Shri Shivaji Education Society Amravati's

SHRI SHIVAJI SCIENCE AND ARTS COLLEGE

Chikhli, Dist. Buldana- 443201.

NAAC Reaccredited with 'B++' Grade (CGPA 3.00)

ISO: 9001-2015

Dr. Meena T. Nikam
Officiating Principal

Hon'ble Shri Harshvardhan P. Deshmukh
President

2.5.1 - Mechanism of internal assessment is transparent and robust in terms of frequency and mode.

- **Internal Exam Notice and Time table**
- **Sample Copy of Unit Test, Assignment, Seminar/ Project**
- **Sample Copy of Result of Internal Assessment**

Shri Shivaji Sci. & Arts College Chikhli, Dist. Buldana

PRINCIPAL
Shri Shivaji Science & Arts College, Chikhli, Dist Buldana

Shri Shivaji Science & Arts College, Chikhli College

Examination Committee Notice

All Department of Science Faculty of Shri Shivaji Science & Arts College, Chikhli informed that for Internal Assessment of Students Unit Test and other Activities should be Conducted as per attached Schedule of Time table.

All Department Should following guidelines while conducting Unit Test and Activity for Internal Assessment.

1) Unit Test will be conducted as per Schedule.
2) Unit Test will be conducted MCQ type for 30 Marks and allotted for 1 Hour duration.
3) Assignment and Project Assignment Should be collected before 15/10/2023.
4) Seminar will be conducted on online mode up to 31/10/2023.

Coordinator,
College Exam. Committee

Internal Exam Timetable of Odd Semester

Shri Shivaji Science & Arts College, Chikhli
Time Table of Unit Test and Activity
Session – 2023 - 24

Sr. No.	Subject	Class	Unit Test	Time
1	Botany	B.Sc.-I Sem.-I, B.Sc.-II Sem.-III, B.Sc.-III Sem.-V	3/10/2023	3.20 to 4.20
2	Zoology	B.Sc.-I Sem.-I, B.Sc.-II Sem.-III B.Sc.-III Sem.-V	4/10/2023	3.20 to 4.20
3	Chemistry	B.Sc.-I Sem.-I, B.Sc.-II Sem.-III, B.Sc.-III Sem.-V	5/10/2023	3.20 to 4.20
4	Microbiology	B.Sc.-I Sem.-I, B.Sc.-II Sem.-III, B.Sc.-III Sem.-V	6/10/2023	3.20 to 4.20
5	Physics	B.Sc.-I Sem.-I, B.Sc.-II Sem.-III, B.Sc.-III Sem.-V	3/10/2023	3.20 to 4.20
6	Math	B.Sc.-I Sem.-I, B.Sc.-II Sem.-III, B.Sc.-III Sem.-V	6/9/2023 & 7/9/2023	3.20 to 4.20
7	Computer Science	B.Sc.-I Sem.-I, B.Sc.-II Sem.-III, B.Sc.-III Sem.-V	4/10/2023	3.20 to 4.20
8	Electronics	B.Sc.-I Sem.-I, B.Sc.-II Sem.-III, B.Sc.-III Sem.-V	5/10/2023	3.20 to 4.20
9	English	B.Sc.-I Sem.-I	9/10/2023	3.20 to 4.20
10	Marathi	B.Sc.-I Sem.-I	10/10/2023	3.20 to 4.20

Note :

1) Unit Test will be conducted as per above Schedule and Time.
2) Unit Test will be conducted for 30 Marks and 1 Hour duration.
3) Assignment and Project Assignment will be collected before 15/10/23.
4) Seminar and other related activity will be conducted before 31/10/23.

Coordinator,
College Exam. Committee

Principal

PRINCIPAL
Shri Shivaji Science & Arts
College, Chikhli, Dist.Buldana

Shri Shivaji Science & Arts College, Chikhli College

Examination Committee Notice

All Department of Science Faculty of Shri Shivaji Science & Arts College, Chikhli informed that for Internal Assessment of Students Unit Test and other Activities should be Conducted as per attached Schedule of Time table.

All Department Should following guidelines while conducting Unit Test and Activity for Internal Assessment.

