

D 72394

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Name

Reg. No.....

THIRD SEMESTER B.Sc. DEGREE EXAMINATION, NOVEMBER 2014

(UG-COCS)

Core Course

Biotechnology

BT 3B 01—BIOCHEMISTRY

Time : Three Hours

Maximum : 30 **Weightage**

I. Objective type questions. Answer all *twelve* questions :

A Name the following :-

- 1 Precursor of tyrosine.
- 2 The hormone completely derived from tyrosine.
- 3 The **porphyrin** which gives stools their characteristic color.
- 4 The end product of fatty acid **synthase** in humans is.
- 5 The analogue **of hypoxanthine** used in the treatment of gout-
- 6 The highest concentration of **cystine** can be found in.

B State True or False :

- 7 **Alanine** is most compatible with α -helical structure.
- 8 All amino acids contain positively charged side chains.
- 9 Pepsin requires activation by the acid hydrolysis of the **proenzyme** form.
- 10 The **amino acid histidine** is not **ionisable** in proteins.
- 11 **Glycine** is optically inactive.
- 12 If all potential sources of ATP production are taken into consideration, a net number of 6 ATP molecules are formed per molecules of glucose in aerobic **glycolysis**.
(12 x $\frac{1}{4}$ = 3 **weightage**)

II. Short answer type questions. Answer all *nine* questions :

- 13 Cation exchangers.
- 14 **Gibberellins**.
- 15 Vitamin **D**.
- 16 **Isoenzymes**.
- 17 **Isomerases**.

Turn over

18 Structures of purines.

19 Structure of pyrimidines.

20 Spingolipids.

21 proteolytic enzymes.

(9 x 1 = 9 weightage)

III. Short essay or Paragraph questions. Answer any *five* from seven :

22 Strong and weak buffers.

23 Chemiosmotic hypothesis.

24 Titration curve of alanine. -

25 Cytochrome oxidase.

26 Blood buffers.

27 Ion exchange chromatography.

28 Different conformational forms of DNA.

(5 x 2 = 10 weightage)

IV. Essay questions. Answer any *two* from three :

29 Outline the Urea cycle and explain its significance..

30 Give a brief account on protein structure classification.

31 Outline the ETC with all its components.

(2 x 4 = 8 weightage)