

ST. JOSEPH'S COLLEGE (AUTONOMOUS), BENGALURU -27
MID SEMESTER TEST – AUGUST 2019
B.Sc. MICROBIOLOGY – I SEMESTER
MB 118: BASIC MICROBIOLOGY AND MICROBIOLOGICAL TECHNIQUES

Time: 1 hour

Max. Marks: 30

I. Answer any Five of the following

5 x 2 = 10

1. What are thymidine dimers?
2. How does a basic dye work? Give one example of a basic dye.
3. Name the bacterial strains used for testing Phenol coefficient of a disinfectant.
4. How does local environment of bacteria affect the effectiveness of a disinfectant?
5. Define: (i) Numerical Aperture (ii) Limit of resolution
6. What do these branches of microbiology deal with? Geomicrobiology and Microbial Physiology
7. Name and list the differences in the two volumes of Bergey's Manual.

II. Answer any One of the following

1 x 5 = 5

8. a. List the Contributions of the Scientist who proposed the "Germ Theory of disease". **3m**
b. What is Cocervate theory? **2m**
9. Explain the endospore staining procedure in detail.

III. Answer any One of the following

1 x 10 = 10

10. Explain the different mechanisms by which chemical agents can kill bacteria.
11. a. Explain the structure of the gram negative cell wall. **7m**
b. Draw the ray diagram for image formation in a dark field microscope. **3m**

IV. Answer the following

1 x 5 = 5

12. a. A patient is complaining of persistent cough for over 3 months which is not getting cured by regular cough medication. You are going to test his sputum sample. What infection would you suspect and name the staining technique which should be used for testing the infection. **2m**
b. You are trying to visualize yeast cells using negative phase contrast microscope, the yeast has a lot of oil droplets deposited inside at the cell periphery. How will the image appear and why? (You can diagrammatically depict if needed.) **3m**