



PROF. DR. T. J. SAWANT
B.E. (Elec.), PGDM, PhD
Founder Secretary

JAYAWANT SHIKSHAN PRASARAK MANDAL'S
JAYAWANTRAO SAWANT COMMERCE AND SCIENCE COLLEGE

Sr. No. 58, Handewadi Road, Satavnagar, Hadapsar, Pune-411028
Phone: 7722045403 / 9175954032

Email Id: principal@jspmjscocs.edu.in Website: www.jspmjscocs.edu.in
Approved by Govt. of Maharashtra & Affiliated to SPPU, Pune-07
College Code: PU/PN/CS/485/2018



Dr. Vinod R.Kulkarni
M.Com.M.A.MBA,M.Phil, PhD
Principal

2.6.2. Attainment of POs and Cos are evaluated .Explain with evidence in a maximum of 500 words.

HEI Input:

Provided list of documents as follows

1. CO Attainment,
2. CO-PO/PSOs Matrix
3. Sample of Question papers, evaluated answer sheet and Mark sheet.




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Sr. No.	List of Documents	Digital No.
1.	CO Attainment	3
2.	CO-PO/PSOs Matrix	6
3.	Sample of Question papers, evaluated answer sheet and Mark sheet.	8




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Savitribai Phule Pune University
Evaluation/ Examination [Internal] for AY 2022-23

T. Y. B. Sc. (2019 CBCS Pattern)

CO ATTAINMENT SHEET

Teacher Name :Dr. Sudipta Banerjee

A.Y - 2022-2023

Subject name and code : Molecular Biology:(MB 364) SEM - VI

Sr. No	Seat No	Students name	Unit Test Marks	Home Assignme	Home Assignmen	Total Internal	Total External	Total Marks for the Course/50
			(Contribution to Internal Marks) (A)	nt 1 (B)	t 2 (C)	Marks out of 15 (A+B+C)	Marks University Exam out of 35	
1	7191	Prajwal Ambekar	1	3	3	7	21	28
2	7192	Asmita Shinde	2	4	5	11	15	26
3	7193	Aniket Badgujar	1	3	3	7	22	29
4	7194	Nikita Bhandare	3	5	4	12	20	32
5	7195	Yash Mohan Devkar	1	3	3	7	20	27




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6	7196	Harshvardhan Dukale	1	3	3	7	15	22
7	7197	Aditya Gavhane	1	3	3	7	23	30
8	7198	Prathmesh Ghule	1	3	3	7	16	23
9	7199	Vivek Ghule	1	3	3	7	19	26
10	7200	Shivanand Jadhav	0	4	3	7	AB	AB
11	7201	Pratik Ganesh Kapare	0	3	4	7	20	27
12	7202	Shounak kumbhojkar	2	3	4	9	22	31
13	7203	Sifa Naik	2	5	5	12	20	32
14	7204	Abhishek Pandey	1	4	3	8	22	30
15	7205	Sushmita Pandey	2	5	3	10	26	36
16	7206	Payal Thoke	3	4	4	11	18	29
17	7207	Rushika Zambare	3	4	5	12	23	35
18	7208	Prajakta Sable	1	4	5	10	19	29
19	7209	Bhavna Shinde	3	4	4	11	9	20
20	7210	Sahil sonawane	0	4	4	8	18	26
21	7211	Mayur Sutar	0	4	3	7	15	22
22	7212	Tanvi Pawar	1	4	4	9	14	23
23	7213	Yash Tupe	2	4	3	9	18	27
24	7214	Madhur Valsangkar	2	4	4	10	18	28

	Internal	External
Threshold Marks (50 % of Maximum Marks)	7.5	17.5
No. of Students scoring more than threshold	14	17
Number of Students Appeared for Exam	23	23
CO Attainment %	60.87	73.91
FINAL CO ATTAINMENT = 0.7*External+0.3*Internal	70.00	




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Evaluation/ Examination [Internal] for AY 2022-23

T. Y. B. Sc. (2019 CBCS Pattern)

CO-PO/PSO Matrix

Teacher Name :Dr. Sudipta Banerjee

A.Y - 2022-2023

Subject name and code : Molecular Biology:(MB 364) SEM - VI

CO-PO/PSO Matrix												
CO		PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PSO1	PSO2
CO1	70.00	2	1					2		1		2
CO2	70.00	2	1					2		1		2
CO3	70.00	2	1					2		1		2
CO4	70.00	3	1	2				3	3	1		2
CO5	70.00	3	1	2				3	3	1		2
Mapping Average		2.4	1	2				2.4	3	1		2



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PO/PSO Attainment											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PSO1	PSO2
CO1	1.4	0.7					1.4		0.7		1.4
CO2	1.4	0.7					1.4		0.7		1.4
CO3	1.4	0.7					1.4		0.7		1.4
CO4	2.1	0.7	1.4				2.1	2.1	0.7		1.4
CO5	2.1	0.7	1.4				2.1	2.1	0.7		1.4
PO PSO Attainment	1.68	0.7	1.4				1.68	2.1	0.7		1.4




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T.Y.B. Sc
Internal Examination
(Pattern: 2019)

Subject: Molecular Biology (MB364)

Semester - VI

Time: 01.30 Hours

Maximum marks: 30

Instructions to the Candidates:

- 1) Question 1 is compulsory.
- 2) Solve any four (4) out of question 2 to question 6
- 3) Figures to the right indicates full marks.
- 4) Draw a neat labeled diagram wherever necessary.

