

ZOOLOGY**Paper – I****Time allowed : Three Hours****Maximum Marks : 200****Question Paper Specific Instructions**

Please read each of the following instructions carefully before attempting questions :

*There are **EIGHT** questions in all out of which **FIVE** are to be attempted.*

*Questions no. 1 and 5 are compulsory. Out of the remaining **SIX** questions, **THREE** are to be attempted selecting at least **ONE** question from each of the two Sections A and B.*

Attempts of questions shall be counted in chronological order. Unless struck off, attempt of a question shall be counted even if attempted partly. Any page or portion of the page left blank in the Question-cum-Answer Booklet must be clearly struck off.

All questions carry equal marks. The number of marks carried by a question/part is indicated against it.

*Answers must be written in **ENGLISH** only.*

Neat sketches may be drawn, wherever required.

SECTION A

- Q1. Write notes on the following in about 150 words each : 8×5=40**
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|---------------------------------------|---|
| (a) Metamerism in Annelids | 8 |
| (b) Affinities of Onychophora | 8 |
| (c) Parasitic adaptations in Ascaris | 8 |
| (d) Aerial respiration in bony fishes | 8 |
| (e) Characteristics of Cetaceans | 8 |

- Q2.** (a) Discuss the status of Rhynchocephalia. 10
(b) Trace the origin of tetrapods. 15
(c) Write a detailed account of diurnal and nocturnal migration in birds. 15
- Q3.** (a) Describe the function of testosterone and estrogen in man. 10
(b) Write an essay on the parental care in Amphibians. 15
(c) Give an illustrative account of the appendicular skeleton of a bony fish. 15
- Q4.** (a) Discuss the terrestrial locomotion in vertebrates. 20
(b) Give a comparative account of the arterial loops in Reptiles and Mammals. 20

SECTION B

- Q5. Write notes on the following in about 150 words each : 8×5=40**
- (a) Biomes 8
 - (b) Sign Stimuli 8
 - (c) Modern Apiculture 8
 - (d) Acquired Immunodeficiency Syndrome 8
 - (e) Measure of Central Tendency 8
- Q6. (a) What do you understand by Population Dynamics ? Explicate the phenomenon in Fisheries and Wildlife management. 20**
- (b) Give a comprehensive account of an oil-seed pest, emphasizing its effects and management. 20
- Q7. (a) Define ethology and describe “group living” in animals. 20**
- (b) What is CFC ? Give an account of the consequences of ozone layer depletion in the environment. 20
- Q8. (a) Describe the application of Regression Analysis after Least Square Method citing biological examples. 20**
- (b) What is Electron Microscope ? Describe the principle and applications of SEM. 20