D 22294 (Pages 2) Name.....

Reg. No.....

FIRST SEMESTER B.Sc. DEGREE EXAMINATION, JANUARY 2012

(CCSS)

Biochemistry—Complementary Course

BCIC 01—ELEMENTARY BIOCHEMISTRY

Time : Three Hours Maximum : 30 Weightage

I. Answer *all* twelve questions :

1 The particles of dispersed phase in colloidal solution are called ————

2 The acid-base balancing solution is called _____

3 What is the function of synovial fluid ?

4 Osmotic pressure depends on :

(a) Temperature ;

(b) Solute Concentration ;

(c) Atmospheric pressure.

5 Give an example of buffering system of blood.

6 _____ is an example of emulsifying agent.

7 What is TLC ?

8 _____ is the protein digesting enzyme of gastric juice.

9 _____ is the polysaccharide of Saliva.

10 In a pH scale the acidic range lies below the pH _____

11 The finely divided oil droplets in water is called _____

12 Loss of atoms or groups from adjacent carbon atoms is called :

(a) Decarboxylation.

(b) Addition reaction.

(c) Elimination reaction.

(12 x $\frac{1}{4}$ = 3 weightage)

II. Answer *all* nine questions :

13 What is Bronstead's definition of acids and bases ?

14 What is Osmosis ?

Turn over

15 What is Lyophilic colloid ?

1.6 What is Oxidation and reduction reaction ?

1.7 Define molality of a solution:

1.8 Define buffering capacity.

19 What is optical activity ?

20 What is the meaning of pKa ?

21 What is a decarboxylation reaction ? Give an example.

(9 x 1 = 9 weightage)

III. Answer any *five* questions :

22 Write a note on the normal constituents of urine.

23 Describe a method of pH determination.

24 Write an account of addition and substitution reaction with example.

25 Write a short note on dialysis.

26 Give the principle of colorimetry.

27 Explain the phenomenon of Brownian movement.

28 Water is an amphoteric molecule—Discuss.

(5 x 2 = 10 weightage)

IV. Answer any *two* questions :

29 Describe the principles and application of electrophoresis in the separation of natural products.

30 Write an account of the function and composition of saliva, gastric juice and bile.

31 Explain the biochemistry of blood clotting.

(2 x 4 = 8 weightage)