Q.1. Attempt any three of the following.

(3*2=6)

- a) Write the role of Rec BCD?
- b) What is the difference between mitosis and meiosis?
- c) Write the formula of Map distance?
- d) What is the cross result of independent assortment?

Q.2. a) Explain themes of Mendel's work?

Q.2. b) Write full form of lethal mutants(Ts and Am)

(4+2=6)

Q.3. a) Explain Eukaryotic Cell cycle Phases with labelled diagram?

(4+2=6)

Q.3. b) Define deletion mapping ?

Q.4. a) Draw well labelled diagram of Holliday Model?

(4+2=6)

Q.4. b) Define alkylation ?

Q.5. a) Explain lytic cycle with diagram?

(4+2=6)

Q.5. b) Write difference between BER and NER?

Q.6. a) Describe plaque morphology?

(4+2=6)

Q.6. b) Write short note on DNA repair by photoreactivation?




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Home Assignment 2				
Class	T.Y. B.Sc.	Academic Year:	2022-2023	
Total Marks	15 (To be converted out of 05)	Subject:	Molecular Biology(unit 3)	
Name of the Student:	_____		Paper No	364
Roll No	_____	Paper :	Topic : DNA damage & Repair mechanism	
Que. Number	1	2	3	Total
Marks Obtained				

Q1. Write short note on DNA repair by photoreactivation?
(5mks)

Q2 Write note on mismatch repair system. ?

(5mks)

Q3. Explain DNA damage by alkylation?

(5mks)



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JSPM's				
Jayawantrao Sawant of College of Commerce and Science				
Home Assignment 1				
Class	T.Y. B.Sc.		Academic Year:	2022-2023
Total Marks	15 (To be converted out of 05)		Subject:	Molecular Biology(unit 2)
Name of the Student:	_____			Paper No 364
Roll No	_____	Paper :	Topic : Bacteriophage genetics	
Que. Number	1	2	3	Total
Marks Obtained				

Q1. Describe lytic and lysogenic cycle ?
(5mks)

Q2. Write short notes on Benzer's spot test?

(5mks)

Q3. Write short notes on plaque morphology?

(5mks)




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S.No.58 Handewadi Road, Salavnagar, Hadapsar, Pune-411028.
 Affiliated to Savitribai Phule Pune University, Pune: College Code: PUI/PNI/CS/485/2018

Name of Student Nikita Bhandare

Term End Exam Seat No.(In Figure):

In World Table

Class: T.Y BSc microbiology Div:

Subject: Molecular Biology Date: 9-5-23

Jr.Supervisor Name Dr. S.P.H. Patil
 Signature And Date 9/5/23

09
15

12
15

Theory/Practical:

Q.1)

→ i) Mitosis		Meiosis
① It occurs in somatic cells.		① It occurs in germ cells
② It formed two daughter cell.		② It formed four daughter cell
③ Daughter cells are diploid.		③ Daughter cells are haploid
④ No crossing over occurs in chromosomes		④ Crossing over occurs in chromosomes
⑤ Nucleus is divides only once		⑤ Nucleus is divides twice



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Map distance = $\frac{\text{Half no of SDS asc}}{\text{Total no of asc}} \times 100$



Assignment no:- 1

Name:- Sifa Naik

Class:- T.Y. Bsc

Subject:- Molecular Biology

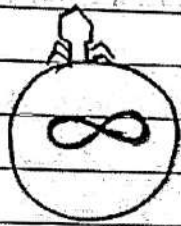
Handwritten marks and scribbles, including a circled '5' and other symbols.

Q.1) Describe lytic and lysogenic cycle?

→ 1) lytic cycle:- Virulent phages always infect and lyse their host cells to propagate progeny viruses called virions. The lytic cycle is the main method of viral replication.

A) Stages of lytic cycle:-

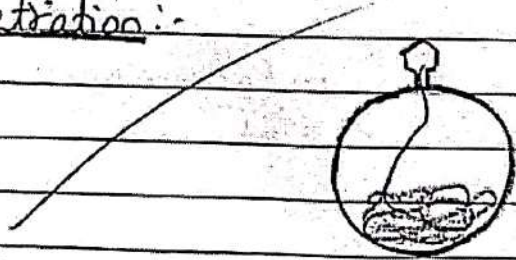
i) Absorption:-



Phages attach to bacteria.

