

FOURTH SEMESTER B.Sc. DEGREE EXAMINATION, MAY 2012

(CCSS)

Biotechnology – Core Course

BT 4B 01— MICROBIAL GENETICS

Time : Three Hours

Maximum : 30 Weightage

I. Objective Type Questions. Answer *all* questions :

A. Name the following :

1. DNA Virus.
2. Coliphage.
3. Intercalating agent.
4. Discovered jumping genes.
5. Prion disease.
6. Plant virus.
7. High temperature tolerating enzyme used in PCR.
8. Causative agent of small pox.

B. Select the appropriate correct answer :

9. The terminator codons are :
 - (a) UAG, UAA, UGA.
 - (b) UUG, UGA, GUG.
 - (c) UUU, GAG, GAA.
 - (d) UAA, UGG, UUA.
10. Small pox is caused by :
 - (a) Varicella Virus.
 - (b) Variola Virus.
 - (c) Paramyxovirus.
 - (d) Retrovirus.
11. Genes are composed of nucleic acids called DNA was first discovered by :
 - (a) James D. Watson.
 - (b) Francis Crick.
 - (c) Rosalind Franklin.
 - (d) Oswald T. Avery.
12. Which of the following is true for interferon?
 - (a) Stimulates wound healing.
 - (b) Improves fertility.
 - (c) Used in cancer treatment.
 - (d) Used in treatment of haemophilic anemia.

(12 x ¼ = 3 weightage)

Turn over

II. Short Answer Type Questions. Answer any *nine* questions :

13. IS elements.
14. Ethidium bromide.
15. RT-PCR.
16. Viroids.
17. HIV.
18. Cryptic plasmids.
19. Frame shift mutation.
20. Excision repair.
21. Passive transposition.

(9 x 1 = 9 weightage)

III. Short Essay or Paragraph questions. Answer any *five* questions :

22. Specialised transduction.
23. Ames test.
24. Retrotransposons.
25. RNA Viruses.
26. Lysogeny.
27. Missense mutations.
28. UV mutagenesis.

(5 x 2 = 10 weightage)

IV. Essay Questions. Answer any *two* out of three :

29. Site-directed mutagenesis.
30. Replication of viruses.
31. Types of plasmids.

(2 x 4 = 8 weightage)