

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) Characteristics of Acoelomata and Coelomata with suitable examples and well-labelled diagrams.
 - (b) Integuments and its derivatives in vertebrates
 - (c) Canal system in Porifera
 - (d) Flight adaptations in birds
2. Describe the salient features of phylum Hemichordata. Classify the phylum up to classes giving their characteristics and suitable examples. **60**
3. Write a detailed account of modification of mouthparts in insects and support your answer with well-labelled diagrams. **60**
4. What is meant by migration? Write a detailed account of migration in fishes and its importance. **60**

SECTION 'B'

5. Write brief account of any three of the following in about 200 words each: **20×3=60**
- (a) The ozone layer and its impact
 - (b) Methods of studying animal behavior
 - (c) Apiculture and its economic importance
 - (d) Null hypothesis
6. Define the terms Biome and Ecotone and describe major terrestrial biomes. **60**
7. Give a detailed account of Biological rhythms and Biological clock. **60**
8. (a) what is Student t-test? Explain its application with examples. **30**
- (b) Describe the principle and working of Geiger-Muller counter and its use in Biology. **30**