1) Unit Test will be conducted as per Schedule.
2) Unit Test will be conducted MCQ type for 30 Marks and allotted for 1 Hour duration.
3) Assignment and Project Assignment Should be collected before 31/03/2024.
4) Seminar will be conducted on online mode up to 31/03/2024.

Shri Shivaji Science & Arts College Chikhli Dist. Buldana

Coordinator,
College Exam. Committee

Internal Exam Timetable of Even Semester

Shri Shivaji Science & Arts College, Chikhli
Time Table of Unit Test and Activity (Even Semester)
Session – 2023 - 24

Sr. No.	Subject	Class	Unit Test	Time
1	Botany	B.Sc.-I Sem.-II, B.Sc.-II Sem.-IV, B.Sc.-III Sem.-VI	18/3/2024	3.20 to 4.20
2	Zoology	B.Sc.-I Sem.-II, B.Sc.-II Sem.-IV B.Sc.-III Sem.-VI	19/3/2024	3.20 to 4.20
3	Chemistry	B.Sc.-I Sem.-II, B.Sc.-II Sem.-IV, B.Sc.-III Sem.-VI	20/3/2024	3.20 to 4.20
4	Microbiology	B.Sc.-I Sem.-II, B.Sc.-II Sem.-IV, B.Sc.-III Sem.-VI	21/3/2024	3.20 to 4.20
5	Physics	B.Sc.-I Sem.-II, B.Sc.-II Sem.-IV, B.Sc.-III Sem.-VI	18/3/2024	3.20 to 4.20
6	Math	B.Sc.-I Sem.-II, B.Sc.-II Sem.-IV, B.Sc.-III Sem.-VI	21/3/2024 & 22/3/2024	3.20 to 4.20
7	Computer Science	B.Sc.-I Sem.-II, B.Sc.-II Sem.-IV, B.Sc.-III Sem.-VI	19/3/2024	3.20 to 4.20
8	Electronics	B.Sc.-I Sem.-II, B.Sc.-II Sem.-IV, B.Sc.-III Sem.-VI	20/3/2024	3.20 to 4.20
9	English	B.Sc.-I Sem.-II	23/3/2024	3.20 to 4.20
10	Marathi	B.Sc.-I Sem.-II	26/3/2024	3.20 to 4.20
11	Soft Skill Paper	B.Sc.-I Sem. -II	27/3/2024	3.20 to 4.20
12	Environment Paper	B.Sc.-II Sem.-IV	28/3/2024	3.20 to 4.20

Note :

1) Unit Test will be conducted as per above Schedule and Time.
2) Unit Test will be conducted for 30 Marks and 1 Hour duration.
3) Assignment and Project Assignment will be collected before 31/3/2024.
4) Seminar and other related activity will be conducted before 31/3/24.

Coordinator,
College Exam. Committee

Principal
14.03.2024

PRINCIPAL
Shri Shivaji Science & Arts
College, Chikhli, Dist.Buldana

Sample Copy of Internal Exam Paper of B.Sc. II Sem IV (Botany)

23/12 = 24/30

Shri Shivaji Education Society, Amravati's

SHRI SHIVAJI SCIENCE & ARTS COLLEGE, CHIKHLI

॥ ज्ञानम् परम् ध्येयम् ॥

First Term / Second Term Examination 20 23 - 20 24

Name Ku. Sanika Anil Joshi

Roll No. _____ In word _____

Class B.Sc. II (sem IV) Subject Botany

Date 18-03-24 Marks obtained _____

Signature of Invigilator Signature of Examiner

Q.1

I) Protoplasm found inside the nucleus is known as ---

→ ~~(a)~~ (c) Cytoplasm

II) Vacule are surrounded by ---

→ ~~(a) Tonoplast.~~

III) Golgi body firstly observed by ---

→ ~~(b) Camilo golgi~~

IV) Every living cell is has ----

→ ~~(c) cell wall~~ (d) Nucleus.

V) Plant cell is differs from animal cell in the presence of ----

→ ~~(a)~~ chloroplast

Q.2

1) The term 'genetics' was coined by Bende & Claude.

2) Prokaryotic cell lack a membrane bond organelle.

3) Mitochondria is called power house of the cell.

