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Name.....

Reg. No.....

**FOURTH SEMESTER M.Sc. DEGREE EXAMINATION
SEPTEMBER 2007**

General Biotechnology

GBT 215 – GENETIC ENGINEERING

Time : Three Hours

Maximum : 80 Marks

Section A

Answer any two questions.

1. Describe the applications of transgenic technology.
2. Explain the principle of PCR and its applications.
3. Describe protein engineering strategies and their applications.

(2 x 10 = 20 marks)

Section B

Answer any ten questions.

4. Explain the role of Positional cloning in gene isolation.
5. Describe the radiation-hybrid mapping technique.
6. Explain the various insect cell expression systems.
7. Comment on DNA vaccines.
8. Describe DNA microarray technology.
9. Give an account on viral vectors used in transfection.
10. Describe the significance of DNA fingerprinting.
11. Explain the strategies for sequencing whole genome.
12. Suggest two different strategies for developing insect resistant plants.
13. Describe the organization of chloroplast and mitochondrial genomes.
14. Explain the importance of molecular marker in genome analysis.
15. Describe the specialized methods of gene transfections.

(10 x 5 = 50 marks)

Section C

Answer all questions.

16. Yeast artificial chromosomes.
17. RFLP.
18. What are shuttle vectors ?
19. What is the purpose of the patent ?
20. STS.

(5 x 2 = 10 marks)