



1212-10-514-017

Code No. : 9451

**FACULTY OF SCIENCE**  
**M.Sc. IV Semester Examination, May/June 2012**  
**BIOCHEMISTRY**  
**Paper – III : Biotechnology**

Time : 3 Hours]

[Max. Marks : 80

**SECTION – A**

**(8×4=32 Marks)**

**Note :** Answer **all** questions.

1. Write note on resolution of amino acid racemates.
2. Discuss the use of poly arginine tail in protein purification.
3. Give an account of basic fermentor design.
4. Discuss the mechanism of microbial mining.
5. Comment on human gene therapy.
6. Write a note on applications of stem cells.
7. Give an account of plant protoplasts.
8. Describe the applications of Ti plasmid in plant biotechnology.

**SECTION – B**

**(4×12=48 Marks)**

**Note :** Answer **all** questions.

9. a) Give a detailed account of drug design and delivery.

OR

- b) Write a note on :
- i) Basic components of a bioreactor
  - ii) Immobilized enzymes.



10. a) Discuss the advantages and disadvantages of biological control of disease.

OR

b) Describe the importance of microbial biotechnology.

11. a) Discuss the methodology of the production of high value therapeutics with suitable examples.

OR

b) Write a note on isolation and culturing of animal cells.

12. a) Briefly explain (i) Legislation of genetically modified foods (ii) Edible vaccines (iii) Plant viruses as vectors.

OR

b) Give an account of principles of generation of transgenic plants and applications of transgenic plants in agriculture.