4) Vacuole ~~are surrounded by~~ Vacuole is consider as storage bin of cell.

5) ~~Gregor~~ Johann Mendel is the father of Genetics.

1/2

3

Q.3

1) What is the Phenotypic ratio of Monohybrid cross?

→ 1 : 2 : 1

1/2

2) Define Epistasis.

→

3) What is cell?

→ Cell is the structural & functional unit unit of life.

1

iv) What is the phenotypic ratio of supplementary gene interaction?

--> 7:9

v) Define Gene?

--> Gene is the fragment of DNA which carry specific hereditry information.

Q.4 Describe in brief

1) Types of Ribosome's

--> In living cell there are two types of ribosomes.

i) In Prokaryotes cell have 70s ribosome.

ii) In Eukaryotes cell have 80s ribosome

iv) In both cell ribosome has subtypes which is in prokaryotic cell 70s ribosome small subunit is 30s and large is 50s.

And in Eukaryotic cell have 80s ribosome small subunit is 40s and large is 60s

v) 's' means sedberge unit.

vi) Ribosomes help in protein synthesis.

2) Function of E.R.

--> Endoplasmic reticulum means E.R are helps the mRNA in protein synthesis.

ii) There are two types of E.R which is RER and SER.

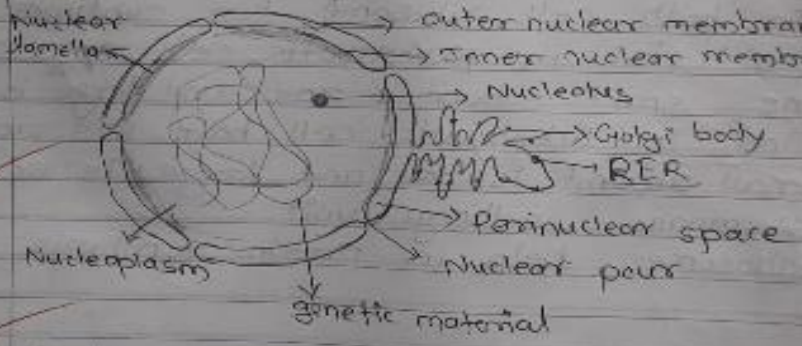
iii) RER is Rough Endoplasmic reticulum and SER is smooth endoplasmic reticulum

iv) Rough E.R is take part in protein synthesis.

Q.5

1) Describe ultrastructure and functions of Nucleus.

→ i) Nucleus is present in all living cells
ii) Nucleus is carry genetic material like DNA, RNA
iii) It stored hereditary information.
iv) In eukaryotic cell nucleus is membrane bond organelle
v) Nucleus control all the important activities of cell such as reproduction, cell division
vi) Nucleus having Nucleolous.
vii) Neule Nuclear membrane is separated to neucleoplasm and cytoplasm.
viii) Neue Nucleus having nuclear membrane which is semipermeable



ix) Nucleus have outer & inner membrane also.
x) It have nuclear lamella.
xi) Golgi complex attach to the nucleus ~~having~~ Ribosomes present on it which is called Rough Endoplasmi Reticulum.

Department of Botany
B.Sc. II Sem IV
Unit Test Attendance List

Date: 18/03/2024

Sr.No	Seat No.	Name	Signature
1.	22AB116578	Aejaz Patel Jilani Patel	AB
2.	22AB116580	Anjali Vijay More	
3.	22AB116583	Arti Sanjay Dandge	
4.	22AB116587	Chanda Nanuram Chaudhari	
5.	22AB116606	Gayatri Gulab Patil	G.G. Patil
6.	22AB116623	Kalyani Shamrao Jadhao	
7.	22AB116632	Mansi Vitthal Panditkar	
8.	22AB116638	Neha Gajanan Pawar	
9.	22AB116639	Neha Pralhad More	
10.	22AB116646	Padmini Tulshidas Sathe	P.T. Sathe.
11.	22AB116647	Pallavi Prakash Solanki	
12.	22AB116653	Pooja Dattatray Ambhore	Ambhore
13.	22AB116655	Pooja Sanjay Dandge	
14.	22AB116664	Prathamesh Vilas Wagh	
15.	22AB116665	Pratik Gajanan Jadhao	
16.	22AB116667	Prerana Santosh Isokar	
17.	22AB116672	Punam Dattatray Sonune	
18.	22AB116682	Rutuja Gajanan Ambhore	AB
19.	22AB116684	Rutuja Vijay Zol	R.V. Zol
20.	22AB116685	Sagar Rajesh Patil	SRPatil
21.	22AB116690	Sakshi Ravindra Bhakare	
22.	22AB116693	Samiksha Tulshiram More	
23.	22AB116695	Sanika Anil Joshi	
24.	22AB116701	Sayali Bhagawan Borul	S.B. Borul
25.	22AB116713	Shital Kaduba Suradkar	SKSuradkar
26.	22AB116714	Shtial Raju Dhage	
27.	22AB116716	Shivani Anil Shelke	AB
28.	22AB116719	Shivkanya Santosh Mhalasane	AB.

