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(Pages 2)

Name.....

Reg. No.....

**FIRST SEMESTER M.Sc. DEGREE EXAMINATION, DECEMBER 2009**

**General Biotechnology  
GBT 102—BIOMOLECULES**

Time : Three Hours

Maximum : 80 Marks

**Section A**

*Answer any two questions.  
Each question carries 10 marks.*

1. Describe the principles and application of space filling method.
2. Write a note on (a) Pigments ; (b) Isoprenoids.
3. Discuss in detail about 1°, 2°, 3° structure of protein.

(2 x 10 = 20 marks)

**Section B**

*Answer any ten questions.*

4. Discuss the classical classification of amino acids.
5. Discuss buffer and discuss about HCO<sub>3</sub> buffer system.
6. Explain the methodology for separation and identification of amino acid by TLC.
7. Write a note on hydrolysis of disaccharides and polysaccharides.
8. Describe the method used to determine the C-terminal amino acid in protein.
9. Write a note on structural and transport proteins.
10. Write a brief account on essential fatty acid with structure and significance.
11. Discuss the principle and application of affinity chromatography.
12. Write an account on any two derivatives of cholesterol.
13. Discuss the various bond involved in the formation 3° structure of protein.
14. Discuss the principle and application of 2D get electrophoresis.
15. Explain how will you determine the molecular weight of the protein.

(10 x 5 = 50 marks)

**Turn over**

**Section C***Answer all questions.*

16. Essential amino acids ?
17. Nucleoside and nucleotide.
18.  $R_f$  value.
19. How will you identify the reducing sugar ?
20. Secondary metabolite.

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