(When phages and their hosts are mixed, the phages attach themselves to the surface of the host cell.)

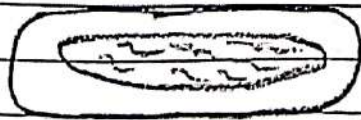
ii) Penetration:-



Injection of DNA inside the bacterial cell from phage.

iii) Synthesis of phage components:-

a) Early infection



Phages DNA replication start.



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Assignment no:- 2

Name:- Sifa Nark

Class:- T.Y. Bsc

Subject:- Molecular Biology

Write short note on DNA repair by photoreactivation.

- i) Direct repair is also called direct reversal because the damage can be directly recognized and reversed.
- ii) Two specific enzymes are involved in direct repair.
- iii) Photolyases which repair UV induced damage in plants bacteria and some animals by splitting the dimers.
- iv) In E. coli, the process involves the enzyme called photolyase.
- v) When stimulated by light with a wavelength between 300 to 500 nm, the enzyme binds to pyrimidine dimers and converts them back to the original monomeric nucleotides.

Write note on mismatch repair system?

- i) Mismatch repair system is able to distinguish between parental DNA and newly synthesized DNA based on the fact that, Parental DNA strand is modified by the methylation of adenine residues within the sequence GATC to form 6-methyladenine.
- ii) Methylation occurs after replication, newly synthesized DNA strands are not methylated and thus can be specifically recognized by the mismatch repair enzymes.



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TY BSc Assignment Report, Year 2022-23, Semester-VI

Subject- *Molecular Biology* Name of Teacher- *Dr. Sudipta Bares*

Sr. No	Students name	Assignment 1 (5mks)	sign	Assignment 2 (5mks)	sign	Test	Total 15mks
1	Madhur Valsangkar	04	<i>Madhur</i>	03+1	<i>Madhur</i>	03-1	10
2	Sahil sonavane	03+1	<i>Sahil</i>	03+1	<i>Sahil</i>	03	08
3	Nikita Bhandare	05	<i>Nikita</i>	04	<i>Nikita</i>	03	12
4	Sifa Naik	04+1	<i>Sifa</i>	04+1	<i>Sifa</i>	04-2	12
5	Prajwal Ambekar	02+3	<i>Prajwal</i>	03+2	<i>Prajwal</i>	02-1	07
6	Shounak kumbhojkar	03	<i>Shounak</i>	03+1	<i>Shounak</i>	02-1	09
7	Rushika Zambare	05-1	<i>Rushika</i>	04+1	<i>Rushika</i>	03	12
8	Abhishek Pandey	03+1	<i>A.P.</i>	03	<i>A.P.</i>	02-1	08
9	Payal Thoke	04	<i>Payal</i>	04	<i>Payal</i>	03	11
10	Prathmesh Ghule	02+1	<i>Prathmesh</i>	02+1	<i>Prathmesh</i>	02+1	06+3=7
11	Yash Mohan Devkar	02+1	<i>Yash</i>	02+1	<i>Yash</i>	02-1	06+1=7
12	Shivanand Yadav	04	<i>Shivanand</i>	3	<i>Shivanand</i>	00	06+1=7
13	Aditya Gavhane	02+1	<i>Aditya</i>	02+1	<i>Aditya</i>	02+1	06+1=7
14	Pratik Ganesh Kapare	03	<i>Pratik</i>	02+2	<i>Pratik</i>	03	07
15	Yash Tupe	03+1	<i>Yash</i>	03	<i>Yash</i>	03-1	09
16	Aniket Badgujar	02+1	<i>Aniket</i>	02+1	<i>Aniket</i>	02-1	06+1=7
17	Harshvardhan Dukale	03	<i>Harshvardhan</i>	02+1	<i>Harshvardhan</i>	02-	07
18	Mayur Sutar	03+1	<i>Mayur</i>	03	<i>Mayur</i>	03	07
19	Vivek Ghule	03+0	<i>Vivek</i>	02+1	<i>Vivek</i>	02+1	07
20	Sushmita Pandey	04+1	<i>Sushmita</i>	04-1	<i>Sushmita</i>	04-2	12-2
21	Prajakta Sable	03+1	<i>Prajakta</i>	04+1	<i>Prajakta</i>	03-2	10
22	Asmita Shinde	04	<i>Asmita</i>	04+1	<i>Asmita</i>	03-1	11
23	Bhavna Shinde	04	<i>Bhavna</i>	04	<i>Bhavna</i>	03	11
24	Tanvi Pawar	04	<i>Tanvi</i>	03+1	<i>Tanvi</i>	02-1	09

[Signature]
 Sign of Subject Teacher



[Signature]
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