18/03/24

29.	22AB116721	Shradha Shriram Dhundale	Dhundale.
30.	22AB116727	Snehal Nandkishor Pawar	Pawar
31.	22AB116737	Suraj Shyamrao Gujar	Gujar
32.	22AB116749	Vaishali Shatrughna Misal	Misal
33.	22AB116750	Vaishnavi Anil Saraf	Saraf.
34.	22AB116751	Vaishnavi Gajanan Nikam	V. G. Nikam
35.	22AB116753	Vaishnavi Rajesh Padre	Padre
36.	22AB116754	Vaishnavi Raju Dhanve	Dhanve
37.	22AB116756	Vaishnavi Vijay Bambâl	Bambal.
38.	23AB310044	Priti Janardhan Kadan	Kadam
39.	23AB310045	Rushikesh R. Zalte	R. Zalte
40.			

Department of Botany
2023-24
B.Sc. II Sem IV
Seminar/ Tour Report Submission list

Sr.No	Seat No.	Name	Seminar Topic	Signature
1.	22AB116578	Aejaz Patel Jilani Patel	Nucleus	AP
2.	22AB116580	Anjali Vijay More	Tour Report	Amore
3.	22AB116583	Arti Sanjay Dandge	Meiosis and Mitosis	Adandge
4.	22AB116587	Chanda Nanuram Chaudhari	mitosis.	Chaudhari
5.	22AB116606	Gayatri Gulab Patil	Nomenclature of Enzyme	GPatil
6.	22AB116623	Kalyani Shamrao Jadhao	Tour Report	KSjadhao
7.	22AB116632	Mansi Vitthal Panditkar	Special type of chromosome	MPanditkar
8.	22AB116638	Neha Gajanan Pawar	~~chromosome Morphology & types.~~ crossing over	NPawar
9.	22AB116639	Neha Pralhad More	structure of cell wall	NPMore
10.	22AB116646	Padmini Tulshidas Sathe	Tour report	PT.Sathe
11.	22AB116647	Pallavi Prakash Solanki	cell cycle phases	PSolanki
12.	22AB116653	Pooja Dattatray Ambhore	characteristic of enzyme	PDambhore
13.	22AB116655	Pooja Sanjay Dandge	Law of mendals	PSDandge
14.	22AB116664	Prathamesh Vilas Wagh	~~Significance.~~ structure and function of vacuole.	PVWagh
15.	22AB116665	Pratik Gajanan Jadhao	Gene	PGJadhao

