

STELLA MARIS COLLEGE (AUTONOMOUS) CHENNAI 600 086
(For candidates admitted from the academic year 2008 – 2009 & thereafter)

SUBJECT CODE: ZL/MC/MB44

B. Sc. DEGREE EXAMINATION, APRIL 2012
BRANCH VI.A. – 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. Mention the important contributions of the following scientists in the field of microbiology.
a) Antony von Leeuwenhoek b) Louis Pasteur c) Alexander Fleming
2. Differentiate staphylococci and streptobacilli.
3. Mention the application of the following techniques.
a) Dark field microscopy b) Acid-fast staining c) Hanging drop method
4. What is chemostat? Mention its significance.
5. Draw a neat labeled diagram of bacterial flagellum.
6. Match the following
a) Erthromycin - 1) Anti-fungal
b) Amphotericin - 2) Anti-viral
c) Acyclovir - 3) Anti-bacterial
7. Name the causative organism of the following diseases.
a) Bacterial pneumonia b) Cholera c) Trichomoniasis
8. Mention any three types of meat spoilage with a microbe involved in each.
9. Explain the following in a sentence.
a) Nosocomial infection b) Endemic disease c) Extra pulmonary tuberculosis
10. Comment on the IMViC test.

SECTION B

ANSWER ANY FIVE QUESTIONS

(5x6=30)

11. Give a brief account on isolation and maintenance of pure culture.
12. Differentiate Gram positive and Gram negative cell walls.
13. Explain conjugation as a method of recombination in bacteria.
14. Briefly describe the role of normal micro-biota in preventing pathogenic microbes.
15. Comment on the microbiology of cheese.
16. Describe the structure and significance of endospore.
17. Write an account on secondary treatment of sewage.

SECTION C

ANSWER ANY TWO QUESTIONS

(2x20 = 40)

18. Describe the capsids of viruses. Explain the lysogenic and lytic cycles.
19. Write the nutritional requirements of bacteria. Add a note on their nutritional classification.
20. Give an account on waterborne infections with few examples.
21. Discuss the role of microbes in nitrogen cycle. Add a note on sulfate reduction.
