

**B.Sc. Part-III (Hons.) Examinations, 2020**

**Subject: Zoology**

**Paper-X: (New Syllabus)**

**Full Marks: 50**

**Time: 2 Hrs**

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

1. Answer any **four** questions of the following **5×4=20**
  - a) Describe rho-independent termination of transcription in *E. coli* with suitable diagram.
  - b) Describe initiation of translation in *E. coli* with suitable diagram.
  - c) Describe the steps involved in gene cloning.
  - d) Write briefly about the Klinefelter's syndrome in man.
  - e) Differentiate between innate and adaptive immunity.
  - f) Compare the structure of IgA and IgM molecule.
2. Answer any **three** questions of the following **10×3=30**
  - a) Briefly describe gastrulation of a frog with diagram
  - b) Describe the formation of heart in chick embryo with proper diagram.
  - c) Classify placenta and mention its roles in human development.
  - d) Briefly describe spermatogenesis in mammal with suitable diagram.
  - e) Write the name of hormones secreted from posterior pituitary and state their functions.

## Paper-X: (Old Syllabus)

**Full Marks: 50**

**Time: 2Hrs**

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

1. Answer any **four** questions of the following **5×4=20**
  - a) Write a short note on organizer concept.
  - b) Classify placenta in mammals according to histological structures with example.
  - c) Mention source and function of testosterone in human.
  - d) Write the names of the hormones secreted from anterior-, mid- and posterior- pituitary.
  - e) Write a short note on electron transport chain.
  - f) Discuss Hamburger phenomenon in relation to transport of CO<sub>2</sub> in human.
2. Answer any **three** questions of the following **10×3=30**
  - a) Describe spermatogenesis with suitable diagram.
  - b) Describe gastrulation in frog with diagram.
  - c) Discuss β-oxidation of fatty acids.
  - d) Describe glycolysis mentioning the enzymes involved at each step.
  - e) Describe the propagation of nerve impulse in myelinated nerve fibers.