

STELLA MARIS COLLEGE (AUTONOMOUS) CHENNAI 600 086
(For candidates admitted from the academic year 2011 – 2012 & thereafter)

SUBJECT CODE: 11ZL/MC/MB44

B. Sc. DEGREE EXAMINATION, APRIL 2015
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) Alexander Fleming b) Calmette Guerin c) Edward Jenner
2. Differentiate virion and prion.
3. Mention the application of the following techniques.
a) VDRL b) ELISA c) WIDAL
4. What is fermentation? Mention its significance.
5. Depict hydrological cycle.
6. Match the following
a) Polymyxin B - 1) Inhibition in protein synthesis
b) Erythromycin - 2) Antimetabolite
c) Sulfonamide - 3) Disruption of cell wall
7. Name the causative organism of the following diseases.
a) Genital Herpes b) Cholera c) Gonorrhoea
8. Expand the following.
a) TEM b) CFU c) HPV
9. Explain the following in a sentence.
a) Botulism b) Superbug c) Probiotic curd
10. Comment on sporulation.

SECTION B**ANSWER ANY FIVE QUESTIONS****(5x6=30)**

11. Differentiate between prokaryotic and eukaryotic cells.
12. Describe the structure of T₄ phage.
13. Explain different phases of bacterial growth curve.
14. Write a brief account of normal micro-biota of the skin.
15. How can the airborne microbes be controlled?
16. Give a brief account on microbial degradation of fabrics.
17. What are the characteristics of Archaea?

SECTION C**ANSWER ANY TWO QUESTIONS****(2x20 = 40)**

18. Distinguish the Gram positive and Gram negative cell walls. Add a description of bacterial flagellum.
19. Explain the process of transformation and transduction as methods of recombination in bacteria.
20. Discuss the epidemiology of the zoonotic diseases that you have studied.
21. Comment on the types of microorganisms that contaminate milk and effectiveness of Pasteurization in clearing such organisms. Add a concise note on dairy products.
