

Date : 01/11/2007
Time : 9:00 - 12:00

Dept. No.

Max. : 100 Marks

Part A

Answer **all** the questions

10 × 2 = 20

1. What is isoelectric point?
2. Define catabolism.
3. What are isomerases? Give an example.
4. What are essential fatty acids? Write any two essential fatty acids.
5. Write down the differences between amylopectin and glycogen?
6. Write down the biological importance and functions of carbohydrate.
7. What is respiration? What are the two phases of respiration?
8. Define oxidative phosphorylation.
9. What are the constituents of blood?
10. Mention any two differences between DNA and RNA.

Part B

Answer any **eight** questions

8 × 5 = 40

11. How is N-terminal of an amino acid determined by Edman's method?
12. Write down the differences between Prokaryotic and Eukaryotic cells.
13. Describe in detail about denaturation of protein. Write down the significance of denaturation of protein.
14. Discuss the mechanism of coenzyme action.
15. Explain the biosynthesis of fatty acids.
16. Write a note on the following.
a) Lecithins b) Cephalins c) plasmalogens
17. How is glyceraldehydes-3-phosphate obtained in the glycolysis process? Explain.
18. What is glycosidic linkage? Explain with the formation of disaccharide.
19. Discuss the mechanism of electron transport system.
20. Explain Watson and Crick Model of DNA.
21. Discuss the chemistry of hemoglobin.
22. What is genetic code? What are the characteristics of genetic code?

Part C

Answer **any four** questions

4 × 10 = 40

23.
 - a) Discuss the different chemical bonds involved in protein structure.
 - b) Explain the classification of lipids.
24.
 - a) Explain biosynthesis of amino acids containing sulphur.
 - b) Describe Gabriel phthalimide and strecker synthetic methods of preparation of amino acids.
25.
 - a) What is competitive inhibition? Explain with an example.
 - b) Explain the factors affecting enzyme activity.
26. Explain the complete changes that occur during one complete turn of the citric acid cycle. (TCA Cycle)
27.
 - a) Explain the replication process of DNA.
 - b) Draw and explain the structure of t-RNA.
28. Explain the biosynthesis of proteins.
