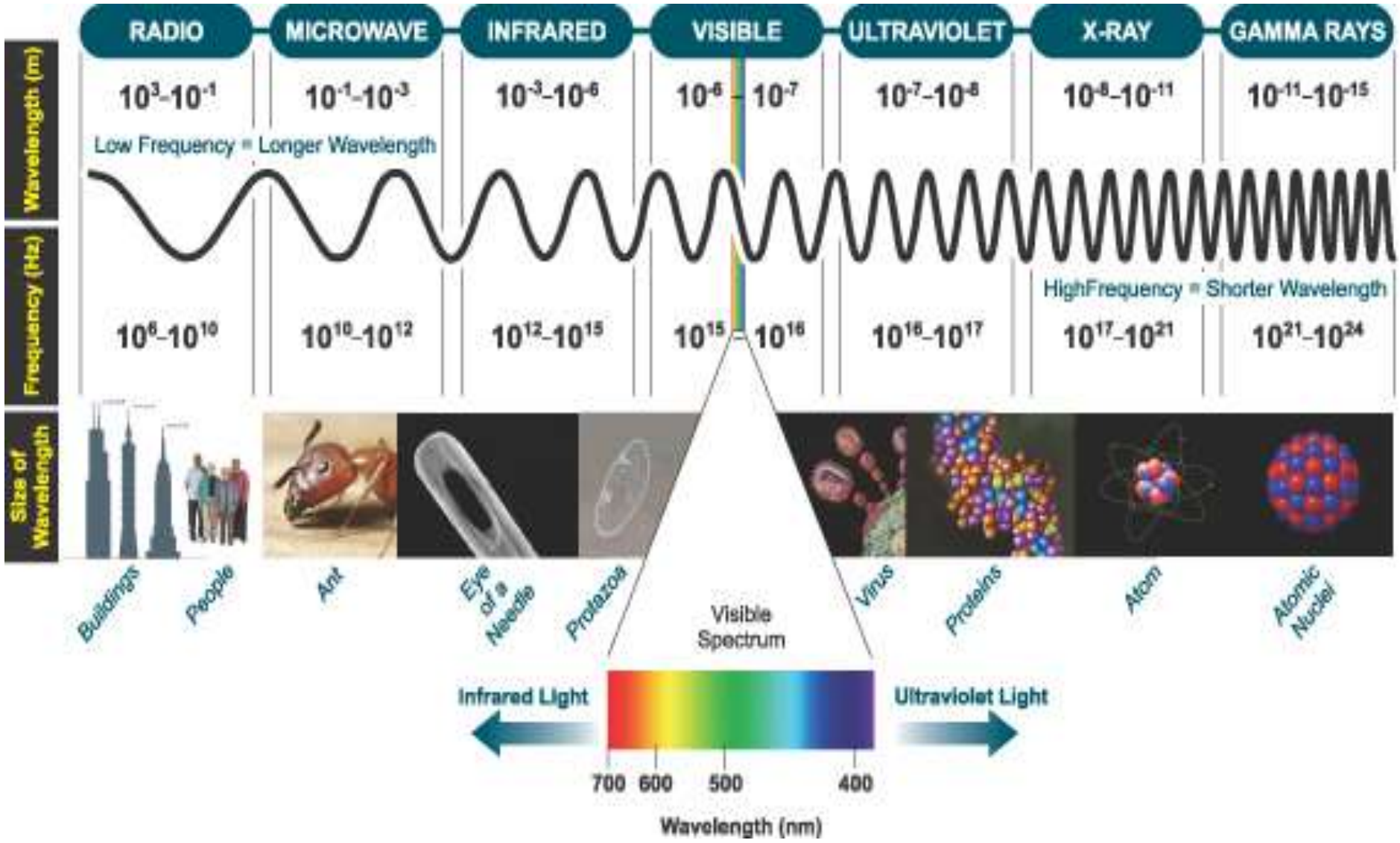
- Introduction to light
- Interaction of light with matter,

Electromagnetic Spectrum

EM spectrum consist of

- **radio waves,**
- **microwaves,**
- **terahertz waves,**
- **infrared,**
- **visible light,**
- **ultraviolet,**
- **X-rays, and**
- **gamma rays at the high-frequency (short wavelength) end.**



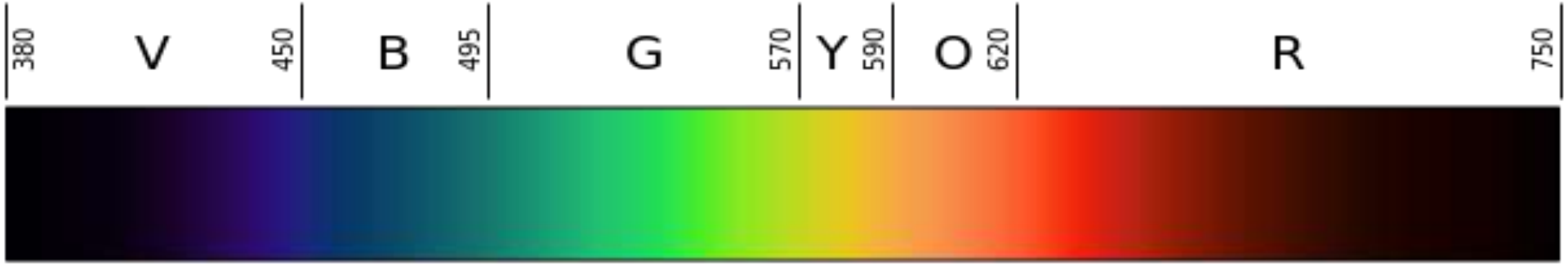

RADIO
MICROWAVE
INFRARED
VISIBLE
ULTRAVIOLET
X-RAY
GAMMA RAYS
Wavelength (m)
10^{3}–10^{-1}
10^{-1}–10^{-3}
10^{-3}–10^{-6}
10^{-6} – 10^{-7}
10^{-7}–10^{-8}
10^{-8}–10^{-11}
10^{-11}–10^{-15}
Low Frequency = Longer Wavelength
HighFrequency = Shorter Wavelength
Frequency (Hz)
10^{8}–10^{10}
10^{10}–10^{12}
10^{12}–10^{15}
10^{15} – 10^{16}
10^{16}–10^{17}
10^{17}–10^{21}
10^{21}–10^{24}
Size of Wavelength
Buildings
People
Ant
Eye of a Needle
Protozoa
Virus
Proteins
Atom
Atomic Nuclei
Visible Spectrum
Infrared Light
Ultraviolet Light
700 600 500 400
Wavelength (nm)

Light

❖**Light** is electromagnetic radiation within a certain portion of the electromagnetic spectrum.

❖Visible light is usually defined as having wavelengths in the range of 400–700 nanometers (nm), or 4.00×10^{-7} to 7.00×10^{-7} m, between the infrared (with longer wavelengths) and the ultraviolet (with shorter wavelengths).

❖This wavelength means a frequency range of roughly 430–750 terahertz (THz).



