

Your Roll No.

JAMIA HAMDARD
School of Pharmaceutical Education and Research
M. Pharm. I Semester Examination (2023-24)

Subject: Advanced Pharmaceutical Biotechnology

Paper Code: MPB 104 T

Date: 15-03-24

Maximum Marks: 75

Time: Three hours

(Write your Roll No. on the top immediately on receipt of this question paper)

Note: This paper has two Sections; A and B.

Attempt all the two sections.

Section A: Answer all the questions.

Section B: Answer any 4 out of 6 questions

Abbreviations Used:

CO-Course Outcome, PO- Program Outcome, BTL- Bloom Taxonomy Level: BT level 1-Remember; BT level 2- Understand; BT level 3- Apply; BT level 4- Analyze; BT level 5- Evaluate; BT level 6- Create.

SECTION-A

Answer the following in brief (Attempt all questions)

5x3= 15 Marks

Q. No 1	Question	BTL	CO	PO
(a)	How pH can affect enzyme activity?	1	3	3
(b)	Draw a flowchart of acute inflammation pathway.	1	2	3
(c)	State the differences between necrosis and apoptosis.	2	3	3
(d)	Briefly describe the activation of G-protein.	3	3	3
(e)	What is the fundamental difference between immobilized and free-state enzyme?	5	2	3

SECTION B

Long type Questions (Attempt any 4 out of 6)

4x15= 60 Marks

	Question	BTL	CO	PO
Q. No 2	How Real-time PCR differ from regular end-point PCR?	5	3	3
Q. No 3	Describe the two apoptotic pathways.	3	3	3
Q. No 4	What are the possible conditions that can effect cellular calcium and ATP production?	4	3	3
Q. No 5	Describe the molecular pathway for norephinephrine –mediated activation of Protein Kinase A.	5	2	3
Q. No 6	What is biotransformation process? Write about the biotransformation process of steroidal molecules.	2	3	2
Q. No 7	Write the protocols of production and industrial applications of bacterial enzymes	6	2	3