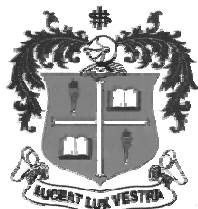


LOYOLA COLLEGE (AUTONOMOUS), CHENNAI – 600 034



B.Sc. DEGREE EXAMINATION – CHEMISTRY

FIFTH SEMESTER – NOVEMBER 2013

CH 5404 - BIO CHEMISTRY

Date : 18/11/2013
Time : 9:00 - 12:00

Dept. No.

Max. : 100 Marks

Part-A

Answer all questions. Each question carries two marks.

1. What are organelles?
2. What is oxidative deamination? Mention its biological importance.
3. What are Coenzymes? Give two examples.
4. Mention the specificity of an enzyme with an example.
5. What are derived lipids? Give an example.
6. What are hydrolytic and oxidative rancidity?
7. Give any two reactions of reducing sugars.
8. How is cellulose hydrolyzed?
9. Mention any two differences between DNA and RNA.
10. Draw the structures of cytosine and uracil.

Part-B

Answer eight questions. Each question carries five marks.

11. Give any one preparation and any two reactions of α -aminoacids.
12. How is N-terminal sequence of amino acid determined by Edman's method?
13. Discuss any two types of enzyme inhibition with examples.
14. Briefly explain the denaturation of proteins.
15. Explain the factors affecting enzyme activity in detail.
16. What are lipids? How are they classified?
17. Explain (a) saponification number (b) iodine value
18. Discuss the β -oxidation of fatty acids.

19. How is the structure of glucose elucidated?
20. Write in detail the sequence of reaction in the Embden-Meyerhoff pathway.
21. Give an account of oxidative phosphorylation.
22. Draw and explain the double helical structure of DNA.

Part-C

Answer four questions. Each question carries ten marks.

23. Write a detailed note on the solid phase synthesis of peptides.
24. How is the rate of a reaction determined by Michaelis-Menten hypothesis? Derive an expression for the hypothesis.
25. Describe the Classification of enzymes with suitable examples.
26. Describe TCA cycle and its energetics.
27. Discuss the biosynthesis of cholesterol.
28. Explain the following: (a) replication of DNA and (b) recombinant DNA technology. (5+5)
