D 51504 **(Pages : 2)** **Name**

Reg. No.....

THIRD SEMESTER B.Sc. DEGREE EXAMINATION, NOVEMBER 2013

(UG–CCSS)

Core Course—Biotechnology

BT 3B 01—BIOCHEMISTRY

Time : Three Hours **Maximum : 30 Weightage**

I. Objective Type Questions. Answer *all* the questions. Name the following :-

1 The **epimer** of glucose in C-2 position.

2 The products of **phenylalanine** degradation.

3 The site at which the substrate bond on enzyme.

4 A hormone that is responsible for regulating blood glucose level.

5 Product of fatty acid oxidation.

6 **Chemiosmotic** hypothesis was proposed by.

7 A nitrogenous **basae** found only in RNA.

8 The structure of B-DNA was proposed by.

9 A steroid present in the cell membrane of mammals.

10 The **multienzyme** complex responsible for the conversion of **pyruvate** in acetyl **CoA.**

11 The H+ ion concentration in a solution is usually expressed as.

12 A molecule that exist on the form of **Zwitterion.**

(12 x ¼ = 3 weightage)

II. Short Answer Type Questions. Answer *all* nine questions. Each question carries a weightage of 1 :

13 What are **isoenzymes ?**

14 What is the function of t-RNA ?

15 Give an idea about the function of **phosphoglycerides.**

16 What do you know about induced fit hypothesis ?

17 What is meant by inversion of sugar ?

18 What is the importance of **transaminases ?**

19 Define **Rf** value.

20 What is the major function of **absiscic** acid ?

21 What are super secondary strucures ?

(9 x 1 = 9 weightage)

Turn over

III. Short Essay *or* Paragraph Questions. Answer any *five* questions. Each question carries a weigh of 2 :

22 Give an idea about the principle and application of affinity chromatography.

23 Outline the classification of lipids.

24 What are the different factors that affect enzyme activity ?

25 What do you know about the structure of starch and glycogen ?

26 Write a note on the amphoteric nature of amino acids.

27 Distinguish between Competitive and Non-competitive inhibitions.

28 How do buffers act ? Give an example.

(5 x 2 = 10 weigh[illegible]

IV. Essay Questions. Answer any *two* questions. Each question carries a weightage of 4 :

29 Discuss about the structural organization in proteins.

30 Detail the reactions of Kreb's cycle and mention its importance.

31 Explain the functions and deficiency disorders of B-complex vitamins.

(2 x 4 = 8 weightage)