

15P114

Name:

Reg. No.....

FIRST SEMESTER M.Sc. DEGREE EXTERNAL EXAMINATION, FEBRUARY 2016

(2015 Admission)

CC15P Z01 C01 – Biochemistry (Zoology)

Time: Three Hours

Maximum : 36 weightage

Part A

I. Answer the following:-

1. Write the structure of sucrose and Trehalose. Explain why they are non reducing.
2. What are acidic amino acids? Give two examples.
3. Describe the role of nicotinamide and flavin coenzymes.
4. What is structural isomerism? Give an example.
5. Write any two biological role of cellulose.
6. Define redox potential.
7. Draw the structure of cholesterol.
8. What is Z-DNA?
9. Discuss epimer and anomer with examples.
10. Give a short account on Gibb's free energy of activation.
11. Mention briefly about hydrogen bonding.
12. Brief out zymogen.
13. What are osazones? Give their uses.
14. Differentiate protein domains and motifs.

(14 × 1= 14 weightage)

Part B

II. Answer any *seven* of the following:-

15. Discuss the role of PFK as pace maker of glycolysis.
16. Explain the salient features of t RNA.
17. Explain feedback inhibition with the help of an example.

18. What are prostaglandins? Give any three functions.
19. How are purine bases degraded? Explain Gout.
20. Distinguish between competitive and non-competitive inhibitors of enzyme action.
21. Explain biosynthesis of fatty acids.
22. Briefly explain about the biosynthesis of lactose.
23. Short account on chemical bonds of bio molecules.
24. Describe HMP pathway.

(7 × 2=14 weightage)

Part C

III. Answer any *two* of the following:-

25. Explain briefly about the classification of carbohydrates with examples.
26. Explain Michaelis-Menten equation. Add a note on significance of K_m and V_{max} .
27. Explain the biosynthesis and degradation of amino acids.
28. Detail out classification of lipids. Give a brief account on the chemistry of sterols, terpenes and carotenoids.

(2 × 4= 8 weightage)
