STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI – 600 086
(For Candidates admitted during the academic year 2005-06 & thereafter)
SUBJECT CODE: ZL/MC/MB34

B.Sc. DEGREE EXAMINATION NOVEMBER 2008
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. Explain the following in a sentence:
   (a) Lyophilisation
   (b) Prophage
   (c) Choleragen
2. What are interferons? Mention their significance.
3. Mention the causative organisms of the following:
   (a) Tuberculosis
   (b) Bacterial dysentery
   (c) Botulism
4. Match the following:

(a) Alexander Flemming	-	Anthrax
(b) Robert Koch	-	Fermentation
(c) Louis Pasteur	-	Penicillin

5. Differentiate the gram positive and negative bacteria based on the structure of cell wall.
6. Mention the application of the following techniques in micro biology:
   (a) Ziehl – Neelsen technique
   (b) ELISA
   (c) Pasteurisation
7. Mention any three sexually transmitted diseases and their causative organism.
8. What are the uses of fimbriae and mesosome?

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9. Define the following:
   (a) Symbiosis
   (b) Antibiotics
   (c) Noscomial infection
10. List the two types of Immune response and their differences.

SECTION – B

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

11. Give the structure of bacterial flagellum with a note on the classification of bacteria based on the number and arrangement of the flagella.
12. Explain the method and the significance of differential staining technique.
13. Enumerate the diagnostic application of any two types of antigen-antibody reactions.
14. What is meant by SCP? List down the advantages and disadvantages.
15. Discuss the contributions of Louis Pasteur.
16. Describe Bacterial conjugation and transformation.
17. Write short notes on different types of vaccines.

SECTION – C

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

18. Discuss how the drinking water is purified in a Municipality or Corporation
19. Give an account of any three water-borne diseases. Add a note on control measures.
20. With a neat labelled diagram give the structure and reproduction in T4 phage.
21. List down the various methods of microbial control.

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