D 92959 (Pages : 2) Name.....

Reg. No.....

FIRST SEMESTER M.Sc. DEGREE EXAMINATION, DECEMBER 2015

(CUCSS)

Zoology

Z0 1C T01—BIOCHEMISTRY

Time : Three Hours Maximum : 36 Weightage

Part A

I. Answer the following :—

1 Differentiate between Macromolecules and Micromolecules.

2 Define hydrogen bond and van der Waals interactions.

3 Define monosaccharides.

4 Illustrate glycocidic bond.

5 Differentiate homopolysaccharides from heteropolysaccharides.

6 Define nonpolar amino acids with example.

7 Explain protein domains.

8 What is Iodine number ?

9 Describe micro-RNA.

10 What is enzyme inhibition ?

11 Define free energy.

12 Differentiate glycogenesis from glycogenolysis.

13 What is fatty acid synthase ?

14 What is the role of 5-phosphoribosyl-1-pyrophosphate ?

(14 × 1 = 14 weightage)

Part B

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

15 Write the biological significance of starch and glycogen.

16 Illustrate the projection formulae of D-glucose and D-fructose.

17 Briefly explain essential and non-essential aminoacids.

18 Illustrate peptide bond formation in proteins.

19 Classify and describe compound lipids.

20 Bring out the roles of lipids as co-factors and vitamin carriers.

Turn over

21 List out the major differences between RNA and DNA.

22 Describe the impact of substrate concentration on rate of enzyme activity.

23 Briefly explain glucose-induced conformation change in hexokinase and its significance.

24 Explain electron transport system.

(7 × 2 = 14 weightage)

Part C

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

25 "Formation of acetyl-CoA is one of the most important turning point in catabolism." Critically evaluate the statement giving reasons.

26 Explain Watson and Crick model of DNA.

27 Give an account on enzyme inhibition.

28 Write an essay on classification of amino acids.

(2 × 4 = 8 weightage)