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B.M.S COLLEGE FOR WOMEN AUTONOMOUS
BENGALURU – 560004
SEMESTER END EXAMINATION – SEPTEMBER 2023

B.Sc in Biotechnology – 2nd Semester

GENERAL MICROBIOLOGY/MICROBIOLOGICAL METHODS
(NEP Scheme 2021-22 Onwards F+R)

Course Code: BT2DSC02A

Duration: 2 ½ Hours

QP Code: 2046/2019

Max Marks: 60

Instructions: 1. Answer all the sections.
2. Draw diagrams wherever necessary.

SECTION-A

I. Answer any FOUR of the following. Each question carries TWO marks. (4X2=8)

1. Define antiseptic. Give an example.
2. Mention the role of non- ionizing radiations in sterilization.
3. State Beer-Lambert's Law.
4. Name any two anti-bacterial agents.
5. What is IC-50?
6. List any two examples for selective media and differential media.

SECTION-B

II. Answer any FOUR of the following. Each question carries FIVE marks. (4X5=20)

7. Classify bacteria based on cell wall composition with neat labeled diagram.
8. Compare TEM & SEM.
9. Mention the contributions of Robert Koch.
10. Illustrate the principle and construction of Hot air oven.
11. Enumerate the methods used for preservation of pure cultures.
12. Describe Disc and Agar well diffusion techniques used for the assessment of antibacterial activity.

SECTION-C

III. Answer any FOUR of the following. Each question carries EIGHT marks. (4X8=32)

13. Add a brief note on working principle and applications of Spectrophotometer.
14. Discuss the different types of media based on composition for cultivation of microorganisms.
15. Describe the mechanism of action of plazomycin and ervacycline.
16. Discuss Seitz filter and membrane filters.
17. What are the challenges involved in antimicrobial therapy?
18. Explain the principle, instrumentation and application of Phase Contrast Microscope.