

D 72394

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Name.....

Reg. No.....

THIRD SEMESTER B.Sc. DEGREE EXAMINATION, NOVEMBER 2014

(UG-CCSS)

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 \times $\frac{1}{4}$ = 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 × 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 × 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 × 4 = 8 weightage)