

**B.Sc. Part-III (Honours) Examination, 2021**

**Subject: Zoology**

**Paper: X**

**(New Pattern)**

**Full Marks: 50**

**Time : 2 Hrs**

*Candidates are required to give the answers in their own words as far as practicable.*

- 1. Answer any *four* questions from the following: **5 × 4 = 20****
- a) Describe briefly initiation of transcription in eukaryotes with suitable diagram.
  - b) State the role of attenuator in the regulation of tryptophan operon with illustration.
  - c) Classify placenta in mammals according to histological orientation with examples.
  - d) Give an account of endocrine disorders due to abnormal secretion of thyroid hormones.
  - e) Discuss briefly development of the lens in chick.
  - f) Write the names of the hormones secreted from the neuro-secretory cells of insects and state their functions.
- 2. Answer any *three* questions from the following: **10 × 3 = 30****
- a) Elucidate briefly the events of initiation and termination of DNA replication in *E. coli* with suitable diagram.
  - b) What is an inborn-error of metabolism? Give an account of the genetic and biochemical basis of phenylketonuria in human.
  - c) Compare different classes of immunoglobulins based on their structure and function.
  - d) Briefly describe the process of gastrulation in chick with proper diagram.
  - e) Describe the process of oogenesis and spermatogenesis.
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