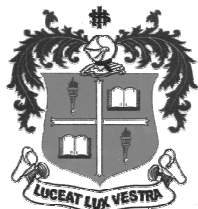


LOYOLA COLLEGE (AUTONOMOUS), CHENNAI – 600 034



B.Sc. DEGREE EXAMINATION – CHEMISTRY

FIFTH SEMESTER – APRIL 2013

CH 5404 - BIO CHEMISTRY

Date : 10/05/2013

Dept. No.

Max. : 100 Marks

Time : 1:00 - 4:00

Part A

Answer ALL questions.

(10x2= 20 marks)

1. Define isoelectric point.
2. Write the structure of the peptide bond.
3. Mention the significance of using enzymes as catalysts in chemical reactions.
4. What are ATP and FAD?
5. Define saponification number of an oil.
6. Draw the structure of cholesterol.
7. Mention any two differences between amylose and amylopectin.
8. What is the action of con.HNO₃ on fructose?
9. Write any two differences between DNA and RNA.
10. What are purine bases? Give the structure.

Part B

Answer any EIGHT questions.

(8x5=40 marks)

11. Discuss the primary structure of proteins and mention the significance.
12. How is N-terminal sequence of an amino acid determined by Edman's method?
13. What are coenzymes? Explain their importance in enzyme action.
14. Discuss the mechanism of enzyme action by any two models.
15. What are the phospholipids? Explain any two types of phospholipids.
16. Write short notes on different types of rancidity.
17. Explain the classification of carbohydrates with examples.
18. What are MUFA and PUFA? Explain with examples.
19. Draw and briefly explain the structure of t-RNA.
20. Write any five differences between animal and plant cell.
21. Define genetic code. Mention any four characteristics of genetic code.
22. What is transcription? Explain.

Part C

Answer any FOUR questions.

(4x10=40 marks)

23. What are the steps involved in TCA cycle? Draw and explain.
24. What is the overall, balanced chemical equation for glycolysis? Explain along with the enzymes involved in each step in detail.
25. Derive the equation for Michaelis-Menden equation.
26. Explain the secondary structure of protein.
27. Discuss any two types of inhibition of enzymes with examples.
28. What are the factors influencing the enzyme activity? Explain.
