

STELLA MARIS COLLEGE (AUTONOMOUS) CHENNAI –600 086
(For candidates admitted during the academic year 2023 – 2024 & thereafter)

M. Sc. DEGREE EXAMINATION, APRIL 2026
BIOTECHNOLOGY
FOURTH SEMESTER

COURSE : ELECTIVE
PAPER : PHARMACEUTICAL BIOTECHNOLOGY
SUBJECT CODE : 23BY/PE/PB15
TIME : 3 HOURS **MAX. MARKS:100**

Q. No.	SECTION A Answer ALL Questions (10 x 1 = 10 marks)	CO	KL
1	Define pharmacology.	1	1
2	What are chemotherapeutic agents?	1	1
3	Mention one route of drug administration.	1	1
4	What is ADMET?	1	1
5	Define drug discovery.	1	1
6	What is a dosage form?	1	1
7	What is micro-encapsulation?	1	1
8	Define vaccines.	1	1
9	What is recombinant DNA technology?	1	1
10	Define toxicology.	1	1
Q. No.	SECTION B Answer ALL Questions (5 x 2 = 10 marks)	CO	KL
11	List the sources of drugs.	1	2
12	Write short notes on dosage forms.	1	2
13	Briefly explain tablet coating.	1	2
14	State the importance of biotechnology-derived therapeutics.	1	2
15	Write a short note on dose–response relationship.	1	2
Q. No.	SECTION C Answer ALL Questions (4 x 10 = 40 marks)	CO	KL
16	Explain pharmacokinetics and pharmacodynamics with reference to ADMET. (OR) Discuss sources of drugs, routes of administration, and drug interactions.	2	3
17	Describe the process of drug discovery and development. (OR) Explain the role of biopolymers in drug delivery systems.	2	3
18	Discuss capsule formulation, importance of base absorption, and types of micro-encapsulation. (OR) Explain tablet manufacturing, types of tablets, and tablet coating techniques.	3	4
19	Describe the preparation and applications of bacterial vaccines, toxoids, and viral vaccines. (OR) Discuss the applications of recombinant DNA technology in drug production.	3	4

Q. No.	SECTION – D Answer ALL Questions (2 x 20 = 40 marks)	CO	KL
20	Evaluate biotechnology-derived therapeutic products with reference to interferons, vaccines, and hormones. (OR) Assess the impact of modern biotechnological approaches in the development of therapeutics.	4	5
21	Discuss clinical trials, new drug approval process, and global and Indian regulatory perspectives. (OR) Explain the principles of toxicology and its various types with suitable examples.	5	6