Speed or velocity of light

C = 299,792,458 m/s

Or

C = 3 X 10^8 m/s

In vacuum

- **Velocity of light in denser medium decreases.**

Conversion of wavelength into energy

$$E = hc/\lambda$$

where:

c = 299792458 m/s is the speed of light in a vacuum

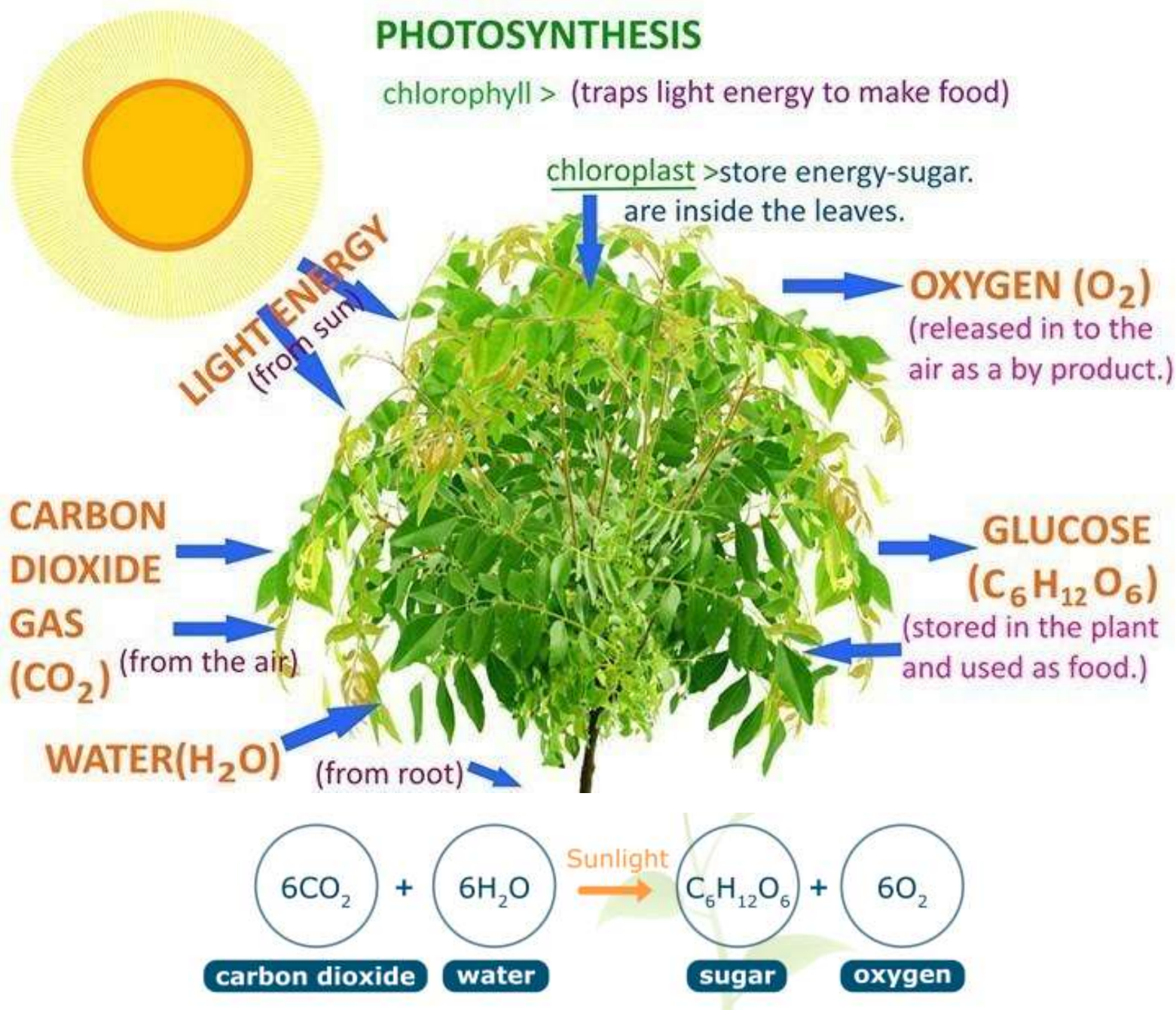
$h = 6.62606896(33)\times10^{-34}$ J·s

$= 4.13566733(10)\times10^{-15}$ eV·s

is Planck's constant

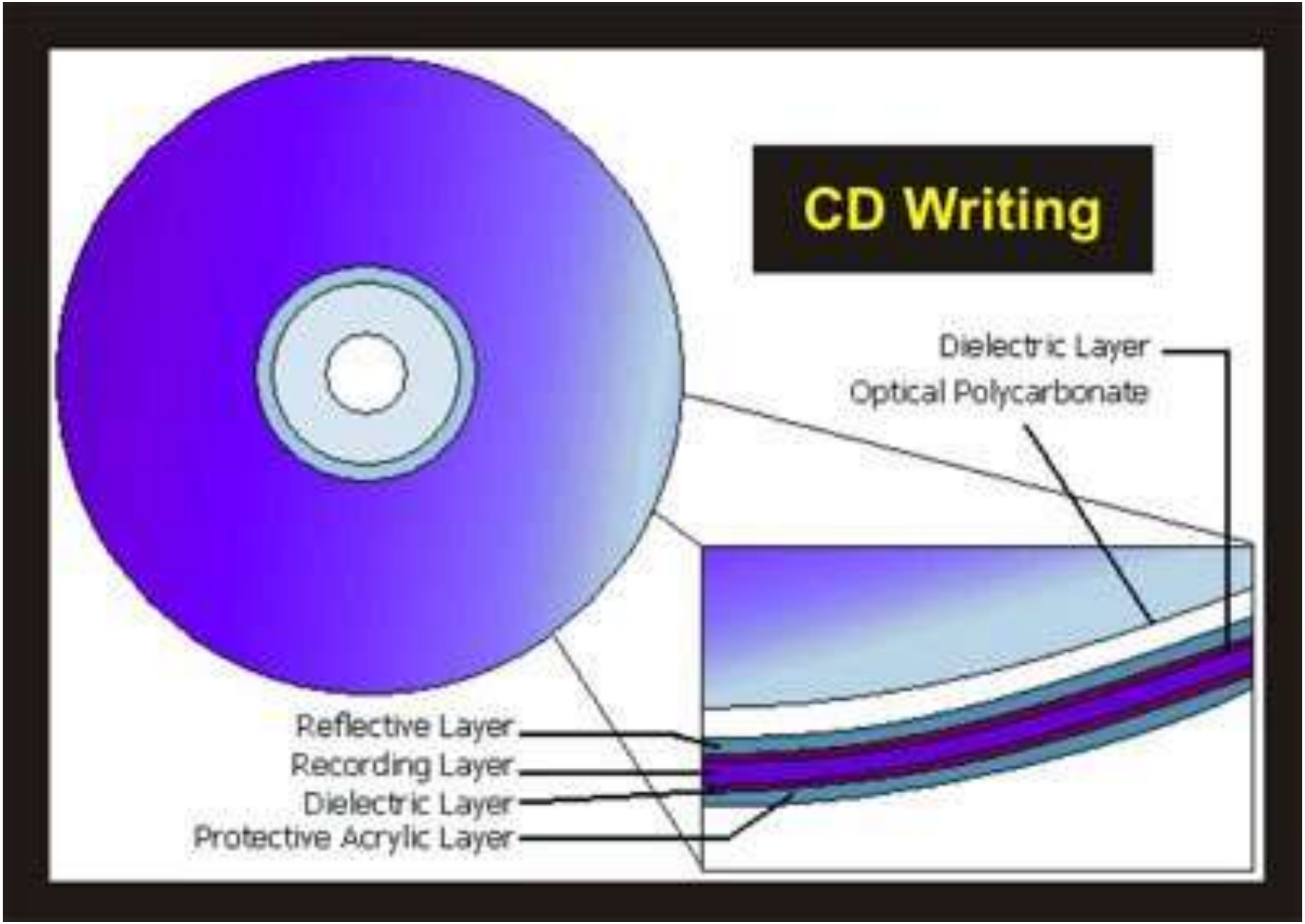
$$E(eV) = 1.24/\lambda(\mu m)$$

Interaction of light with matter: Photosynthesis



Interaction of light with matter: Laser eye surgery

Interaction of light with matter: CD writing



Thank you one and all !!!!!!!!

