C 57315 **(Pages : 2)** **Name.....**

Reg. No.....

FOURTH SEMESTER M.Sc. DEGREE EXAMINATION, JULY 2009

Microbiology

MB 4.2.T—GENETIC ENGINEERING, BIOSAFETY, BIOETHICS AND IPR

(2005 Admissions)

Time : Three Hours Maximum : 80 Marks

Section A

Answer all **twenty** *questions.*

Each question carries 2 marks.

Write briefly on :

1. CsCI centrifugation of DNA.
2. Blund end and staggered end restriction enzyme digestion.
3. Codon preferences.
4. GMOs
5. GATT.
6. UPOV.
7. Kleno fragment of DNA polymerase.
8. YACs.
9. Adaptors.
10. Homopolymer tailing.
11. Real time PCR.
12. Southern blotting.
13. Colony bybridization.
14. Hybrid promoter.
15. Plasmid rescue method.
16. Nick translation labeling of DNA.
17. RACE.
18. Directional cloning.
19. AFLP.
20. RNAi.

(20 x 2 = 40 marks)

Turn over

Section B

Answer any **five** *questions.*

Each question carries 8 *marks.*

21. Describe the methods used for preventing self ligation of DNA during rDNA technology.
22. Explain the characteristics of an ideal gene library. How they are constructed ?
23. Elaborate the host and vector characteristics required for the over expression of a gene using recombinant DNA technology.
24. Explain the methodology and utility of microarray technology.
25. Discuss the importance of Ti plasmids in plant genetic engineering.
26. Comment on the requirements for the patentability of an invention.
27. Differentiate plant variety right and plant breeder rights with example.

(5 x 8 = 40 marks)