

**D 31925**..... Name.....

Reg. No. ....

**FIRST SEMESTER M.Sc. DEGREE EXAMINATION, MARCH 2004**

**General Biotechnology**

**GBT 102. BIOMOLECULES**

**Time : Three Hours**

**Maximum : 80 Marks**

**Section A**

*Answer any two questions.*

1. Describe the laws of thermodynamics.
2. Briefly describe chromatographic techniques.
3. Explain protein structural hierarchy.

**(2 x 10 = 20 marks)**

**Section B**

*Answer any ten questions.*

4. Explain Bronsted-Lowry concept of acids and bases.
5. What are weak chemical bonds ?
6. Write briefly on two important biomolecules.
7. Give importance of hydrophilic amino acids in protein structure.
8. What is optical activity ? Give its structural basis.
9. Give the structure and properties of sucrose.
10. What is cellobiose ?
11. Write briefly on the structure of starch.
12. What is centrifugation ?
13. What are phospholipids ?
14. What is Ramachandran map ?
15. Write on IR spectroscopy.

**(10 x 5 = 50 marks)**

**Section C**

*Answer all questions.*

16. Define pH.
17. What is isoelectric point ?
18. What is disulphide bond ?
19. What are purines ?
20. What is the function of a detergent ?

**(5 x 2 = 10 marks)**