VIDNYAN MAHAVIDYALAYA SANGOLA

REMEDIAL TEACHING TIME TABLE (2018-19)

Class : B.Sc.I Category : Slow Learners w.e.f 1/9/2018

TIME	MON	TUE	WED	THR	FRI	SAT
WED TO SAT: 2.30 PM TO 3.18 PM TUE : 3.18 TO 4.06PM	----	MATHS/ZOO (44 / 45)	STAT/BOT (44 / 45)	CHEM/COM.SCI (45 / 46)	PHY/ GEO (45 / 46)	ENG (45)

VIDNYAN MAHAVIDYALAYA SANGOLA

REMEDIAL TEACHING TIME TABLE (2018-19)

Class : B.Sc.I Category : Advanced Learners w.e.f 1/9/2018

TIME	MON	TUE	WED	THR	FRI	SAT
WED TO SAT: 2.30 PM TO 3.18 PM TUE : 3.18 TO 4.06PM	----	STAT/BOT (46 / 16)	CHEM/COM.SCI (16 / 46)	PHY/ GEO (44 / 16)	ENG (44)	MATHS/ZOO (44 / 16)

Note: 1) Figures in the Bracket indicates Class Room Numbers

Vidnyan Mahavidyalaya, Sangola Dist. Solapur

CHAIRMAN

TIME TABLE COMMITTEE

Principal

Vidnyan Mahavidyalaya, Sangola
Tal. Sangola Dist. Solapur

PRINCIPAL

VIDNYAN MAHAVIDYALAYA SANGOLA

Student Name:	Department of Physics Background Knowledge Test B.Sc.-I	Obtained marks:

Date: 14/07/2018 **Maximum Marks: 50**

Q. Rewrite the following sentences by using correct alternatives.

1. ..... is a SI unit of acceleration due to gravity?
a. m/sec b. m^2/sec
c. m/sec^2 d. cm/sec^2
Ans:

2. Newton's first law is a law of.....
a. Force b. Inertia
c. Velocity d. acceleration
Ans:

3. Speed is .....quantity.
a. Vector b. Scalar
c. Both a & b d. None of these
Ans:

4. For every action, there is .....& ..... reaction.
a. action, opposite b. equal, same
c. equal, opposite d. opposite, action
Ans:

5. Acceleration has ..... And .....
a. Magnitude, base b. magnitude, direction
c. direction, base d. None of these
Ans:

6..... is CGS unit of force.
a. N b. gm^2/sec
c. dyne d. Nm^2
Ans:

7. Surface tension is property related to.....
a. gas b. liquid
c. solid d. solid and gas
Ans:

8. Within .....limit, stress is directly proportional to strain.
a. Elastic b. Plastic
c. thermal d. thermal
Ans:

9. The time rate of change of ..... is directly proportional to impressed force.
a. Velocity b. momentum
c. mass d. acceleration.
Ans:

10. Motion of a body along circumference of a circle is called .....motion.
a. circular b. longitudinal
c. linear d. translational
Ans:

11. ..... is SI unit of surface tension.
a. N/m b. m/N
c. dyne d. dyne/sec
Ans:

2018-19

Slow Learner. BSC-I

1) Mane Pratiksha Chandrakant - 20
2) Khandekar Priyka Balso - 28
3) Bendgude Prajakta Dattu - 26
4) Kakamare Aishwarya Rameshwar - 26
5) Bansode Tejaswini Sunil - 26
6) Gherade Sarjerao Dhadiram - 24
7) Gadade Sushil Samadhan - 22
8) Bhagat Suraj Rajaram - 26
9) Kadam Rahul Baban - 20
10) Kokare Amol Mhalappa - 28
11) Savant Mahendra Bandapant - 18
12) Katkar Abhay Dattatray - 10
13) Yevale Nilesh Basveshwar - 28
14) Bankar Amol Kisan - 24
15) IRker Rahul Balaso - 20
16) Khandakar Navanth Shivaji - 24
17) Pawar Swapil Audumbar - 26
18) Mane Prajyot Papat - 24
19) Kokate Vidya Arun - 24
20) Sargar Sonali Namdev - 14
21) Patil Komal Shahaji - 16
22) Kadam Swati Dilip - 18
23) Dighe Rutuja Dattatray - 26
24) Kasid Akshay Ramesh - 28
25) Patil Swaraj Vasant - 20

39) Ghadge Vipul manikrao -
40) kodag Ravindra sambhaji -3
41) shinde onkar Bhausaheb -32
42) Bhasale Amar Gorakh -34
43) Bile kavita Baly -30
44) Jadhav priyanka chandrakant -34
~~45) More vidya Gopal~~
45) lendave sandhya samadhan -32
46) patil Apeksha Laxman -32
47) patil sujata Uttam -34
48) Mehkari Rupali shivaji -36
49) Jadhav prajakta mohan -32
50) Jadhav sarika Haridas -36
51) Dhandore Trupti Udhaw -32
52) shinde Supriya Ravsaheb -32
53) kadam Ashwini Baburao -40
54) Dolas shubhagi Ashok -42
55) Mulani kaishma kabir -32
56) shastre swati Dattatry -34
57) kadam supriya Dagady -36
58) yedage kiran pandurang -30
59) More manasi mahadev -32
60) yedage pooja Bharat -34
61) phule sucheta sitaram -42
~~62)~~

Advanced learner BSC-I

2018-1

1) Babar Akashata Dilip - 30
2) Pawar sonali Balu - 32
3) pawar pratiksha chandrakant - 30
4) kamble Gauri prabhakar - 34
5) Misal pooja pratap - 42
6) Gorad vaibhavi Madhukar - 32
7) Gaikwad Manisha .H - 42
8) kakande Rukuja Narayan - 36
9) Sutar Rohini Dadaso - 32
10) Gangadhare pallavi Balasaheb - 32
11) patil monika shivaji - 34
12) Jadhav kajal satish - 32
13) kodag puja prabhakar - 30
14) Teigune Mohini machhindra - 30
15) Chavan vaibhav Chandrakant - 30
16) Bhajanawale vinayak Dhananjay - 32
17) Anpat swapnil Kailal - 38
18) kale sachin uttam - 34
19) pawar onkar kisan - 32
20) Gaikwad Akash mohan - 36
21) Gavhane Bharati sanjay - 42
22) Dighe komal vishwanath - 32
23) Ligade komal sambhaji - 30
24) kharade Sandhyarani Dattu - 30
25) Naik kajal Bapuso - 36
26) Bhalerao R. T - 32
27) khandekar sunil prakash - 34
28) patil Amol Hambirrao - 36
29) Jawalke ganesh Tanaji - 32
30) pujari Aba Dnyaneshwar - 36
31) sagar premnath Hanumant - 38
32) korande Machindra Mahadev - 30
33) Bhosale shikant Sunil - 34
34) Bagal komal dadaso - 36
35) shembade supriya Hemant - 30
36) Jodh pratibha pandurang - 38
37) Bandgar Vijayshri Balaso - 36
38) kolase omkar abaso - 32

