

**STELLA MARIS COLLEGE (AUTONOMOUS) CHENNAI-86**  
**DEPARTMENT OF BIOTECHNOLOGY**  
**END SEMESTER EXAMINATION – NOVEMBER 2021**  
**MICROBIOLOGY**

**SUBJECT CODE: 19BY/PC/MI14**  
**CLASS: I M.Sc.**

**TIME: 3hours**  
**MAX MARKS: 100**

**Section A**

**Answer all the questions**

**(15 x 2 = 30)**

1. Give contributions of Louis Pasteur and Robert Koch.
2. Write a note on Numerical Taxonomy.
3. Differentiate disease and infection.
4. Write the note on production of Glutamic acid.
5. What are the symptoms of Dysentery and control measures?
6. Write a brief on the prebiotics and probiotics.
7. What are Biopesticides? give examples.
8. Brief a note on Sauerkraut and the microbes involved.
9. What is the significance of a chemostat?
10. What are photoautotrophs?
11. What are enriched media?
12. Give the significance of pneumocysts.
13. What are trophozoites?
14. Differentiate myxomycota and Eumycota.
15. Write the principle behind dark field microscopy.

**Section B**

**Answer all the questions**

**(5 x 10=50)**

16. (a) Explain on the parts, principle and working of Scanning Electron Microscope with its applications.

(or)

- (b) Write an account on principle and instrumentation of transmission electron microscope with its applications.

17. (a) Write an account on Respiratory tract infections with specific emphasis to pathogenesis in Tuberculosis with prevention and control.

(or)

- (b) Give an account on Urinary Tract Infections, pathogenesis, prevention and control.

18. (a) Write a brief note on vitamin B12 production, uses and application.  
(or)  
(b) What are the bio-fertilizers and biopesticides? Give an account on their types as bio-inoculants.
19. (a) Describe the influence of temperature and pH on the growth of the microorganism.  
(or)  
(b) Describe the methods to estimate the number of cells present in a microbial culture.
20. (a) Discuss the classification of bacteria based on Bergy's manual of systematic bacteriology.  
(or)  
(b) Write a note on the six taxa of protozoan classification based on genetic scheme.

### **Section C**

**Answer any one question**

**(1x20=20)**

21. (a) Explain the route of entry, pathogenesis of sexually transmitted diseases, its prevention and control.  
(b) Give an illustration of Phase contrast microscopy, its uses in the field of microbiology with applications.
22. Give an account on effective control of microbes.

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