STELLA MARIS COLLEGE (AUTONOMOUS) CHENNAI 600 086
(For candidates admitted during the academic year 2011- 12 & thereafter)

SUBJECT CODE: 11BT/MC/MB54

B. Sc. DEGREE EXAMINATION, NOVEMBER 2015
BRANCH V (a) – PLANT BIOLOGY AND PLANT BIOTECHNOLOGY
FIFTH SEMESTER

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

SECTION – A

ANSWER ALL QUESTIONS (18 Marks)

I. Choose the correct answer (5x1=5)

1. In the five kingdom classification, protozoa and microscopic algae are placed in the kingdom _____
   a) animalia b) monera c) plantae d) protista
2. A bacterial cell with a tuft of flagella at one pole is said to be _____
   a) amphitrichous b) atrichous c) lophotrichous d) peritrichous
3. The following statements are correct with respect to viruses, except _____
   a) can replicate only within a living cell b) have either DNA or RNA
   c) have their own ribosomes d) acellular forms
4. Non- symbiotic nitrogen fixation is brought about by _____
   a) *Rhizobium* b) *Pseudomonas* c) *Azotobacter* d) *Aspergillus*
5. The rate of pollution of sewage water is expressed as
   a) COD b) BOD c) Odour d) Colour

II. Fill in the blanks: (5x1=5)

6. Vaccination was invented by _____ .
7. _____ staining is the first step in bacterial identification.
8. Retro viruses are responsible for _____ .
9. An example for nematophagus fungus is _____ .
10. _____ are the common air borne fungi.

III. True or False (4x1=4)

11. Transduction requires contact between donor and recipient.
12. Father of microbiology is Louis Pasteur.
13. Viruses are intracellular parasites.
14. Airborne microorganism are responsible for jaundice.

..2

IV. Match the following (4x1=4)

15.	Nitrogen fixation	sewage
16.	Endospore	Legumes
17.	Rhizobium	Nostoc
18.	coliform bacteria	Bacillus

V. Answer any six questions, each answer not exceeding 50 words (6x3=18)

19. What is vaccination? Write about its advantages?
20. What is a sigmoid growth curve?
21. What is capsomere?
22. Write about retrovirus.
23. Write about the importance of mycorrhiza.
24. Write about viral insecticide.
25. What is lysogenic cycle?
26. Give the economic importance of actinomycetes.
27. Give a brief account on the purification of drinking water.

SECTION - B

ANSWER ANY FOUR QUESTIONS EACH ANSWER SHOULD NOT EXCEED 200 WORDS. DRAW DIAGRAMS WHEREVER NECESSARY (4x6=24)

28. Summarise the Koch's postulates.
29. Describe the process of endospore formation.
30. Give the general properties and structure of viruses.
31. Write an account on the rhizosphere microflora.
32. Write an account on prions and viroids.
33. Give an account on the sampling technique of air borne microbes.

SECTION - C

ANSWER ANY TWO QUESTIONS EACH ANSWER SHOULD NOT EXCEED 1000 WORDS. DRAW DIAGRAMS WHEREVER NECESSARY (2x20=40)

34. Give a detailed account on the genetic recombination in bacteria.
35. Write an essay on the replication of bacteriophages.
36. Describe nitrogen cycle.
37. Explain the various steps in sewage disposal.

****