16.	22AB116667	Prerana Santosh Isokar	Nucleolus.	Isokar
17.	22AB116672	Punam Dattatray Sonune	structure of Nucleus	PSonune
18.	22AB116682	Rutuja Gajanan Ambhore	Enzymes	RAmbhore
19.	22AB116684	Rutuja Vijay Zol	Significance of Mitosis.	RVZol
20.	22AB116685	Sagar Rajesh Patil	structure and function of peroxisomes	SRPatil
21.	22AB116690	Sakshi Ravindra Bhakare	Tour Report	SBhakare
22.	22AB116693	Samiksha Tulshiram More	Tour Report	SMore
23.	22AB116695	Sanika Anil Joshi	Tour Report	SAJoshi
24.	22AB116701	Sayali Bhagawan Borul	Chloroplast structure & fun	SBBorul
25.	22AB116713	Shital Kaduba Suradkar	Plasma membrane - structure & function	SKSuradkar
26.	22AB116714	Shtial Raju Dhage	Significance of Meiosis.	SDhage
27.	22AB116716	Shivani Anil Shelke	~~Significance~~ Mutation	SShelke
28.	22AB116719	Shivkanya Santosh Mhalasane		
29.	22AB116721	Shradha Shriram Dhundale	Nuclear Membrane	SShundale
30.	22AB116727	Snehal Nandkishor Pawar	Structural abeerations.	SNPawar
31.	22AB116737	Suraj Shyamrao Gujar	Structure & function of Golgi complex	SGujar
32.	22AB116749	Vaishali Shatrughna Misal	Mitochondria - structure and fun	VSMisal
33.	22AB116750	Vaishnavi Anil Saraf	Tour Report	VSaraf
34.	22AB116751	Vaishnavi Gajanan Nikam	Nuclear pore complex	VGNikam
35.	22AB116753	Vaishnavi Rajesh Padre	Plant cell & tissue	VPadre

36.	22AB116754	Vaishnavi Raju Dhanve	Tour report	Dhanve
37.	22AB116756	Vaishnavi Vijay Bambal	Endoplasmic reticulum	Bambal.
38.	23AB310044	Priti Janardhan Kadam	Crossing over	Kadam
39.	23AB310045	Rushikesh R. Zalte	significance of meiosis.	RZalte
40.		Priti Janardhan Kadam	Crossing over	Priti
41.				

31/03/2024

Student Sample Copy of Seminar Presentation of B.Sc. II Sem IV (Botany)

Shri Shivaji Art And Science Collage Chikhali

Department Of Botany

Seminar Presented By: Ku. Sayali Bhagwan Borul

Class -B.Sc. 2nd year

Semester -4th

Seminar Topic -Chloroplast Structure and function

1

- Strecture and function of Chloroplast

Chloroplast are the common and familiar plastid of most cells and they are greatest biological importance ,since by photosynthesis they produce chemical energy .They can be redaily seen in most plant cell at low magnification under living microscope.

- Morphology
  - The choloroplast remain homogeneously distrbuted in the groundplasml of plant cells.
  - In some plant cells they are found concentreated around the nucleus and in some they may found just beneath the plasma membrane.

2

Shape

- Plastid in the cell of higher plant show a great deal of varotion in shape the cell of leaves contain many chloroplast of spheroid,ovoid or discolidal shape..
- Some may be clubed shaped having narrow middle zone and bluging ends.

They may be vesicular with a colourless centre in some cells.

- In alage,cells often possess a single lrge chloroplast which may be star shaped,cup shaped,discolodal or reticulate.

3

- Size:
  - Chloroplast show considreable variation in size.
  - The average diameter of choloroplast of higher plant is4-6micrometer and the thickness is 3micrometer
  - The size is more or less constnt for a given cell type in a plant but in polyplocell they are compairitively larger than those in the corrosponding diploid cell.

Plant growing in shade have chloroplast that are larger in size and contain more chlorophylls than the chloroplst found in plnt growing in sunlight

4

Number

- The number of chloroplast appear to be relatively constant in diffirent plants and the variation in the number whenever seen is related with the physiologiacal state of the cell .When the number is in excess it is decrese by degeneration.
- The cells in most algae posses only a single chloroplast.
- The cells of the higher plant may have 20 to 40chloroplast,as an average 36chloroplast in each palisade cell and 20in each spongy pernchyma cell.
- In moss genus Minum,cells have been found to posses and average of about 106chloroplast each

5

Ultradtrecture

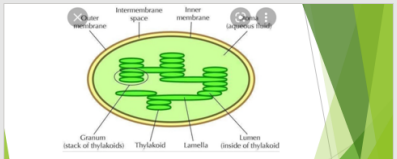
There are two types of chloroplast:-

(a)Lamellate chloroplast

(b)Chloroplast with grana

- Lamella chlotoplast are vommanly found in alage and in some cel of lower plant.
- They are disc shaped ,primitive type of chlroplast bounded by two differiently permiable unit membranes of lipoprotein.

