

**STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI – 600 086**  
**(For Candidates admitted during the academic year 2005-06 & thereafter)**

**B.Sc. DEGREE EXAMINATION NOVEMBER 2007**  
**BRANCH VI.A. -ADVANCED ZOOLOGY AND BIOTECHNOLOGY**  
**THIRD SEMESTER**

**COURSE : MAJOR CORE**  
**PAPER : MICROBIOLOGY**  
**TIME : 3 HOURS** **MAX. MARKS: 100**

## **SECTION - A**

**ANSWER ALL QUESTIONS:** **(10 x 3 = 30)**

1. Mention the causative microbe of the following diseases:
    - (a) Hanson's disease
    - (b) Syphilis
    - (c) Dysentery
  2. Define the term lyophilization
  3. State the Koch's postulates
  4. Match the following:

(a) Pasteur	-	Salinity
(b) Halophile	-	Nitrogen
(c) Azotobacter	-	Fermentation
  5. Differentiate endospore and exospore with examples.
  6. What is meant by Botulism?
  7. Expand the following with a foot note:

(a) Hfr	(b) LTH	(c) BOD
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  8. Define the following:

(a) Psychrophiles	(b) Fermentation	(c) Neu
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  9. List down the functions of fimbriae
  10. What are the two types of immune response?

## **SECTION – B**

**ANSWER ANY FIVE QUESTIONS: (5 x 6 = 30)**

11. Write about the different types of filters and their significance.
  12. Mention the causative organism, morphology and symptoms of any two sexually transmitted diseases.
  13. List down the various methods of food preservation.

14. Explain the method and significance of Gram staining.
15. Define the term antibiosis with examples.
16. Give an account of diagnostic applications of antigen-antibody reaction.
17. With a neat labeled diagram explain the structure of T4 phage.

**SECTION – C**

**ANSWER ANY TWO QUESTIONS:** **(2 x 20 = 40)**

18. Explain the steps involved in the treatment of sewage.
19. What is bacterial recombination? Describe the process in detail.
20. Give an account of any three waterborne diseases and list down the measures taken to control the diseases.
21. Describe the morphology of bacterial cell. Add a note on the functions of various structures associated with it.

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