

# Zoology

## Paper-II

**Time Allowed: Three Hours**

**Maximum Marks: 300**

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*Note:* 1. The figures in the margin indicate full marks for the questions.

2. Candidate should answer questions No. 1 and 5 which are compulsory and any **three** of the remaining questions, selecting at least **one** from each section.

### SECTION – A

1. Write short notes on any **three** of the following in not less than **200** words each: 20×3=60
  - (a) Genetic code and its importance
  - (b) Transgenic animals
  - (c) Zoological nomenclature
  - (d) Hardy Weinberg's law
  
2. (a) Describe protein synthesis in detail. 30  
(b) What is cell division? Describe the process of meiosis in detail. 2+28=30
  
3. (a) What are Mendel's laws of inheritance? How they have revolutionized genetics? 30  
(b) What is cloning? Describe cloning in detail. 30

4. (a) What is natural selection? Describe the Darwin's theory of evolution and neoDarwinism in detail. 5+25=30
- (b) What are fossils? Give a detailed description of fossilization and its importance. 5+25=30

### SECTION – B

5. Write short notes on any **three** of the following in not less than **200** words each: 20×3=60
- (a) Immunity
- (b) Nerve impulse
- (c) In vitro fertilization
- (d) Hormones secreted by pituitary and their functions
6. (a) What is your understanding of phosphorylation? Describe glycolysis and Krebs's cycle in detail. How many net ATP's are produced during each cycle. 30
- (b) Structure of proteins and their importance in cell functioning. 30
7. (a) Give a detailed account of various blood constituents. 30
- (b) Write a commentary on the various types of muscles and the mechanism of muscle contraction. 20+10=30
8. Write short notes on the following:
- (a) Various phases of development in frog 30
- (b) Neotany 10
- (c) Types of placenta and their function in mammals 20