26) Mane Akshay Dattatray - 22
27) Kulkarani Vijay Ramesh - 28
28) Kashid Heishikesh Manik - 18
29) Navale onkar khandojirao - 28
30) Bandgar swapnil Nivrutti - 14
31) kharat Shivaji Onyanu - 24
32) khandekar charudatta pandit - 26
33) Patil Sagar sukader - 16
34) Gurav Akshay Balso - 24
35) khandekar ajit suresh - 28
36) Gaikwad pravin Ashok - 26
37) Narale Vaibhav Bapu - 24
38) Vhianmane Amol Bhagwan - 24
39) Behre Dhyaheshwar Balsasheb - 28
40) Soudagar Geetanjali Parrasapa - 26
41) Vhanmane kashiling Shivaji - 24
42) Fule Pooja Narayan - 26
43) kulkarni Gurri Ramchandra - 24
44) Takale suraswatti appa - 28
45) Mulani Moshasin Balu - 18
46) Lavate santosh sambhaji - 28
47) kasid Vishal suryakantt - 28
48) Teli komal Dattatray - 24
49) vhanmane priyanka vithaba - 26
50) Aldar usha vishnu - 18

...ant Monali Bharat - 20
More Vidya Gopal - 18
Waghamare Pradnya Dadso - 10
Ingale Asmita Krushna - 24
) Metakari Shrutika Dadaso - 28
) Ligade Kajal Vijay - 24
7) Sayyad Ayesha Rashid - 24
58) Binge Komal Sunil - 28
59) Parase Shital Gajanan - 20
60) Randive Nikita Kantital - 28
61) Dhole ~~Su~~ Shivpriya Anilkumar - 26
62) Kolekar Sanika - 24
63) Aldar Anjali Bhagwan - 26
64) Bhandhare Priyanka Rajaram - 22
65) Ingale Vaishali Tatyaso - 16
66) Goddse Pournima Vitthal - 24
67)

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S.T.S.S.P.MANDAL'S

VIDNYAN MAHAVIDYALAYA, SANGOLA

Name of teacher
Topic
Date

Department of Physics
Attendance sheet of (B.Sc-I)
Advance Learner Students

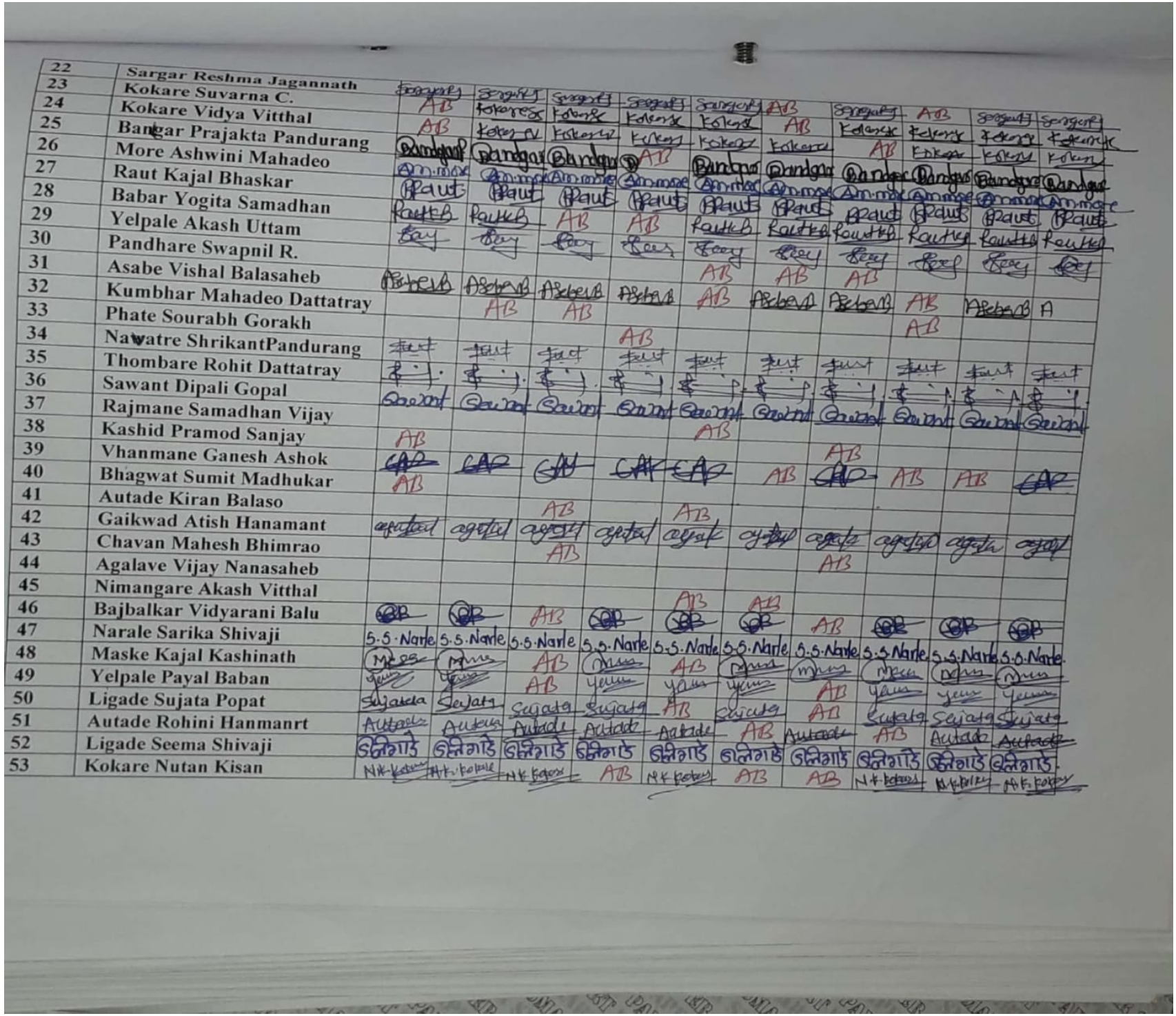
Sr.No.	Name of Student										
1	Babar Ajita Shankarrao	A.S.Babar	A.S.Babar	A.S.Babar	A.S.Babar	A.S.Babar	A.S.Babar	A.S.Babar	A.S.Babar	A.S.Babar	A.S.Babar
2	Lawate Ashwini Balasaheb			AB		AB	AB				AB
3	Pandit Sonali Subhash						AB				
4	Jadhav Shraddha Subhash	AB				AB					
5	Mane Mayuri Dattatray										
6	Anantkavali Archana Bhivaji										
7	Nawale Chhaya Ankush	Nawale.CA	Nawale.CA	Nawale.CA	Nawale.CA	Nawale.CA	Nawale.CA	Nawale.CA	Nawale.CA	Nawale.CA	Nawale.CA
8	Patole Komal Subhash										
9	Karande Prajkta Sitaram					AB		AB			AB
10	Gadade Rutuja Bandu										
11	Gaikwad Nikita Sunil	G.Nitin	G.Nitin	G.Nitin	AB	AB	G.Nitin	G.Nitin	G.Nitin		
12	Ghodake Komal Vijay	AB		AB							
13	Narale Kajal Ashok										
14	Phate Poonam Bandu					AB			AB		AB
15	Kamble Komal Deuba	AB			AB					AB	
16	Madane shital Balasaheb										
17	Shejal Priyanka Dattatraya	S.P.shejal	S.P.shejal	S.P.shejal	S.P.shejal	S.P.shejal	S.P.shejal	S.P.shejal	S.P.shejal	S.P.shejal	S.P.shejal
18	Lawate Rupali Maruti										
19	Aldar Swati Satyawan	S.S.Aldar	S.S.Aldar	S.S.Aldar	S.S.Aldar	S.S.Aldar	S.S.Aldar	S.S.Aldar	S.S.Aldar	S.S.Aldar	S.S.Aldar
20	Thokale Rohini Gautam										
21	Sose Pooja Vitthal	AB	AB			AB					

