

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

BOTANY PAPER-I

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 **(2×10=20)**
 - (a) Structure and reproduction of bacteriophage
 - (b) Conjugation in bacteria
2. With suitable diagrams, describe the vegetative structure and reproduction in *Chara*. **(20)**
3. Write short notes on- **(2×10=20)**
 - (a) Plant systematics
 - (b) Palynology and Phylogeny
4. Write a comparative account between natural and phylogenetic systems of plant classification. Give an outline of Bentham and Hooker's system of classification with its merit and demerits. **(8+12=20)**

PART - B

5. Write notes on *any two* of the following : **(2×10=20)**
 - (a) Microgametogenesis in angiosperms
 - (b) Types of pollination in plants
 - (c) Fertilization in angiosperms
6. Describe the economic products obtained, their uses and the morphological nature of the tissues yielding them in *Cannabis sativa* and *Glycine max*. **(2×10=20)**
7. Answer *any two* of the following : **(2×10=20)**
 - (a) Totipotency and its significance in plants
 - (b) Somatic hybrids vs Cybrids
 - (c) Protoplast isolation and culture
8. Write short notes on *any two* of the following : **(2×10=20)**
 - (a) Stomata and its types with diagram
 - (b) Glandular and non-glandular trichomes
 - (c) Anomalous secondary growth in *Bignonia*

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