

# MIZORAM PUBLIC SERVICE COMMISSION

## GENERAL COMPETITIVE EXAMINATIONS FOR RECRUITMENT TO THE POST OF JR. GRADE OF MIZORAM FOREST SERVICE (ASST. CONSERVATOR OF FORESTS) UNDER ENVIRONMENT, FOREST & CLIMATE CHANGE DEPARTMENT, GOVERNMENT OF MIZORAM, 2023

### 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. Give a detail account of the locomotion in Protozoa with suitable diagram. (10)
2. Write notes on: (2×5=10)
  - (a) Larval forms in Crustacea
  - (b) Parental care in Amphibia
3. Write a detailed notes on the pituitary hormones and its functions. (10)
4. Write notes on: (2×5=10)
  - (a) Ozone layer and its impact
  - (b) Integrated pest management
5. Write notes on: (2×5=10)
  - (a) Conditioning
  - (b) Role of pheromones in alarm spreading.
6. Give an account of the process of rearing honey bee. Add a note on the economic importance of honey bee. (10)
7. Write notes on: (2×5=10)
  - (a) Null hypothesis
  - (b) Scanning electron microscopy

**SECTION - B**

8. Write in detail the structure and function of power house of the cell with well labelled diagram. (10)
9. Write notes on: (2×5=10)  
(a) Transposable elements  
(b) DNA finger-printing
10. Explain the conditions for Hardy-Weinberg equilibrium. (10)
11. Write notes on: (2×5=10)  
(a) Cladistics  
(b) cAMP as second messenger
12. What is glycolysis? Write down the sequential steps of Krebs cycle. (10)
13. Write notes on: (2×5=10)  
(a) Mechanism of contraction in skeletal muscles  
(b) Mechanism of blood coagulation
14. Write notes on: (2×5=10)  
(a) Paedogenesis  
(b) In vitro fertilization.

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