Zoology
Paper-I

Time Allowed: Three Hours

Maximum Marks: 300

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:

   (a) Different types of canal systems in porifera with suitable examples

   (b) Life cycle of liver fluke

   (c) Structure of a bird’s feather

   (d) Respiration in fishes

2. Write short notes on the following:

   (a) Salient features of phylum arthropoda and mouth parts of cockroach.

   15+15=30

   (b) Life cycle of earthworm and locomotion in annelids.

   20+10=30
3. (a) Describe in detail the flight adaption in birds and their migration.  
     \[15 + 15 = 30\]

(b) What is your understanding of parental care and paedomorphosis in amphibians?  
     \[15 + 15 = 30\]

4. Give a detailed account of circulatory system in different classes of vertebrates.  
     \[12 \times 5 = 60\]

SECTION – B

5. Write short notes on any three of the following in not less than 200 words each:  
     \[20 \times 3 = 60\]

(a) Greenhouse effect and its impact

(b) Geiger Mueller Counter

(c) Integrated Pest Management

(d) Circadian rhythms

6. Write short notes on the following:

(a) Fish farming  
     \[30\]

(b) Conditioning and imprinting  
     \[15 + 15 = 30\]

7. (a) Pheromones and their role in the induction of various responses.  
     \[30\]

(b) Pathogenesis and prevention of small pox and tuberculosis.  
     \[15 + 15 = 30\]

8. (a) Describe in detail the Chi-square Test and Correlation of Coefficients with suitable example.  
     \[15 + 15 = 30\]

(b) Write in detail about liquid scintillation counter and Transmission Electron Microscope.  
     \[15 + 15 = 30\]