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

BOTANY

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 various centres of origin of cultivated plants given by Vavilov. **(10)**

2. Write notes on *any two* of the following : **(2×5=10)**
   (a) Dissemination of plant diseases
   (b) Evolution of sex in algae
   (c) Economic importance of fungi

3. Write an account on *any two* of the following : **(2×5=10)**
   (a) Stomata and their types
   (b) Polyembryony
   (c) Salient features of coniferales

4. Elucidate the development of Female gametophyte in Angiosperms. **(10)**

5. Mention any five important timber yielding plants in Mizoram. Give vernacular name, botanical name and their respective families. **(10)**

6. Describe *any two* of the following : **(2×5=10)**
   (a) Totipotency
   (b) Protoplast culture
   (c) Cybrids

7. What is ethnobotany? Discuss the importance of ethnobotany in Indian context. **(2+8=10)**

SECTION - B

8. Define cell cycle? Describe in detail the various steps involved in meiosis. **(10)**

9. Write notes on *any two* of the following. **(2×5=10)**
   (a) Cytoplasmic inheritance.
   (b) General properties of genetic code.
   (c) Importance of secondary metabolites

10. Write short notes on *any two* of the following: **(2×5=10)**
    (a) Standard deviation
    (b) endemism
    (c) senesence

11. Write notes on *any two* of the following: **(2×5 =10)**
    (a) Seed dormancy
    (b) Photoperiodism
    (c) Oxidative phosphorylation

12. What do you meant by pollution? Mention major air pollutants and their sources. Suggest controlling measures to prevent air pollution. **(10)**

13. What is photosynthesis? Describe the mechanism of light reaction in green plants. **(2+8=10)**

14. Write an account on *any two* of the following: **(2×5 =10)**
    (a) Intellectual property rights
    (b) Global warming
    (c) Red date book

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