

**FIFTH SEMESTER (CBCSS-UG) DEGREE EXAMINATION, NOVEMBER 2019**

Zoology

ZOL 5B 08T—BIOCHEMISTRY AND MOLECULAR BIOLOGY

(2019 Admission onwards)

Time : Two Hours and a Half

Maximum : 80 Mark

**Section A**

I. Short answer questions. Each question carries 2 marks.

- 1 What are ketoses ? Mention example.
- 2 Comment on type I diabetics.
- 3 Write a note on isoelectric point.
- 4 What is HPLC ? Write any two applications of HPLC.
- 5 What are lecithins ? Write its function.
- 6 Write a note glycogenolysis.
- 7 What is Z-DNA ?
- 8 Write a note on luxury genes.
- 9 Comment on one gene one enzyme hypothesis.
- 10 Write a note on gene splicing.
- 11 What is RNA interferenc ?
- 12 Write an account on the active centers of ribosomes.
- 13 Comment on transposons.
- 14 What is satellite DNA ?
- 15 Define transduction.

(Ceiling: 25 marks)

**Section B**

II. Paragraph questions. Each question carries 5 marks.

- 16 Explain polysaccharides. Mention any four biological roles of carbohydrates.
- 17 Comment on different structural levels of protein.
- 18 Explain oxidative phosphorylation.

**Turn over**

- 19 Explain Sanger's method of sequencing of DNA.
- 20 Comment on transcription and transcription unit.
- 21 Explain the role of different enzymes involved in DNA replication.
- 22 Explain splicing, capping and tailing during RNA processing.
- 23 Explain the lytic and lysogenic cycle.

### Section C

Essay questions. Answer any *two* questions.

- 24 What are enzymes ? Classify enzymes. Write a note on enzyme inhibition.
- 25 Explain electron transport chain.
- 26 Explain the properties of the genetic code. Add a note on wobble hypothesis.
- 27 What are operons ? Explain tryptophan operon and its regulation.

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