

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 **base** 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 **multi-enzyme** 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 $\frac{1}{4}$ = 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 **R_f** value.
- 20 What is the major function of **abscisic acid** ?
- 21 What are super secondary **structures** ?

(9 x 1 = 9 weightage)

Turn over

III. Short Essay *or* Paragraph Questions. Answer any *five* questions. Each question carries a weight 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 **weightage**)

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**)