



Register Number:

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ST. JOSEPH'S COLLEGE (AUTONOMOUS), BENGALURU-27
B.Sc. MICROBIOLOGY - I SEMESTER
SEMESTER EXAMINATION: JANUARY 2021
MB 118 – BASIC MICROBIOLOGY AND MICROBIOLOGICAL TECHNIQUES

Time: 2 1/2 hours

Max Marks: 70

This paper contains 2 printed pages and 4 parts

I. Answer any Five of the following

5X3=15

1. List the unique properties of actinomycetes.
2. State the mathematical expression and significance of resolution of a microscope.
3. How are prions different from viruses?
4. What is the endosymbiotic theory of origin of life?
5. Elaborate on the different types of septa found in fungi.
6. Highlight the differences between TEM and SEM.
7. What are mesosomes? What is their importance?

II. Answer any Five of the following

5X5=25

8. Bacteria can reproduce sexually. Justify the statement.
9. Explain the principle and procedure of endospore staining.
10. Describe the methods by which fungi reproduce sexually.
11. List the factors that affect efficiency of an antimicrobial agent.
12. How can animal viruses be cultured?
13. Elaborate on the structure of cyanobacterial cells.
14. Discuss the role of radiations in controlling microbes.

III. Answer any Two of the following

2X10=20

15. Explain the principle and working of fluorescent microscope with a neat, labelled diagram.
16. Describe the structure of flagellum in a gram-negative cell. How does the cell change its direction of movement upon encountering an antibiotic?
17. Discuss how HIV replicates in a host cell.

IV. Answer the following

1X10=10

18. 5 disinfectants were tested for their efficiency and the given table shows the results. Identify the technique, analyze the results and comment on the potency of the disinfectants with justification. Add a note on the principle and procedure of the technique. (1+ 5 + 4)

Disinfectant	Phenol Co-efficient
A	0.46
B	0.25
C	1
D	0.8
E	2