6



Ultrastrecture of chlotoplast

7

- In section it appears like a pair of parallel membrane joined at each and enclosing narrow space terms locule.
- In many green alage,the thallakoids occur in multiple layers forming grana like strecture called stacks or band.
- Usally there are four to six thylakoids in a stack.Thylkoids in the stack do not adhere and remain sepreted by a narrow space called interdisc or inter thylakoid space.

8

- Chloroplast with grana:-

This type of plastid occur generally in the mesophyll cells of the higher plant .The nature chloroplast of the higher plant can be divided into the following three part.

i) The chloroplast enevelope

ii) The stroma comprsing the internal matrix material,and

iii) The grana fretwork system comprsing the internal memnrane system

9

- Protuberances have been observed extending from elioplast mature chloroplast
- The protuberances extending from chloroplast are of two types
- Some appera as long thin extrusions which are bounded by the chlotoplast envelope and mainly contain stroma material
- The second type if protuberances occur in plant possesing high photosynthetic capasity and this extension possess anatomizing network of tubels.
- Given out by the inner membrane of the chloroplast envelope.

10

- The chloroplast Envelope:
  - It is now well established that the chloroplast envelope consist of two unit membranes,each about 80-100A in thickness,sepreted by a space about 100-200A in width appera electron translucent in electron micrograph.
  - It is across this thin enevelope that photosynthetic metabolites enter and leave
  - In most of the mature chloroplast the inner membrane of the enevelope invaginates to form small vesicular or flattened or ginger like invagniation.

11

- The stroma
  - Inside the enevelope there is a proteinaceous matrix called stroma,containing starch grains,osmiophilic plastoglobun,phytoferretin granules ,protein grains,ribosomes,RNAs and DNA.
  - The stroma also contain enzymes that are involved in dark reaction of photosynthesis,carbohyadrate synthesis,proteins synthesis and synthesis of chlorophylls,caretenoids and other pigment
  - Starch grains ate the commanly observedin the stroma of chlotoplast.

12

- Function:-
  - Cholroplast are organelle bodieswhich contain pigment such as chlorophyll.They are photosynthesizing centeres and are found in thr cells of organism that produce their energy from the sun.
  - Chloroplast absorb light and use it in conjuction with water and carbon dioxide and water with oxygen released as a by product.They contain the green pigment chlorophyll,which traps light energy for photosynthesis.

13

Thank You.....!

14

Sample Copy of Internal Assessment Marks of B.Sc. II Sem IV (Botany)

Sant Gadge Baba Amravati University, Amravati
Record of Internal Assessment Marks
(One Assignment per theory paper)
Name of the College: Shri Shivaji Science & Arts College Chikhli.
(Center No. 308)
Subject: Botany Class: B.Sc. II (Sem- IV) Session –2023-24

Sr.No	Seat No.	Name of Students	*Marks Awarded*			Total Marks-20
			Assignment / Project Marks - 4	Seminar/ Tour Report-6	Class Test Marks-10	
1.	22AB116578	Aejaz Patel Jilani Patel	0	0	0	0
2.	22AB116580	Anjali Vijay More	4	6	10	20
3.	22AB116583	Arti Sanjay Dandge	4	6	10	20
4.	22AB116587	Chanda Nanuram Chaudhari	4	6	10	20
5.	22AB116606	Gayatri Gulab Patil	4	6	10	20
6.	22AB116623	Kalyani Shamrao Jadhao	4	6	10	20
7.	22AB116632	Mansi Vitthal Panditkar	4	6	10	20
8.	22AB116638	Neha Gajanan Pawar	4	6	10	20
9.	22AB116639	Neha Pralhad More	4	6	10	20
10.	22AB116646	Padmini Tulshidas Sathe	4	6	10	20
11.	22AB116647	Pallavi Prakash Solanki	4	6	10	20
12.	22AB116653	Pooja Dattatray Ambhore	4	6	10	20
13.	22AB116655	Pooja Sanjay Dandge	4	6	10	20
14.	22AB116664	Prathamesh Vilas Wagh	4	6	10	20
15.	22AB116665	Pratik Gajanan Jadhao	0	0	10	10
16.	22AB116667	Prerana Santosh Isokar	4	6	10	20
17.	22AB116672	Punam Dattatray Sonune	4	6	10	20
18.	22AB116682	Rutuja Gajanan Ambhore	0	0	0	0
19.	22AB116684	Rutuja Vijay Zol	4	6	10	20
20.	22AB116685	Sagar Rajesh Patil	4	6	10	20
21.	22AB116690	Sakshi Ravindra Bhakare	4	6	10	20
22.	22AB116693	Samiksha Tulshiram More	4	6	10	20
23.	22AB116695	Sanika Anil Joshi	4	6	10	20
24.	22AB116701	Sayali Bhagawan Borul	4	6	10	20
25.	22AB116713	Shital Kaduba Suradkar	4	6	10	20
26.	22AB116714	Shtial Raju Dhage	4	6	10	20
27.	22AB116716	Shivani Anil Shelke	0	0	0	0

