43543 **(Pages 2)** **Name.....**

Reg. No.....

FIRST SEMESTER B.Sc. (GENETICS) DEGREE EXAMINATION, JULY 2013

(CCSS)

Biochemistry

BC 1C 01—ELEMENTARY BIOCHEMISTRY

ime : Three Hours Maximum : 30 Weightage

I. Answer *all* twelve questions :

1 Chlorination of methane is an example of _____ reaction.

2 Which of the following is an amphoteric substance ?

(a) Water. (b) Glucose.

(c) Acetic acid.

3 Negative log of H ion concentration is _____

4 What is buffer action ?

(a) resisting change in pH. (b) Increasing the pH.

(c) decreasing the pH.

5 A molecule with no plane of symmetry is called _____

6 When an atom, group or molecule is added to the substrate molecule, the reaction is called _____

7 Which is decarboxylation ?

(a) oxalosuccinic acid to keto glutaric acid.

(b) succinic acid to fumaric acid.

8 Which of the following is an ingredient of saliva.

(a) Renin. (b) Trypsin.

(c) Mucin. (d) Insulin.

9 _____ is the chief sugar of milk.

10 _____ is the mineral ion essential for blood clotting.

11 The **pH** of pure water at ordinary temperature is _____

12 Sodium acetate and acetic acid are constituents of ____—— buffer.

(12 x ¼ = 3 weightage)

Turn over

II. Answer *all* nine questions :

13 What is Tyndall effect ?

14 What is substitution reaction ?

15 What is **pOH** ?

16 What is pH meter ?

17 What is an elimination reaction ?

18 What is a **lyophobic** colloid ?

19 What is **Rf** value ?

20 What is optical activity ?

21 What is a geometrical isomer ?

(9 x 1 = 9 weightage

III. Answer any *five* questions :

22 Describe the principle of electrophoresis.

23 Give the principle involved in **ultracentrifugation.**

24 Write the composition of lymph.

25 Describe the different function of blood.

26 Discuss the Lewis theory of acids and bases.

27 Mention the applications of radio-immune assay.

28 Give an account of dissociation of water.

(5 x 2 = 10 weight

IV. Answer any *two* questions :

29 Describe the biochemical aspects of blood clotting.

30 What is buffer solution ? Explain **Henderson-Hasselbalch** equation.

31 What is chromatography ? Explain the principle and types.

(2 x 4 = 8 weigh