

FOURTH SEMESTER M.Sc. DEGREE EXAMINATION , JUNE 2010

Microbiology

MB 4.2T – GENETIC ENGINEERING, BIOSAFETY, BIOETHICS AND IPR

(2005 Admissions)

Time : Three Hours

Maximum : 80 Marks

Section A*Answer any **twenty** questions.**Each question carries 2 marks.*

Write briefly on :

1. pBR322 plasmid.
2. EPA.
3. GLP.
4. Reporter gene.
5. BACs.
6. Linkers.
7. Multiplex PCR.
8. Western blotting.
9. Dot blot analysis.
10. Replica plating.
11. End labeling of DNA.
12. Heterologous probe.
13. Electroporation.
14. RFLP.
15. Codon preference in cells.
16. X-gal and IPTG.
17. Reverse Transcriptase.
18. FISH technology.
19. CAT assay.
20. Antisense RNA.

(20 x 2 = 40 marks)

Turn over

Section B

*Answer any **five** questions.*

*Each question carries **8** marks.*

21. Explain and differentiate the **genomic** DNA and **cDNA** libraries and mention their **importance**.
22. Describe the difference between the DNA cloning in *E.coli* and Bacillus.
23. Elaborate the basic properties of a cloning vector.
24. Discuss the Sanger's method of DNA sequencing.
25. Genetically modified fruits - Discuss the ethical, legal and moral issues.
26. Describe the impact of **WTO's** TRIP agreement on Indian agriculture.
27. Plant variety right and plant breeder rights. Differentiate with example.

(5 x 8 = 40 marks)