S.T.S.S.P.MANDAL'S

VIDNYAN MAHAVIDYALAYA, SANGOLA

Department of Physics
Attendance sheet of (B.Sc-I)
Slow Learner Students

Sr.No.	Name Of student										
1	Kokate Simarani Bhausaheb	Kokate S.B	Kokate S.B	Kokate S.B	Kokate S.B	Kokate S.B	Kokate S.B	Kokate S.B	Kokate S.B	Kokate S.B	Kokate S.B
2	Fulari Gauri Subhash	Fulari	Fulari	Fulari	Fulari	Fulari	Fulari	Fulari	Fulari	Fulari	Fulari
3	Somdale Sayali Kisan	Sayali	Sayali	Sayali	Sayali	Sayali	Sayali	Sayali	Sayali	Sayali	Sayali
4	Waghamare Pratibha M.	Waghmare	AB	Waghmare	Waghmare	Waghmare	Waghmare	Waghmare	Waghmare	Waghmare	Waghmare
5	Pawar Ashwini Dilip	Pawar	Pawar	Pawar	AB	AB	Pawar	Pawar	Pawar	Pawar	Pawar
6	Suryawanshi Vaishali R.	AB	Vaishali	Vaishali	Vaishali	Vaishali	Vaishali	Vaishali	Vaishali	Vaishali	Vaishali
7	Kengar Kisan Vishwas	Kengar K.V.	AB	AB	Kengar K.V.	Kengar K.V.	Kengar K.V.	Kengar K.V.	Kengar K.V.	Kengar K.V.	Kengar K.V.
8	More Shivani Bhagwat	S.B More	S.B More	S.B More	S.B More	S.B More	S.B More	S.B More	S.B More	S.B More	S.B More
9	Shinde Dhanshri Pandurang	Shinde	Shinde	Shinde	AB	Shinde	Shinde	AB	Shinde	Shinde	AB
10	Gusale Sangita Ramchandra	Gusale	Gusale	Gusale	Gusale	Gusale	Gusale	AB	Gusale	Gusale	Gusale
11	Mane Reshma Popat	Rmane	Rmane	Rmane	Rmane	Rmane	Rmane	Rmane	Rmane	Rmane	Rmane
12	Mane Kavita Bhagyawant	Kavita	Kavita	AB	Kavita	Kavita	Kavita	Kavita	AB	Kavita	Kavita
13	Thorat Karishma R.	Thorat	AB	Thorat	Thorat	Thorat	Thorat	Thorat	Thorat	AB	Thorat
14	Kolekar Lata Kisan					AB		AB			
15	Patil Amruta Gulab	Patil	AB	Patil	Patil	Patil	Patil	Patil	Patil	Patil	Patil
16	Autade Nita Dnyaneshwar				AB	AB					
17	Yadav Suvarna Ananda	AB	Yadav	Yadav	Yadav	Yadav	Yadav	Yadav	AB	Yadav	Yadav
18	Kshrisagar Pratiksha V.	Pratiksha	Pratiksha	Pratiksha	Pratiksha	PAB	AB	Pratiksha	Pratiksha	Pratiksha	Pratiksha
19	Ambekar Bharati Nilkanth	AB	AB								
20	Khatkale Sayali Arun	Khatkale	Khatkale	AB	AB	Khatkale	Khatkale	Khatkale	Khatkale	Khatkale	Khatkale
21	Mali Yogeshwari Sambhaji	AB	Mali V.S.	Mali V.S.	Mali V.S.	Mali V.S.	Mali V.S.	Mali V.S.	Mali V.S.	Mali V.S.	Mali V.S.



22	Sargar Reshma Jagannath											
23	Kokare Suvarna C.	AB										
24	Kokare Vidya Vitthal	AB										
25	Bangar Prajakta Pandurang				AB							
26	More Ashwini Mahadeo											
27	Raut Kajal Bhaskar											
28	Babar Yogita Samadhan											
29	Yelpale Akash Uttam			AB	AB							
30	Pandhare Swapnil R.											
31	Asabe Vishal Balasaheb					AB	AB	AB				
32	Kumbhar Mahadeo Dattatray											
33	Phate Sourabh Gorakh		AB	AB		AB			AB			A
34	Nawatre ShrikantPandurang				AB				AB			
35	Thombare Rohit Dattatray											
36	Sawant Dipali Gopal											
37	Rajmane Samadhan Vijay											
38	Kashid Pramod Sanjay	AB				AB						
39	Vhanmane Ganesh Ashok							AB				
40	Bhagwat Sumit Madhukar	AB					AB		AB	AB		
41	Autade Kiran Balaso											
42	Gaikwad Atish Hanamant			AB		AB						
43	Chavan Mahesh Bhimrao			AB								
44	Agalave Vijay Nanasaheb							AB				
45	Nimangare Akash Vitthal											
46	Bajbalkar Vidyarani Balu			AB		AB	AB					
47	Narale Sarika Shivaji							AB				
48	Maske Kajal Kashinath			AB		AB						
49	Yelpale Payal Baban			AB				AB				
50	Ligade Sujata Popat					AB		AB				
51	Autade Rohini Hanmanrt						AB		AB			
52	Ligade Seema Shivaji											
53	Kokare Nutan Kisan				AB		AB	AB				

