

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

M. Sc. DEGREE EXAMINATION - NOVEMBER 2024
BIOTECHNOLOGY
FIRST SEMESTER

COURSE : CORE
PAPER : MICROBIOLOGY
SUBJECT CODE : 23BY/PC/MI14
TIME : 3 HOURS

MAX. MARKS: 100

Q. No.	SECTION A	CO	KL
	Answer ALL Questions (10 x 1 = 10)		
1.	Which of the following microorganisms produces penicillin? (a) bacteria (b) molds (c) algae (d) yeasts	1	1
2.	Hans Gram developed Gram staining technique in _____.	1	1
3.	The lipid portion of LPS is known as _____.	1	1
4.	Magnification results when a beam of radiation _____ as it passes through a lens.	1	1
5.	Pale objects are often better observed with dark-field microscopes (True/False).	1	1
6.	Deep-freezing involves freezing the cells at temperatures from _____.	1	1
7.	_____ disrupts transport across the cytoplasmic membrane of <i>Mycobacterium tuberculosis</i> .	1	1
8.	Bacitracin interferes with _____. (a) the formation of cell walls (b) the synthesis of proteins (c) the replication of nucleic acids (d) the formation of cytoplasmic membranes	1	1
9.	The distinctive feature of most zygomycetes is the formation of sexual structures called _____.	1	1
10.	Thermophiles and hyperthermophiles stabilize their proteins with extra hydrogen and covalent bonds between amino acids (True/False).	1	1
Q. No.	SECTION – B	CO	KL
	Answer ALL Questions (5 x 2 = 10)		
11.	Explain Koch's postulates.	1	2

12.	Summarize osmosis.	1	2
13.	Compare and contrast cladogram and dendrogram.	1	2
14.	Outline leptospira access into body.	1	2
15.	Outline acidophiles.	1	2
Q. No.	SECTION C Answer ALL Questions (4 x 10 = 40)	CO	KL
16.	Plan out preservation of cultures. (or) Build the phases of microbial population growth.	2	3
17.	Organize fungi reproduction with illustrations. (or) Construct some common zoonoses.	2	3
18.	Inspect the effects of salmonellosis. (or) Analyze the biotechnological applications of extremophiles.	3	4
19.	Examine biofertilisers and list the advantages. (or) Analyze thermophiles.	3	4
Q. No.	SECTION – D Answer ALL Questions (2 x 20 = 40)	CO	KL
20.	Explain physical and chemical methods of microbial control. (or) Evaluate replication of viruses with illustrations.	4	5
21.	Discuss industrial production of antibiotics. (or) Elaborate on the principles and applications of electron microscopy.	5	6
