

2008
ZOOLOGY
Paper 1

Time : 3 Hours]

[Maximum Marks : 300

INSTRUCTIONS

*Candidates should attempt **all** the questions in Parts A, B & C.
However, they have to choose only **three** questions in Part D.*

*Answers must be written in the medium opted (i.e. English or
Kannada).*

This paper has four parts :

- | | |
|----------|-----------|
| A | 20 marks |
| B | 100 marks |
| C | 90 marks |
| D | 90 marks |

Marks allotted to each question are indicated in each part.

SEAL

PART A

4×5=20

Answer each question in about 50 words. Each question carries 5 marks.

1. Write short answers for the following :
 - (a) Explain five salient features of Porifera.
 - (b) What are the ecological pyramids ?
 - (c) What are the hormones important to behaviour regulation ?
 - (d) What are the types of silk ? Name the insect secreting the silk.

PART B

10×10=100

*Answer each question in about 100 words. Each question carries 10 marks.
Illustrate wherever necessary.*

2. Explain briefly the schizogony part of life cycle of Plasmodium.
3. With the help of a diagram, explain Phosphorus cycle.
4. Briefly explain the biology of the causative organism of Filariasis.
5. What are the adaptations required for a life in desert ?
6. Explain the structure, types and functions of air bladder in fishes.
7. Comment on Monotremata, give examples and add a note on their affinities.
8. Fish A and B are stocked in a pond. Species A, numbering 400, consumes 5 kg food per day. B, numbering 1000 consumes 10 kg/day. What is the average food consumption of fish in the pond ?
9. What are the insect pests of stored grains and how do we control them ?
10. What are the inter-specific relations or interactions between species ?
11. Explain the biology of any two insect pests of veterinary importance and their control measures.

[Turn over]

PART C

6×15=90

Answer each question in about 150 words. Each question carries 15 marks. Illustrate wherever necessary.

12. Explain the morphological and physiological adaptations of helminth parasites.
13. What are the properties of population group ?
14. Comment on the salient features of Apoda and their affinities.
15. Why is temperature considered as a limiting factor ?
16. Explain the hormonal regulation of metamorphosis in insects.
17. What are the basic factors to be considered in the selection of species for fish culture ?

PART D

3×30=90

Answer any **three** of the following questions, each in about 300 words.
Each question carries 30 marks.

18. Describe the structure and mechanism of locomotory organelles in Protozoa.
19. Write an essay on flightless birds.
20. Describe the sources of water pollution, effects on organisms and preventive measures to reduce it.
21. What is the nature of biological rhythms, types of rhythms, tidal rhythms, lunar rhythms and circadian rhythms ?
22. Describe the technique of induced breeding (hypophysation) in fish culture.