22	Kamble Pradnya Balasaheb	AB	Kamble	kamble	kamble	kambale	kambale	kambale	AB	kambale	kambl
23	Birajdar Manish Pandurang			AB		AB					
24	Baad Pooaj Manik	Baad	Baad	AB	Baad	Baad	AB	Baad	Baad	Baad	Baad
25	Khandekar Komal R.						AB		AB		
26	Mali Seema Sadashiv	S.S.Mali	AB	AB	ss.Mali	s.s.mali	s.s.Mali	s.s.Mali	s.s.Mali	AB	s.s. Ma
27	Kolekar Sujata Shahaji	s.s.kolekar	s.s.kolekar	s.s.kolekar	s.s.kolekar	s.s.kolekar	s.s.kolekar	s.s.kolekar	s.s.kolekar	s.s.kolekar	s.s.kolekar
28	Nakate Poonam Tanaji	Nakate	Nakate	Nakate	Nakate	Nakate	Nakate	Nakate	AB	Nakate	Nakate
29	Katkar Ujwala Madhukar					AB		AB			
30	Nakate Swati Vilash	AB	Ali	Ali	Ali	AB	Ali	AB	Ali	Ali	AB
31	Shrishad Rajashri M.						AB				
32	Mote Seema Vilas	Mote	Mote	Mote	Mote	AB	Mote	Mote	Mote	Mote	Mote
33	Metkari Abhijit Ekanath	AB	AB		AB		AB		AB		AB
34	Bansode Umesh Laxman	Bansode	Bansode	Bansode	Bansode	AB	Bansode	Bansode	Bansode	AB	Bansode
35	Kolekar Sagar Dattu	AB						AB			
36	Kashid Aapasaheb Suryakant	Kashid	Kashid	AB	Kashid	Kashid	Kashid	Kashid	Kashid	Kashid	Kashid
37	Babar Sujata Sunil	AB	Babar	Babar	Babar	Babar	Babar	AB	Babar	Babar	Babar
38	Koli Netaji Balaso	Koli N.B	Koli N.B	Koli N.B	AB	Koli N.B	AB	Koli N.B	Koli N.B	Koli N.B.	AB
39	Ankalgi Somshekhar M.		AB			AB					
40	Shelake Navanath Suresh	Shelake	Shelake	AB	Shelake	Shelake	Shelake	Shelake	Shelake	AB	Shelake
41	Kumbhar Hanmant Shamrao										
42	Nanaware Sagar Ramchandra										
43	Khandagale Mayur Haridas				AB		AB	AB			
44	Badade Laxman Subhash	AB	AB			AB					
45	Pawar Rahul Subrao	Pawar	Pawar	Pawar	Pawar	Pawar	Pawar	AB	Pawar	AB	AB
46	Kumbhar Pandurang S.	AB	AB								
47	Khandagle Vishal Bapuso							AB			
48	Kedar Anil Laxman	Kedar A.L.	Kedar A.L.	AB	Kedar A.L.	Kedar A.L.	Kedar A.L.	Kedar A.L.	Kedar A.L.	Kedar A.L.	Kedar A.L.
49	Pawar Akash Balu	A.B Pawar	A.B Pawar	A.B Pawar	A.B Pawar	A.B Pawar	AB	A.B Pawar	A.B Pawar	A.B Pawar	A.B Pawar
50	Bodare Ravi Vilas			AB							
51	Narale Archana Agatrao	Narale	Narale	Narale	Narale	Narale	Narale	Narale	Narale	Narale	Narale
52	Pawar Komal Chandrakant	Pawar	Pawar	Pawar	AB	Pawar	Pawar	Pawar	Pawar	Pawar	Pawar
53	Todakar Aparna Laxman			AB				AB		AB	

54	Shinde Chhakuli Bharat	AB										
55	Shingare Aruna Chagan	Shingare	Shingare	Shingare	Shingare	Shingare	AB	Shingare	Shingare	Shingare	Shingare	
56	Babar Sima Eknath	Babar	Babar	Babar	Babar	Babar	Babar	Babar	Babar	Babar	Babar	
57	Patil Chandrakant Shamrao											
58	Gurav Omkar Pandurang					AB						
59	Kirgat Pooja Manik	Pooja	Pooja	Pooja	Pooja	Pooja	Pooja	Pooja	Pooja	Pooja	Pooja	
60	Thombare Snehar Sida	Thombare	Thombare	Thombare	Thombare	Thombare	Thombare	Thombare	Thombare	Thombare	Thombare	
61	Hajare Komal Mahadeo	Hajare	AB	Hajare	Hajare	Hajare	Hajare	Hajare	Hajare	Hajare	Hajare	
62	Ghadage Dhanshri Abaso	D.A.Ghadge	D.A.Ghadge	D.A.Ghadge	D.A.Ghadge	D.A.Ghadge	D.A.Ghadge	D.A.Ghadge	D.A.Ghadge	D.A.Ghadge	D.A.Ghadge	
63	Thombare Monika Manohar	Thombare	Thombare	Thombare	Thombare	Thombare	Thombare	Thombare	Thombare	Thombare	Thombare	
64	Dighe Aswini Sunil	Dighe	Dighe	AB	Dighe	Dighe	Dighe	Dighe	Dighe	AB	Dighe	
65	Raste Trupti Raghunath	Raste	AB	Raste	Raste	AB	Raste	Raste	Raste	AB	Raste	
66	Devkate Payal Pandurang	Devkate	Devkate	Devkate	Devkate	Devkate	Devkate	Devkate	Devkate	Devkate	Devkate	
67	Bajare Shradha Prakash	Bajare	Bajare	Bajare	Bajare	Bajare	Bajare	Bajare	Bajare	Bajare	Bajare	
68	Kamble Priyanka D.	AB	Kamble	Kamble	Kamble	AB	Kamble	Kamble	Kamble	Kamble	Kamble	
69	Deasi Shubhangi Jagnnath	Desai	Desai	Desai	Desai	Desai	Desai	Desai	Desai	Desai	Desai	
70	Dhobale Supriya Rajendra	Dhobale	Dhobale	Dhobale	AB	Dhobale	Dhobale	Dhobale	Dhobale	Dhobale	Dhobale	
71	Reshama Balasaheb Todkar	Todkar	Todkar	Todkar	Todkar	Todkar	Todkar	Todkar	Todkar	Todkar	Todkar	
72	Khandagle Kavita Tanaji	AB					AB					
73	Kasar Aarati Jagannath	Kasar	AB	Kasar	Kasar	Kasar	Kasar	Kasar	Kasar	Kasar	Kasar	
74	Khilare Jyoti Dnyanesh	Khilare	Khilare	Khilare	Khilare	Khilare	AB	Khilare	Khilare	Khilare	Khilare	
75	Patil Swapnali Balaso	Patil	Patil	Patil	Patil	Patil	Patil	Patil	Patil	Patil	Patil	
76	Paiwan Tanuja Prabhakar	Paiwan	Paiwan	Paiwan	Paiwan	Paiwan	Paiwan	Paiwan	Paiwan	Paiwan	Paiwan	

Student Name: Khandekar Priyanka Balaso

Department of Physics
Background Knowledge Test
B.Sc.-I

Obtained marks: 28

Date: 14/07/2018

Maximum Marks: 50

Q. Rewrite the following sentences by using correct alternatives.

1. ..... is a SI unit of acceleration due to gravity? cm/sec²
a. m/sec — b. m^2/sec
c. m/sec^2 — d. cm/sec^2
Ans:

2. Newton's first law is a law of..... Force
a. Force — b. Inertia
c. Velocity — d. acceleration
Ans:

3. Speed is .....quantity. scalar
a. Vector — b. Scalar
c. Both a & b — d. None of these
Ans:

4. For every action, there is .....& ..... reaction. equal same
a. action, opposite — b. equal, same
c. equal, opposite — d. opposite, action
Ans:

