



Register Number:

Date:

ST. JOSEPH'S COLLEGE (AUTONOMOUS), BENGALURU-27
B.Sc. MICROBIOLOGY- III SEMESTER
SEMESTER EXAMINATION: OCTOBER 2019
MB 118 – BASIC MICROBIOLOGY AND MICROBIOLOGICAL TECHNIQUES

Time: 2 1/2 hrs

Max. Marks - 70

This paper contains 2 printed pages and 4 parts

I. Answer any Five of the following

5x3=15 marks

1. What are the contributions of Robert Koch to the field of Microbiology?
2. What is the branch of microbiology that studies fungi called? Name and list the components of the stain used for staining fungi.
3. What are the functions of immersion oil and the substage condenser?
4. Draw a neat labeled diagram of Flagella of gram positive bacteria.
5. List Salient features of Mycoplasma.
6. List 3 methods used to culture animal viruses.
7. What are Prions? Give two symptoms seen in patients suffering from diseases caused by Prions?

II. Answer any Five of the following

5x5=25 marks

8. Give a comparative account of genetic material organization and ribosome composition in prokaryotes and eukaryotes.
9. List the characteristics features of algae. Write a note on its importance.
10. Bring out the differences between bacterial and fungal cell wall.
11. What are stains? What importance does staining find in Microbiology? Explain what is differential staining.
12. What factors affect the antimicrobial activity of chemical agents to be used as antimicrobials?
13. Give an account of reproduction in bacteria.
14. What is negative staining, shadowing, and freeze-etching?

III. Answer any Two of the following

2X10=20 marks

15. Compare and contrast Fluorescence with Phase contrast Microscopy.
16. Define Sterilization and Disinfection. Describe one physical method for sterilization and one chemical method for disinfection.
17. Describe the structures of TMV and HIV.

IV. Answer the following

1X10=10 marks.

1. a. Five hypothetical chemicals were synthesized hoping to have antimicrobial property. How do you think the biologist who synthesized chemicals might have tested their antimicrobial potency?

5 marks

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- b. Scientist isolated an unidentified bacterium and wanted to study its internal cell structure. From the techniques you have studied which one will the scientists used to study and how?

5 marks