

ZOOLOGY (Paper I)

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. Write concise account of any three of the following in about 200 words each: **20×3=60**
- (a) Protista and Parazoa and their status
 - (b) Comparison of hearts of pigeon and rabbit
 - (c) Pedicellariae of echinoderms
 - (d) Paedomorphosis in amphibians
2. Describe the salient features of phylum Annelida. Classify the phylum upto orders – giving their characteristics and suitable examples. **60**
3. Describe the morphological features of *Fasciola hepatica*. Write an account of its life history in detail with a note on mode of infection. **60**
4. What are the endocrine glands? Write a detailed account of the structure and hormone's of mammalian pituitary gland. Discuss 'why the pituitary gland is not a master of endocrine orchestra now: **60**

SECTION 'B'

5. Write brief account of any three of the following in about 200 words each: **20×3=60**
- (a) Green house gases and green house effect
 - (b) Pheromones and their role in alarm signaling
 - (c) Pest of rice, *Stilohophilus oryzae* and its control
 - (d) Designing of experiments and its importance
6. What is meant by the population? Describe various characteristics of a population. Discuss the phenomenon of stabilization of populations. **60**
7. What is understood by the learning and innate behaviors? Give an account of various methods of studying animal behavior. **60**
8. (a) Explain the 'F' test. How is the one way F-test applied? **30**
- (b) Describe the principle and working of a flame photometer. **30**