

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) **Paramyxo Virus.**
 - (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)