28.	22AB116719	Shivkanya Santosh Mhalasane	0	0	0	**0**
29.	22AB116721	Shradha Shriram Dhundale	4	6	10	**20**
30.	22AB116727	Snehal Nandkishor Pawar	4	6	10	**20**
31.	22AB116737	Suraj Shyamrao Gujar	4	6	10	**20**
32.	22AB116749	Vaishali Shatrughna Misal	4	6	10	**20**
33.	22AB116750	Vaishnavi Anil Saraf	4	6	10	**20**
34.	22AB116751	Vaishnavi Gajanan Nikam	4	6	10	**20**
35.	22AB116753	Vaishnavi Rajesh Padre	4	6	10	**20**
36.	22AB116754	Vaishnavi Raju Dhanve	4	6	10	**20**
37.	22AB116756	Vaishnavi Vijay Bambal	4	6	10	**20**
38.	23AB310044	Priti Janardhan Kadan	4	6	10	**20**
39.	23AB310045	Rushikesh R. Zalte	4	6	10	**20**

Name of Teacher: Sign

Mr.M.D.Kolte 30.04.2024

Mr.D.L.Gavande 30/04/24

Head of Department
Prof. Dr.V.U.Pochhi

Principal

Sample Copy of Internal Exam Paper of B.Sc. II Sem IV (Physics)

Shri Shivaji Education Society Amravati's
Shri Shivaji Science and Arts College, Chikhli, Dist.-Buldana
Department of Physics

B.Sc. II Sem IV
Activity-1

Academic Year:2023-24
Maximum Marks :10

Name of the Student: Vaishnavi Siddhavinayak shinde Marks Obtained: 10/10

Roll Number: 22AB116755

Q. 1 How Craters Formed on the Moon ?

These craters formed when rocks or comets from space smashed into the surface of the moon.

Q. 2 Write name of any five Lunar Maria

① Serpent sea
② Southern sea
③ sea of knowledge
④ sea of crises
⑤ Mare crisium

Q. 3 Write any five features of moon surface

① Maria features : maria and oceans, Lacus, sinus and paludes
② craters, catenae.
③ Valleys
④ Mountains ⑤ Mountain ranges.

Q. 4 Write the co-ordinates of 1) Mare Nubium 2) Mare Orientale

① Mare Nubium :- 21.3°S16.6°W
② Mare orientale :- 19.4°S92.8°W

Q. 5 Write any five names of Craters 1

① Albategnius
② Apistarchus
③ Apistoteles
④ Bailly
⑤ clavius

Q. 6 Write the number of Moon's Saturn has

Saturn has 146 moons

6

Q. 7 Write short note on Saturn ring

Saturn's rings are throught to be pieces of comets, asteroids, or shattered moons that broke up before they reached the planet, torn apart by saturn's powerful gravity. They are made of billions of small chunks of ice and rocks coated with other materials such as dust.

Q. 8 Who is the first to observe the rings of Saturn in 1610 using telescope ?

Galileo Galilei was the first to observe saturn's rings in 1610, although from his telescope the ring looked more like handles or arms.

Q. 9 Why there is a shadow on the top of the Jupiter?

Total eclipses are more common on jupiter than earth for several reason: Jupiter has four major moons (Ganymede, Io, Callisto, and Europa) that often pass between jupiter moons orbit in a plane close to jupiters orbital plane, the moon shadows are often cast upon the planet.

