

**JL – 39/14**

**Zoology**

**Paper – I**

*Time : 3 hours*

*Full Marks : 200*

*The figures in the right-hand margin indicate marks.*

*Answer five questions selecting  
one question from each Unit.*

### **UNIT – I**

1. (a) Elucidate the parasitic adaptations with suitable examples. 20
- (b) Explain evolutionary significance of larval forms in echinoderms. 20
2. Write short notes on the following :
  - (a) Protozoan parasites of man 10
  - (b) Reproduction in sponges 10
  - (c) Locomotory organs in molluscs 10
  - (d) Excretion in aquatic insects 10

## UNIT – II

3. (a) Explain migration in fishes and its biological significance. 20
- (b) Give a detailed account on adaptive radiation in mammals. 20
4. (a) Write an essay on poisonous and non-poisonous snakes in India. 20
- (b) Discuss the adaptive features for flight in birds. 20

## UNIT – III

5. Explain the types of environmental pollutants, their sources and impact on biological systems. 40
6. (a) Give an account on wild life of India and their conservation. 20
- (b) What are Tests of Significance ? Explain their methods and applications in Biology. 20

## UNIT – IV

7. Explain various distinct patterns of evolution with suitable examples. 40

8. Write short notes on the following :

- (a) Natural selection and its importance in evolution 10
- (b) Isolating mechanisms in relation to origin of species 10
- (c) Hardy-Weinberg principle and its relevance to population genetics 10
- (d) Biological clock and circadian rhythm 10

### UNIT – V

- 9. (a) Explain the process of vermicomposting and its applications. 20
- (b) Give an account on transgenic animals and their potential uses. 20
- 10. (a) What are the methods of induced breeding in fishes ? Add a note on their applications. 20
- (b) Describe the structure of bacteria and bacteriophage with neatly labelled diagrams. 20