5. Acceleration has ..... And ..... magnitude direction
a. Magnitude, base — b. magnitude, direction
c. direction, base — d. None of these
Ans:

6. ..... is CGS unit of force. dyne
a. N — b. gm^2/sec
c. dyne — d. Nm^2
Ans:

7. Surface tension is property related to..... liquid
a. gas — b. liquid
c. solid — d. solid and gas
Ans:

8. Within .....limit, stress is directly proportional to strain. thermal
a. Elastic — b. Plastic
c. thermal — d. thermal
Ans:

9. The time rate of change of ..... mass is directly proportional to impressed force.
a. Velocity — b. momentum
c. mass — d. acceleration.
Ans:

10. Motion of a body along circumference of a circle is called .....motion. circular
a. circular — b. longitudinal
c. linear — d. translational
Ans:

11. ..... N/m is SI unit of surface tension.
a. N/m — b. m/N
c. dyne — d. dyne/sec
Ans:

12.Moment of Inertia depends on.....
a. mass b. radius
c. mass & radius d.none of these
Ans: mass & radius

13.The number of oscillations performed by particle per second is called ....
a. Time b. Displacement
c.velocity d.Frequency
Ans: Frequency

14.Total energy of a particle is the sum of ..... And .....energy.
a. electric,mechanical b. potential,electrical
c. kinetic,potential d.kinetic,electric
Ans: kinetic, potential

15.The time taken by a particle to complete one oscillation is called.....
a. Motion b. period
c. time d.none of these
Ans: none of these

16.An object under the influence of only gravity is said to be in a....
a. acceleration b. moment of Inertia
c. Free-fall d.translational
Ans: Free-fall

17. One newton is equal to the force required to accelerate one kilogram of mass at
a. one meter/sec b. one meter
c. one cm/sec d.one meter/second/second
Ans: one meter/second/second

18.What acceleration will result when a 12 N net force applied to a 3 kg object?
a. 3m/s/s b. 4m/s/s
c. 18m/s/s d. 9m/s/s
Ans: 9 m/s/s

19. The number 10^{-9}m is .....
a. pico b. mili
c.micro d.nano
Ans: nano

20. Planets move in.....orbits with the sun at one of the foci.
a. circular b. elliptical
c. parabolic d. none of these
Ans: elliptical

21. Dispersion of light is nothing but...
a. bending of light b. Mixing of light
c. reflection of light d. Huygen's wave.
Ans: bending of light

22. Least of travelling microscope is...
a. 0.01 cm b. 0.001 cm
c. 0.1 cm d. 0.001 mm
Ans: 0.001 mm

23. Spectrometer is used to determine .....
a. angle of prism b. R.I of water
c. amplitude of wave d. frequency of wavelength.
Ans: amplitude of wave

24. Convert wavelength of 0.5 μm into energy ..... eV.
a. 2.48 eV b. 24.8 eV
c. 0.248 eV d. 0.5 eV
Ans: 0.248eV

25. When light interact with matter then light is .....
a. absorbed b. transmitted
c. reflected d. all a, b and c
Ans: transmitted

Student Name: Mane Pratiksha Chandrakant

Department of Physics
Background Knowledge Test
B.Sc.-I

Obtained marks: 20

Date: 14/07/2018

Maximum Marks: 50

Q. Rewrite the following sentences by using correct alternatives.

1. ..... is a SI unit of acceleration due to gravity?
a. m/sec
b. m^2/sec
c. m/sec^2
d.cm/sec^2
Ans: m/sec^2

2.Newton's first law is a law of.....
a.Force
b.Inertia
c. Velocity
d.acceleration
Ans: Force

3.Speed is .....quantity.
a.Vector
b.Scalar
c. Both a & b
d.None of these
Ans: Scalar

4.For every action,there is .....& ..... reaction.
a.action,opposite
b.equal,same
c.equal,opposite
d.opposite,action
Ans: equal, opposite

5.Acceleration has ..... And .....
a.Magnitude,base
b.magnitude,direction
c. direction,base
d.None of these
Ans: direction, base

6..... is CGS unit of force.
a. N
b.gm^2/sec
c. dyne
d.Nm^2
Ans: gm^2/sec

7. Surface tension is property related to.....
a.gas
b.liquid
c. solid
d.solid and gas
Ans: solid

8.Within .....limit,stress is directly proportional to strain.
a.Elastic
b. Plastic
c. thermal
d.thermal
Ans: Elastic

9. The time rate of change of ..... is directly proportional to impressed force.
a. Velocity
b. momentum
c. mass
d.acceleration.
Ans: Velocity

10.Motion of a body along circumference of a circle is called .....motion.
a. circular
b. longitudinal
c. linear
d.translational
Ans: circular

11. ..... is SI unit of surface tension.
a. N/m
b. m/N
c. dyne
d.dyne/sec
Ans: dyne

12.Moment of Inertia depends on.....
a. mass b. radius
c. mass & radius d.none of these
Ans: c) mass & radius
13.The number of oscillations performed by particle per second is called ……..
a. Time b. Displacement
c.velocity d.Frequency
Ans: d) frequency
14.Total energy of a particle is the sum of ……. And ……..energy.
a. electric,mechanical b. potential,electrical
c. kinetic,potential d.kinetic,electric
Ans: b) potential, electrical
15.The time taken by a particle to complete one oscillation is called…….
a. Motion b. period
c. time d.none of these
Ans: b) Period
16.An object under the influence of only gravity is said to be in a….
a. acceleration b. moment of Inertia
c. Free-fall d.translational
Ans: d) translational
17. One newton is equal to the force required to accelerate one kilogram of mass at
a. one meter/sec b. one meter
c. one cm/sec d.one meter/second/second
Ans: d) one meter 1second 1 second
18.What acceleration will result when a 12 N net force applied to a 3 kg object?
a. 3m/s/s b. 4m/s/s
c. 18m/s/s d. 9m/s/s
Ans: b) 4m/s/s
19. The number 10^{-9}m is …….
a. pico b. mili
c.micro d.nano
Ans: a) pico
20. Planets move in ……orbits with the sun at one of the foci.
a. circular b. elliptical
c. parabolic d. none of these
Ans: b) elliptical
21. Dispersion of light is nothing but…
a. bending of light b. Mixing of light
c. reflection of light d. Huygen's wave.
Ans: a) bending of light.
22. Least of travelling microscope is…
a. 0.01 cm b. 0.001 cm
c. 0.1 cm d. 0.001 mm
Ans: a) 0.01m
23. Spectrometer is used to determine …..
a. angle of prism b. R.I of water
c. amplitude of wave d. frequency of wavelength.
Ans: b) R.I of water
24. Convert wavelength of 0.5 μm into energy ….. eV.
a. 2.48 eV b. 24.8 eV
c. 0.248 eV d. 0.5 eV
Ans: a) 2.48 ev
25. When light interact with matter then light is …..
a. absorbed b. transmitted
c. reflected d. all a, b and c
Ans: a) absorbed

