

SC(MP)ACFTCE(09MY)

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. Write an essay on parasitic adaptations in flatworm. **(10)**
2. Write notes on any 2 (two): **(2×5=10)**
 - (a) Medicinal importance of leeches.
 - (b) Parental care in Amphibia.
 - (c) Egg-laying mammals.
3. What disease is caused by Ascaris? Write an account of its pathogenecity, therapy and prophylaxis. **(10)**
4. Explain the meaning of the term population. What is population density? Mention the characteristics of population. **(10)**

(Contd. 2)

5. Write notes on any 2 (two): **(2×5=10)**
- (a) Sign stimuli.
 - (b) Homing.
 - (c) Predator tactics.
6. What is Electron Microscopy? Explain its working principle and its utility. **(10)**
7. Write notes on any 2 (two): **(2×5=10)**
- (a) Carp culture.
 - (b) Plaque.
 - (c) Pest of rice.
8. (a) Describe the procedure for computing students test. Mention its utility in the field of Bioscience. **(5)**
- (b) Method of calculating chi-square test. **(5)**

(Contd. 3)

SECTION - B

9. Write about the function of genes and mechanism of gene regulation in eukaryotes. **(10)**
10. Write notes on any 2 (two): **(2×5=10)**
- (a) Mitotic apparatus.
 - (b) Golgi bodies.
 - (c) Transcription factors.
11. Explain how a nerve impulse is carried through a synapse. **(10)**
12. Write notes on any 2 (two): **(2×5=10)**
- (a) Hardy-Weinberg law.
 - (b) Transgenics.
 - (c) Human genome-mapping.
13. Discuss the mechanism of hormonal action at the target site. **(10)**
14. Write notes on any 2 (two): **(2×5=10)**
- (a) Cladistics.
 - (b) Role of cyclic AMP.
 - (c) Isolation.

(Contd. 4)

- 4 -

15. What are allosteric enzymes? Discuss the mechanism of enzyme action. **(10)**
16. Write notes on any 2 (two): **(2×5=10)**
- (a) Baer's law.
 - (b) Metaplasia.
 - (c) Ageing.

* * * * *