

APRIL 2014

55659/MDH4A

Time : Three hours

Maximum : 75 marks

PART A — (10 × 1 = 10 marks)

Answer any TEN questions.

All questions carry equal marks.

Each answer should not exceed 50 words.

Write short notes on :

1. Covalent bond.
2. Glycosidic linkage.
3. Ramachandran plot.
4. Zwitter ion.
5. Fatty acid.
6. Gluconeogenesis.
7. Gibbs free energy.
8. Coupled reaction.
9. Apoenzyme.

10. K_m value.
11. Invert sugar.
12. Epimer.

PART B — ($5 \times 5 = 25$ marks)

Answer any FIVE questions.

All questions carry equal marks.

Each answer should not exceed 200 words.

13. Describe mutarotation.
14. Comment on buffers.
15. Explain peptide bond formation.
16. Differentiate saturated and unsaturated fatty acid.
17. Write a short account on Redox potential.
18. Describe the concept of active sites.
19. Elucidate the IUBN system of enzyme nomenclature.

PART C — (4 × 10 = 40 marks)

Answer any FOUR questions.

All questions carry equal marks.

Each answer should not exceed 500 words.

20. Explain the structure and properties of maltose and sucrose.
21. Enumerate the chemical bonds involved in the protein structure.
22. Explain the various steps involved in glyoxylate pathway.
23. Describe the structure and function of ATP.
24. Discuss the law of thermodynamics.
25. Write an account on mechanism of enzyme action.