

ST. JOSEPH'S COLLEGE (AUTONOMOUS), BANGALORE -27
MID SEMESTER TEST – AUGUST 2018
B.Sc. MICROBIOLOGY – I SEMESTER
(MB 118: BASIC MICROBIOLOGY AND MICROBIOLOGY TECHNIQUES)

16-8-18

Time: 1 hour

Max. Marks: 30

I. Answer any Five of the following

5 x 2 = 10

1. List Koch's Postulates.
2. Name the following: a. Cocci in cluster(bunch of grapes), b. bacteria that undergo division in three planes.
3. How do ultrasonic waves kill bacteria? What is the wave frequency used in an ultrasonicator?
4. Write the Abbes equation and list the relation between resolution and limit of resolution of a microscope.
5. Write names of all the chemicals used in gram staining procedure.
6. Explain the difference between disinfection and sterilization.
7. What is the need for an oil immersion objective in a compound microscope?

II. Answer any One of the following

1 x 5 = 5

8. Explain the structure of a gram positive bacterial cell wall.
9. Explain the Ziehl-Neelsen staining procedure.

III. Answer any One of the following

1 x 10 = 10

10. A. List the differences in the working and image formation of a fluorescence and confocal microscope.
 B. Draw a ray diagram depicting image formation in a dark field microscope.
11. Write a brief note on filtration as a method of sterilization. Explain giving suitable examples.

IV. Answer the following

1 x 5 = 5

12. Given below are graphs of No. of survivors v/s time of exposure for two treatments employed in a research laboratory for sterilization of a certain media. Study the graphs and suggest which of the treatments would be more advantageous. Also find which of the treatments must be operating at a higher temperature according to you. Give appropriate reasons for your answer. (5)

