

MIZORAM PUBLIC SERVICE COMMISSION

GENERAL COMPETITIVE EXAMINATIONS FOR RECRUITMENT TO THE POST OF JUNIOR GRADE OF MIZORAM FOREST SERVICE i.e. ASSISTANT CONSERVATION OF FOREST (ACF) UNDER ENVIRONMENT, FOREST & CLIMATE CHANGE DEPARTMENT, GOVERNMENT OF MIZORAM, 2018

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: (5+5=10)
 - (a) Circadian rhythm
 - (b) Imprinting
7. Write short notes on: (5+5=10)
 - (a) Principle and applications of spectrophotometry
 - (b) Measures of central tendencies

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:** **(5+5=10)**
- (a) Structure of neuron
 - (b) Types of mutation
- 13. Write short notes on:** **(5+5=10)**
- (a) Placenta in mammals
 - (b) Fate map
- 14. Write short notes on:** **(5+5=10)**
- (a) Role of ICZN
 - (b) Theory of natural selection

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