

## ZOOLOGY (Paper II)

**Time Allowed : Three Hours**

**Maximum Marks : 300**

### QUESTION PAPER SPECIFIC INSTRUCTIONS

*(Please read each of the following instructions carefully before attempting questions)*

There are EIGHT questions divided in two Sections.

Candidate has to attempt FIVE questions in all.

Question Nos. 1 and 5 are compulsory and out of the remaining, any THREE are to be attempted choosing at least ONE question from each Section.

The number of marks carried by a question/part is indicated against it.

Wherever any assumptions are made for answering a question, they must be clearly indicated.

Word limit in questions, wherever specified, should be adhered to.

### SECTION 'A'

1. Distinguish between any THREE of the following (each answer may be in about 200 words):  

**3×20=60**

  - (a) TATA box and GC Box
  - (b) Plasmid and Cosmid
  - (c) Point mutation and missense mutation
  - (d) Homologous and analogous organs.
2. Describe Gene expression in prokaryotes and eukaryotes. Define transcription. **60**
3. What is gene cloning? Give an account of standard vectors used in gene cloning. **60**
4. Write short notes on the following:  

**4×15=60**

  - (a) Natural selection
  - (b) Mega evolution
  - (c) Genetic drift
  - (d) Chemotaxonomy.

### SECTION 'B'

5. Write notes on any THREE of the following:  

**3×20=60**

  - (a) Ketone bodies
  - (b) Structure of human eye
  - (c) Importance of placenta
  - (d) Theories of Cancer development.
6. Describe the structure & physiology of fat soluble vitamins. **60**
7. What do you understand by osmoregulation? Describe the phenomenon and physiology of urine formation. **60**
8. Write notes on the following:  

**4×15=60**

- (a)**     Gastrula formation
- (b)**     Bear's law
- (c)**     Determinate and indeterminate cleavages
- (d)**     Ageing.