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Name.....

Reg. No.....

**FIRST SEMESTER M.Sc. DEGREE EXAMINATION
JANUARY 2009**

General Biotechnology

GBT 102—BIOMOLECULES

Time : Three Hours

Maximum : 80 Marks

Part A

*Answer any **two** questions.*

*Each question carries **10** marks.*

1. Explain the Laws of thermodynamics.
2. With suitable examples discuss the chemical nature, classification and functional significance of secondary metabolites.
3. Discuss the principle and applications of any *two* analytical techniques used in biochemistry.

(2 X 10 = 20 marks)

Part B

*Answer any **ten** questions.*

4. Discuss the secondary structure of proteins.
5. Distinguish between homo and heteropolysaccharides.
6. Write the structure and mention the significance of essential fatty acids.
7. Describe any one procedure to detect N-terminal amino acid in protein.
8. Write the structure of any : (a) disaccharide (b) dipeptide.
9. List out the functions of proteins.
10. List out the functions of carbohydrates.
11. List out any *five* functional groups of biomolecules. Indicate their occurrence.
12. Discuss the nature and significance of Hydrogen bond.
13. Discuss the principle and applications of TLC.
14. Write the structure and mention the significance of cholesterol.
15. Discuss the principle and applications of electrophoretic techniques.

(10 x 5 = 50 marks)

Turn over

Section C

Answer **all** questions.

16. What are reducing sugars ?
17. What is amino acid ?
18. In how many ways two sugars can be linked ?
19. What are glycosyl amino glycons ?
20. What are essential amino acids ?

(5 x 2 = 10 marks)