LOYOLA COLLEGE (AUTONOMOUS), CHENNAI – 600 034

B.Sc. DEGREE EXAMINATION – CHEMISTRY

FIFTH SEMESTER – NOVEMBER 2009

CH 5404 / 5401 - BIO CHEMISTRY

Date & Time: 14/11/2009 / 9:00 - 12:00 Dept. No. | | Max. : 100 Marks

PART – A

Answer ALL the questions **(10 X 2 = 20)**

1. Write down the acidic and basic properties of amino acid?
2. What is peptide bond? Give an example.
3. Draw the structure of cholesterol.
4. What are Ligases? Give an example.
5. What is glucoside linkage? Give example with formation of disaccharide.
6. Draw the Fisher and Haworth structure of D-Fructose.
7. Write a note on biological oxidation?
8. What is substrate-level phosphorylation?
9. What are the constituents of blood?
10. Write any two differences between DNA and RNA.

PART – B

Answer any Eight questions **(8 X 5 = 40)**

11. How is N-terminal sequence of amino acid determined by Edman method?
12. Write any three functions of the following organelles a) Mitochondria b) Endoplasmic Reticulum
13. Discuss the primary structure of protein.
14. What are phospholipids? Explain the types of phospholipids.
15. Discuss the β-Oxidation of fatty acids
16. What are the salient features of coenzymes?
17. Write down the differences between amylose and amylopectin?
18. Explain the first five steps in the process of conversion of glucose to pyruvic acid
19. How do we get energy from ATP? Explain

20. Discuss the Energy liberation during cellular oxidation
21. Draw and explain the structure of m-RNA
22. Explain the types of DNA replication.

PART – C

Answer any Four questions **(4 X 10 = 40)**

23. Discuss the following

    a) Denaturation of protein b) Protein absorption and digestion

24. What is enzyme inhibition? Explain the three types of enzyme inhibition.
25. Explain the series of reactions involved in TCA cycle with the enzymes involved and energy yield.
26. Explain the mechanism of electron transport system
27. Draw and explain the double helical structure of DNA.
28. Explain the steps involved in the translation process of protein synthesis.

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