CSM : 24

ZOOLOGY PAPER - I

Time Allowed : 3 hours | Maximum Marks : 100

QUESTION PAPER SPECIFIC INSTRUCTIONS

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

There are eight (8) questions - four (4) questions each in Part A & B. Each question carries 20 marks.

Marks for each question is indicated against it.

Compulsory questions :

(a) Question No. 1 from Part-A and

(b) Question No. 5 from Part-B

[Compulsory questions No. 1 & 5 have 4 (four) Sub-questions carrying 5 marks each.]

Total No. of questions to be attempted :

5 (five) questions.

[A candidate shall attempt 2 (two) compulsory questions from Part A and B. Out of the remaining 6 (six) questions, 3 (three) are to be attempted taking at least 1 (one) but not more than 2 (two) questions from each Part]

Word Limit:

(a) Compulsory questions carrying 5 marks shall have a limit of 150 words.

(b) There shall be no word limit for the remaining questions.

PART - A

1. Write short notes on the following : **(4×5=20)**
   (a) Three Domain system of classification
   (b) Types of scales in fishes
   (c) Different types of canal systems of Porifera
   (d) Torsion and Detorsion in gastropods

2. What is metamorphosis? Describe in detail the morphological changes and hormonal regulations during the process of metamorphosis in insects. **(2+10+8=20)**

3. Explain the principle and modes of flight in birds. Discuss the different types of migration found in birds. **(10+10=20)**

4. Describe the modification of hearts in various vertebrate groups. Support your answer with suitable diagrams. **(12+8=20)**

PART - B

5. Write short notes on the following : **(4×5=20)**
   (a) Green-house effect
   (b) Biomes and Ecotones
   (c) Theory of Natural Selection
   (d) RNA world hypothesis and its role in the origin of life on Earth

6. Discuss the cause, effects and possible solution of environmental biodegradation and explain the major types of environmental pollution. **(10+10=20)**

7. Define insect pest control and explain the various methods used for pest management. Add a note on the advantages and disadvantages of Integrated Pest Management. **(2+12+6=20)**

8. What are genome and proteome databases? Discuss the functions and applications of NCBI, BLAST and EMBL. **(5+5+5+5=20)**

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