

D 25899

Name.....

Reg. No.....

**FOURTH SEMESTER M.Sc. DEGREE EXAMINATION
SEPTEMBER/OCTOBER 2006**

**General Biotechnology
GBT 215—GENETIC ENGINEERING**

Time : Three Hours

Maximum : 80 Marks

Section A

*Answer any **two** questions.*

1. Write an essay of **PCR** and its application.
2. Describe **AFLP**, **RAPD** and **RFLP** analysis and molecular markers linked to disease resistance genes.
3. Explain plant transformation technology in detail.

(2 x 10 = 30 marks)

Section B

*Answer any **ten** questions.*

4. Write about patenting of life forms.
5. Explain site-directed **mutagenesis**.
6. Describe purification and refolding of protein.
7. Write about taxonomy and **biodiversity**.
8. What are strategies of sequencing of whole **genome** ?
9. Explain gene knockout technologies.
10. Explain DNA **microarray** technology.
11. Describe **electroporation** and micro injection type of gene transfer in plants.
12. What is gene silencing ?
13. Describe the plant transformation for herbicide resistance.
14. How long shelf life of fruits and flowers are produced by genetic engineering ?
15. Write about insect resistance by 'Bt' gene transfer.

(10 x 5 = 50 marks)

Section C

*Answer **all** questions.*

16. What is protein engineering ?
17. What is gene therapy ?
18. How genes are edited ?
19. What is the role of 'Ti' **plasmid** in gene transfer in plants ?
20. What is particle bombardment ?

(5 x 2 = 10 marks)