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Name.....

Reg. No.....

FIRST SEMESTER M.Sc. DEGREE EXAMINATION, JANUARY 2007

General Biotechnology

GBT 102—BIOMOLECULES

Time : Three Hours

Maximum : 80 Marks

Section A

Answer any **two** *questions.*

1. Give a detailed account on physical and chemical properties of amino acids and its classification.
2. Explain protein structural hierarchy.
3. Explain metabolic activities of fatty acids.

(2 x 10 = 20 marks)

Section B

Answer any **ten** *questions.*

4. What are weak chemical bonds ?
5. Describe Bohr effect.
6. What are chaperons ?
7. Describe biosynthesis of pigments.
8. Explain ball and stick models.
9. Explain the role of vitamins.
10. Describe Henderson-Hasselbalch equation.
11. Explain the significance of electrophoresis.
12. Give an account of iodine number and saponification value and number.
13. Explain the significance of Gangliosides.
14. Give an account fluorescence and **IR** spectroscopy.
15. What is Ramachandran map ?

(10 x 5 = 50 marks)

Section C

Answer **all** *questions.*

16. What is "salting out" ?
17. What is collagen ?
18. Define Lambert-Beer law.
19. What is optical density ?
20. What is polyprotic acid ?

(5 x 2 = 10 marks)