

**STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI - 600 086**  
**(For candidates admitted from the academic year 2019 – 2020 & thereafter)**

**SUBJECT CODE: 19ZL/MC/MB44**

**B. Sc. DEGREE EXAMINATION, APRIL 2023**  
**BRANCH VIA. – ADVANCED ZOOLOGY AND BIOTECHNOLOGY**  
**FOURTH SEMESTER**

**COURSE : MAJOR – CORE**  
**PAPER : MICROBIOLOGY**  
**TIME : 3 HOURS**

**MAX. MARKS: 100**

**SECTION A**

**ANSWER ALL THE QUESTIONS.**

**(10x3 =30)**

1. Write Koch's postulates.
2. Highlight the steps involved in the Streak Plate Technique
3. List the methods for isolation of virus.
4. Differentiate between Gram positive and Gram negative cell wall.
5. What are the functions of fimbriae and pili?
6. Define Bacterial Transduction.
7. What are Chemoautotrophs? Give an example.
8. Enlist the normal microbiota of gut.
9. Mention the significance of Nosocomial infections.
10. What are Probiotics? Give two examples.

**SECTION B**

**ANSWER ANY FIVE QUESTIONS**

**(5x6=30)**

11. What are Selective and Differential Media? Explain with suitable examples.
12. Discuss temperature and pH requirements for bacterial growth.
13. Describe the structure and types of flagella in bacteria.
14. What is Zoonosis? Explain the same with an example of a zoonotic disease.
15. Elaborate on the Nitrogen Cycle.
16. Write the types of Plasmids. Add a note on its functions.
17. Highlight the types of fermented foods. Explain with the help of any two examples.

**SECTION C**

**ANSWER ANY TWO QUESTIONS**

**(2x20 = 40)**

18. Write the phases of the bacterial Growth Curve and describe the various methods of measurement of microbial growth.
19. Explain the physical and chemical methods of microbial control.
20. Discuss the causative agent, pathogenicity, and control measures of any two water borne diseases.
21. Elaborate on the types of microbial food spoilage and its control measures.

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