ZOOLOGY

Time Allowed : 3 hours
Full Marks : 100

The figures in the margin indicate full marks for the questions.

Answer any 10 (ten) questions taking 5 (five) questions from each section.

SECTION - A

1. Describe the life cycle of Plasmodium falciparum with a suitable diagram. (10)
2. Explain the process of metamorphosis in insects. Add a note on the hormonal regulation. (6+4=10)
3. Compare circulatory systems in vertebrates with reference to modifications of the heart. (10)
4. Discuss carbon and hydrological cycles with suitable diagrams. (5+5=10)
5. Give an account on the process of rearing of silkworm. What are the economic importances of silkworm? (7+3=10)
6. Write short notes on:
   (a) Circadian rhythm
   (b) Imprinting
(5+5=10)
7. Write short notes on:
   (a) Principle and applications of spectrophotometry
   (b) Measures of central tendencies
(5+5=10)

SECTION - B

8. Explain the process of translation in prokaryotes. (10)
9. Describe the mechanism of sex determination in Drosophila and humans. (10)
10. Delineate the reactions involved in glycolysis. (10)
11. Describe the structure of haemoglobin. Explain its roles in oxygen and carbon dioxide transport. (6+4=10)
12. Write short notes on:  
   (a) Structure of neuron  
   (b) Types of mutation  

13. Write short notes on:  
   (a) Placenta in mammals  
   (b) Fate map  

14. Write short notes on:  
   (a) Role of ICZN  
   (b) Theory of natural selection