

(101BO24)

**M.SC DEGREE EXAMINATION, Model QP
Botany - First Semester**

PLANT SYSTEMATICS

Time : Three hours

Maximum : 70 marks

Answer ALL Questions. (5X14 = 70 marks)

UNIT –I

1. (a) Give a detailed note on Taxonomic hierarchy species to division.

Or

- (b). Give a brief note on International Code of Nomenclature (ICN) of plants.

UNIT-II

2. (a). Give a detailed note on System of classification by Armen Takhtajan, its merits and demerits.

Or

- (b). Give a brief account on selective clades like Monocots (including Commelinids), Eudicots.

UNIT-III

3. (a). Give a detailed note on Taxonomic evidence based on palynology and cytology in relation to taxonomy.

Or

- (b). Give a detailed note on Data information systems.

UNIT-IV

4. (a). Give a brief note on Process of Plant Identification based on use of Taxonomic keys.

Or

- (b). Give a brief note on Major botanical gardens of the World and India.

UNIT-V

5. (a). Give an account on Phylogenetic Systematics.

Or

- (b). Give a detailed note on Molecular Systematics, Gene sequences, Phylogenetic analysis.

(102BO24)

M.SC DEGREE EXAMINATION, Model QP
Botany - First Semester

REPRODUCTIVE BIOLOGY OF ANGIOSPERMS

Time : Three hours

Maximum : 70 marks

Answer ALL Questions. (5X14 = 70 marks)

UNIT –I

1. (a) Give a detailed note on Structure of anther, microsporogenesis, role of tapetum and pollen development.

Or

- (b). Give a brief note on Types of ovules, megasporogenesis and their special features.

UNIT-II

2. (a). Give a detailed note on double fertilization.

Or

- (b). Give a brief account on structure of style and stigma; pollen-pistil interaction.

UNIT-III

3. (a). Give a detailed note on Embryogenesis in dicots and monocots.

Or

- (b). Give a detailed note on Causes of polyembryony, experimental induction and classification of polyembryony with its practical applications.

UNIT-IV

4. (a). Give a brief note on Vegetative reproduction and apospory.

Or

- (b). Give a brief note on importance of embryological characters in taxonomic considerations.

UNIT-V

5. (a). Give an account on Somatic embryogenesis with direct and indirect somatic embryogenesis.

Or

- (b). Give a detailed note on Embryo culture and its applications.

(103BO24)

**M.SC DEGREE EXAMINATION, Model QP
Botany - First Semester**

BIOLOGY AND DIVERSITY OF VIRUSES, BACTERIA, ALGAE AND FUNGI

Time : Three hours

Maximum : 70 marks

Answer ALL Questions. (5X14 = 70 marks)

UNIT –I

1. (a) Give a brief account on discovery of viruses; general properties, structure.

Or

- (b). Give a brief note on plant viruses and their economic importance.

UNIT-II

2. (a). Give a detailed note on recombination in bacteria.

Or

- (b). Give a brief account on general characters of Mycoplasmas, Cyanobacteria and their economic importance.

UNIT-III

3. (a). Give a brief account of Chlorophyceae, Rhodophyceae, Phaeophyceae, and Bacillariophyceae.

Or

- (b). Give a detailed note on algae as SCP.

UNIT-IV

4. (a). Give a brief note on nutrition and reproduction of fungi.

Or

- (b). Give a brief account of Basidiomycotina and Deuteromycotina.

UNIT-V

5. (a). Give an account on edible and poisonous mushrooms.

Or

- (b). Give a detailed note on Mycotoxins.

(104BO24)

**M.SC DEGREE EXAMINATION, Model QP
Botany - First Semester**

**OUTLINES OF BRYOPHYTES, PTERIDOPHYTES, GYMNOSPERMS AND PLANT
FOSSILS**

Time : Three hours

Maximum : 70 marks

Answer ALL Questions. (5X14 = 70 marks)

UNIT –I

1. (a) Give a detailed note on classification, general characters and reproduction in Bryopsida.

Or

- (b). Give a brief note on evolutionary trends in sporophytes of Bryophytes.

UNIT-II

2. (a). Give a detailed note on anatomy and reproduction of Psilopsida, Psilotopsida.

Or

- (b). Give a brief account on evolution of stele in Pteridophytes.

UNIT-III

3. (a). Give a detailed note on structure and reproduction in living (modern) Cycads, Coniferopsida.

Or

- (b). Give a detailed note on male and female gametophytes of gymnosperms.

UNIT-IV

4. (a). Give a brief note on determination of age of plant fossils.

Or

- (b). Give a brief comprehensive account of fossil algae, fossil bryophytes.

UNIT-V

5. (a). Give an account on ecological, economic, evolutionary and industrial applications of Bryophytes, Pteridophytes.

Or

- (b). Give a detailed note on recent trends and model plants from Pteridophyte plants.