

MIZORAM PUBLIC SERVICE COMMISSION
MIZORAM CIVIL SERVICES (COMBINED COMPETITIVE)
MAIN EXAMINATION, 2023

BOTANY PAPER-II

Time Allowed : 3 hours

FM : 100

Marks for each question is indicated against it.

Attempt any 5 (five) questions taking not more than 3 (three) questions from each Part.

PART - A

1. Write short notes on *any two* of the following : **(2×10=20)**
 - (a) Electron microscopy
 - (b) Structure and function of cell wall
 - (c) Cytoskeleton and Microtubules
2. Write notes on the following : **(2×10=20)**
 - (a) Role of RNA in origin and evolution
 - (b) Gene silencing
3. Write short notes on *any two* of the following : **(2×10=20)**
 - (a) Ecological factors
 - (b) Plant succession in a hydrosere
 - (c) Different methods of biodiversity conservation
4. Write notes on the following : **(4×5=20)**
 - (a) IPR
 - (b) IUCN
 - (c) Global Warming
 - (d) Invasive species

PART - B

5. Answer *any two* of the following: **(2×10=20)**
 - (a) Method of mass selection in plant breeding
 - (b) Role of mutation in plant breeding
 - (c) Heterosis breeding
6. Write *any two* of the following: **(2×10=20)**
 - (a) What is chi-square test? Explain Chi-square test with suitable example.
 - (b) What is t-test? Explain t-test with suitable example.
 - (c) What is Z-test? Explain Z-test with suitable example.
7. Answer *any two* of the following: **(2×10=20)**
 - (a) C₄ pathway of CO₂ fixation
 - (b) Mechanism of phloem transport
 - (c) Growth movements in plants
8. Write notes on *any two* of the following: **(2×10=20)**
 - (a) Chemiosmotic theory of ATP synthesis
 - (b) Secondary metabolites in plants
 - (c) Enzymes and classification