Q. 10 What contains on the surface of Jupiter ?

The composition of jupiter is similar to that the sun- mostly hydrogen and helium. Deep in the atmosphere, pressure and temp. increase, compressing the hydrogen gas into liquid. This gives jupiter the largest ocean in the solar system - an ocean made of hydrogen instead of water.

Shri Shivaji Education Society Amravati's
Shri Shivaji Science and Arts College, Chikhli, Dist.-Buldana
Department of Physics

B.Sc. II Sem IV
Activity-2

Academic Year:2023-24
Maximum Marks :10

Name of the Student: Sakshi Rajaram Gawai

Marks Obtained: 7/10

Roll Number: 22AB116688

Q. 1 For common human eye D=25 cm and focal length is 5 cm then calculate maximum and minimum magnifying power.

focal length of convex lens $f = 5$, position of image, $v = 25$ cm
Position of object, $u = ?$
Apply lens formula

$$\frac{1}{f} = \frac{1}{v} - \frac{1}{u} = \frac{1}{5} = \frac{1}{25} - \frac{1}{u}$$

$u = \frac{25}{4}$ cm. Magnifying power of instrument : $m = 1 + \frac{D}{f}$

$$m = 1 + \frac{25}{5} = 6$$

Hence, object distance is $\frac{25}{4}$ cm and magnifying power is 6.

Q. 2 Compound microscope is used to very small object then what is the size of an object?

Compound microscop is used to very small object, it Provide magnification in range of 40x - 1000x

Q. 3 Which lenses used in the compound microscope?

→ The first lens is ocular lens, is close to the eye and the second one is objective lens and concave lens and Convex lens.

Q. 4 The pocket microscope used by a student consists of eye lens of focal length 6.25 cm and objective of focal length 2 cm. At microscope length 15 cm, the final image appears biggest. Estimate distance of the object from the objective and magnifying power of the microscope.

Given
$F = 2\text{cm} = 0.02\text{cm}$
$v = 15\text{cm} = 0.15\text{cm}$

$$\frac{1}{F} = \frac{1}{v} + \frac{1}{u} = \frac{15}{7490}$$

$$\frac{1}{0.02} = \frac{1}{0.15} + \frac{1}{y} \Rightarrow 0.2003\text{m}$$

$$M = \frac{D}{F} = \frac{0.15}{0.0625}$$

$M = 2.4$

Q. 5 Write uses of concave lenses

→ Ans :- A concave lens is commonly used in telescopes, peephole and eyeglasses. Concave lenses are used in telescopes and binoculars to magnify objects.

3½

Q. 6 What happens when an object holds 16 cm away from the eye?

When an object is held 16 cm away from the eye it will appear closer and larger due to the process of accommodation in the eye.

Q. 7 Write the formula for the power of Lense and unit of power of lense

Ans :- Power of a Lens = 1/focal length

= The unit of power of lense is Dioptre (D).

Q. 8 What is the Combination of focal length of two lenses?

Ans :- When two thin lenses are kept in contact. Prove that their combined or effective focal length F is given by $\frac{1}{F} = \frac{1}{f_1} + \frac{1}{f_2}$ where the terms have their usual meaning.

Q. 9 Focal length of the objective of an astronomical telescope is 1 m. Under normal adjustment, length of the telescope is 1.05 m. Calculate focal length of the eyepiece and magnifying power under normal adjustment

Focal length of objective (f_o) = 1m

Length of telescope (L) = 1.05m

$\frac{1}{F_{eff}} = \frac{1}{f_o} + \frac{1}{f_2}$ $F_{eff} \approx 0.512$

$\frac{1}{F_{eff}} = 1/1 + 1/1.05$

$M = \frac{f_o}{f_e}$

$M = \frac{1}{0.50}$

$M \approx 1.95$

Q. 10 In geometrical optics Cartesian Convention for spherical mirror or lenses

~~All distance~~ → For Spherical mirrors.

All distances are measured from the pole of the mirror. Incident line is shown coming from LHS of mirror.

For lenses

The object is always positioned on the len's left side

1. Object distance (u)
2. Image distance (