12.Moment of Inertia depends on.....
a. mass b. radius
c. mass & radius d.none of these
Ans: mass & radius
13.The number of oscillations performed by particle per second is called ....
a. Time b. Displacement
c.velocity d.Frequency
Ans: Velocity
14.Total energy of a particle is the sum of ..... And .....energy.
a. electric,mechanical b. potential,electrical
c. kinetic,potential d.kinetic,electric
Ans: kinetic , potential
15.The time taken by a particle to complete one oscillation is called.....
a. Motion b. period
c. time d.none of these
Ans: period
16.An object under the influence of only gravity is said to be in a....
a. acceleration b. moment of Inertia
c. Free fall d.translational
Ans: free fall
17. One newton is equal to the force required to accelerate one kilogram of mass at
a. one meter/sec b. one meter
c. one cm/sec d.one meter/second/second
Ans: one meter
18.What acceleration will result when a 12 N net force applied to a 3 kg object?
a. 3m/s/s b. 4m/s/s
c.18m/s/s d. 9m/s/s
Ans: 18 m/s/s
19. The number 10^{-9}m is .....
a. pico b. mili
c.micro d.nano
Ans: nano
20. Planets move in .....orbits with the sun at one of the foci.
a. circular b. elliptical
c. parabolic d. none of these
Ans: circular
21. Dispersion of light is nothing but...
a. bending of light b. Mixing of light
c. reflection of light d. Huygen's wave.
Ans: bending of light
22. Least of travelling microscope is...
a. 0.01 cm b. 0.001 cm
c. 0.1 cm d. 0.001 mm
Ans: 0.001 cm
23. Spectrometer is used to determine .....
a. angle of prism b. R.I of water
c. amplitude of wave d. frequency of wavelength.
Ans: R.I of water
24. Convert wavelength of 0.5 μm into energy ..... eV.
a. 2.48 eV b. 24.8 eV
c. 0.248 eV d. 0.5 eV
Ans:
25. When light interact with matter then light is .....
a. absorbed b. transmitted
c. reflected d. all a, b and c
Ans: all a, b & c

Student Name: Pawar Sonali Bapu

Department of Physics
Background Knowledge Test
B.Sc.-I

Obtained marks: 32

Date: 14/07/2018 Maximum Marks: 50

Q. Rewrite the following sentences by using correct alternatives.

1. ..... is a SI unit of acceleration due to gravity?
a. m/sec b. m^2/sec
c. m/sec^2 d. cm/sec^2
Ans: m/sec^2

2. Newton's first law is a law of.....
a. Force b. Inertia
c. Velocity d. acceleration
Ans: Inertia

3. Speed is .....quantity.
a. Vector b. Scalar
c. Both a & b d. None of these
Ans: scalar

4. For every action, there is .....& ..... reaction.
a. action, opposite b. equal, same
c. equal, opposite d. opposite, action
Ans: equal, same

5. Acceleration has ..... And .....
a. Magnitude, base b. magnitude, direction
c. direction, base d. None of these
Ans: magnitude, direction

6..... is CGS unit of force.
a. N b. gm^2/sec
c. dyne d. Nm^2
Ans: dyne

7. Surface tension is property related to.....
a. gas b. liquid
c. solid d. solid and gas
Ans: solid

8. Within .....limit, stress is directly proportional to strain.
a. Elastic b. Plastic
c. thermal d. thermal
Ans: Elastic

9. The time rate of change of ..... is directly proportional to impressed force.
a. Velocity b. momentum
c. mass d. acceleration.
Ans: mass

10. Motion of a body along circumference of a circle is called .....motion.
a. circular b. longitudinal
c. linear d. translational
Ans: circular

11. ..... is SI unit of surface tension.
a. N/m b. m/N
c. dyne d. dyne/sec
Ans: N/m

Student Name: Khandekar Priyanka Balaso

Department of Physics
Background Knowledge Test
B.Sc.-I

Obtained marks: 28

Date: 14/07/2018 Maximum Marks: 50

Q. Rewrite the following sentences by using correct alternatives.

1. ..... is SI unit of acceleration due to gravity? cm/sec²
a. m/sec b. m^2/sec
c. m/sec^2 d. cm/sec^2
Ans:

2. Newton's first law is a law of..... Force
a. Force b. Inertia
c. Velocity d. acceleration
Ans:

3. Speed is .....quantity. scalar
a. Vector b. Scalar
c. Both a & b d. None of these
Ans:

4. For every action, there is .....& ..... reaction. equal same
a. action, opposite b. equal, same
c. equal, opposite d. opposite, action
Ans:

5. Acceleration has ..... And ..... magnitude direction
a. Magnitude, base b. magnitude, direction
c. direction, base d. None of these
Ans:

6..... is CGS unit of force. dyne
a. N b. gm^2/sec
c. dyne d. Nm^2
Ans:

7. Surface tension is property related to..... liquid
a. gas b. liquid
c. solid d. solid and gas
Ans:

8. Within .....limit, stress is directly proportional to strain. thermal
a. Elastic b. Plastic
c. thermal d. thermal
Ans:

9. The time rate of change of ..... mass is directly proportional to impressed force.
a. Velocity b. momentum
c. mass d. acceleration.
Ans:

10. Motion of a body along circumference of a circle is called .....motion. circular
a. circular b. longitudinal
c. linear d. translational
Ans:

11. ..... N/m is SI unit of surface tension.
a. N/m b. m/N
c. dyne d. dyne/sec
Ans:

12.Moment of Inertia depends on... mass & radius
a. mass b. radius
c. mass & radius d.none of these
Ans:

13.The number of oscillations performed by particle per second is called ..... Frequency
a. Time b. Displacement
c.velocity d.Frequency
Ans:

14.Total energy of a particle is the sum of ..... And .....energy. kinetic potential
a. electric,mechanical b. potential,electrical
c. kinetic,potential d.kinetic,electric
Ans:

15.The time taken by a particle to complete one oscillation is called..... period
a. Motion b. period
c. time d.none of these
Ans:

16.An object under the influence of only gravity is said to be in a... moment of inertia.
a. acceleration b. moment of Inertia
c. Free-fall d.translational
Ans:

17. One newton is equal to the force required to accelerate one kilogram of mass at one meter/sec
a. one meter/sec b. one meter
c. one cm/sec d.one meter/second/second
Ans:

18.What acceleration will result when a 12 N net force applied to a 3 kg object? 4m/s/s
a. 3m/s/s b. 4m/s/s
c. 18m/s/s d. 9m/s/s
Ans:

19. The number 10^{-9}m is ..... nano
a. pico b. mili
c.micro d.nano
Ans:

20. Planets move in .....orbits with the sun at one of the foci. elliptical
a. circular b. elliptical
c. parabolic d. none of these
Ans:

21. Dispersion of light is nothing but... Mixing of light.
a. bending of light b. Mixing of light
c. reflection of light d. Huygen's wave.
Ans:

22. Least of travelling microscope is... 0.01 cm
a. 0.01 cm b. 0.001 cm
c. 0.1 cm d. 0.001 mm
Ans:

23. Spectrometer is used to determine .... R.I of water.
a. angle of prism b. R.I of water
c. amplitude of wave d. frequency of wavelength.
Ans:

24. Convert wavelength of 0.5 μm into energy ..... eV. 2.48 eV
a. 2.48 eV b. 24.8 eV
c. 0.248 eV d. 0.5 eV
Ans:

25. When light interact with matter then light is ..... all a, b and c.
a. absorbed b. transmitted
c. reflected d. all a, b and c
Ans: