

STELLA MARIS COLLEGE (AUTONOMOUS) CHENNAI 600 086
(For candidates admitted during the academic year 2008-09)
SUBJECT CODE: BT/MC/MB54
B. Sc. DEGREE EXAMINATION, NOVEMBER 2010
BRANCH V (a) – PLANT BIOLOGY AND PLANT BIOTECHNOLOGY
FIFTH SEMESTER

COURSE : MAJOR – CORE
PAPER : MICRO BIOLOGY
TIME : 3 HOURS **MAX.MARKS:100**

SECTION – A

ANSWER ALL QUESTIONS **(18 marks)**

I. Choose the correct answer

1. Wall less bacteria are called as -----
a) *Pseudomonas* b) *Rhizobium* c) *Mycoplasma* d) *Staphylococcus*
2. The cellwall of bacteria is made up of -----
a) cellulose b) pectins c) mureins d) chitin
3. An example of virus with complex symmetry is
a) TMV b) Retro virus c) Adeno virus d) Bacteriophage
4. A plasmid when integrated irreversibly with the bacterial genome is called -----
a) episome b) mesosome c) centrosome d) centromere
5. Endospores are produced by one of the following
a) *Clostridium* b) *Streptococcus* c) *Nitrosomonas* d) none of these
6. The general ideal medium for growth of viruses is
a) agar medium b) M.S.medium c) yolk sac d) paraffin wax
7. Small pox is caused by----- virus
a) *Variola* b) *Varicella* c) *Adeno* d) *Polio*
8. Prokaryotic alga is
a) green b) blue green c) red d) brown
9. Bacteria which can grow on small quantity of oxygen are called
a) aerobes b) obligate aerobes c) micro aerophiles d) anaerobes

II. State True or False

10. B.O.D. is biolistic oxygen demand.
11. Haemoglobin is the pigment present in root nodules.
12. Conversion of ammonia to nitrate is called nitrification.
13. Treatment of sewage using plants is called bioremediation.
14. Heavy metal is a nondegradable waste.

III. Fill in the Blanks

15. Retroviruses has ----- enzyme in its virion for conversion of RNA to DNA and viceversa.
16. Oncogenic viruses induces-----

IV. Identify the Scientist.

17. Who isolated and characterized Bacillus anthrax?
18. Who discovered bacterial transformation?

Answer any six of the following in 50 words

(6 x 3 = 18)

19. Koch's postulates
 20. Coccus
 21. Endospore
 22. Icosahedral capsid
 23. Prions
 24. Rhizosphere
 25. Eutrophication
 26. Actinomycetes
 27. Chlorination

Section – B

Answer any four of the following. Each answer not to exceed 200 words.

Draw diagrams wherever necessary

(4 x 6 =24)

28. Explain the bacterial growth curve.
 29. Explain how conjugation occurs in bacteria?
 30. With a neat diagram describe the structure of T.M.V.
 31. Write about the sources of air borne organisms.
 32. Briefly explain the distribution and function of annelids.
 33. Write a short note on Mycorrhiza

Section – C

Answer any two of the following. Each answer not to exceed 1000 words. Draw

diagrams wherever necessary

(2 x 20 = 40)

34. Describe the classification of bacteria based on Bergey's manual.
 35. Explain the salient features of viruses. Give a brief note on lytic and lysogenic cycle.
 36. What is biogeochemical cycle? Explain carbon, phosphorus and sulphur cycle.
 37. Explain the steps involved in sewage treatment.
