(DBOT01)

ASSIGNMENT-1

M.Sc. (Previous) DEGREE EXAMINATION, MAY/JUNE 2025.

First Year

Botany

BIOLOGY AND DIVERSITY OF ALGAE, BRYOPHYTES, PTERIDOPHYTES AND GYMNOSPERMS

MAXIMUM MARKS:30

ANSWER ALL QUESTIONS

1. Classification of algae.
2. Life cycle patterns in algae.
3. Thallus range in bryophytes.
4. General characters of bryopsida.
5. Stele in lycopsida.
6. Fossil Pteridophytes.
7. Caytoniales.
8. Cones in coniferales.

(DBOT01)

ASSIGNMENT-2

M.Sc. (Previous) DEGREE EXAMINATION, MAY/JUNE 2025.

First Year

Botany

BIOLOGY AND DIVERSITY OF ALGAE, BRYOPHYTES, PTERIDOPHYTES AND GYMNOSPERMS

MAXIMUM MARKS:30

ANSWER ALL QUESTIONS

1. (a) Describe the thallus organization in algae.

   (b) Describe the structure, reproduction and phylogenetic relations of rhodophyta.

2. (a) Describe the reproduction and evolutionary trends in hepaticopsida.

   (b) Describe the structure, reproduction and evolutionary trends in anthoceratopsida.

3. (a) Describe the structure. reproduction and evolutionary trends in sphaenopsida.

   (b) Compare and contrast the structure and reproduction in lycopsida and pteropsida.

4. (a) Describe the structure, reproduction and evolutionary trends in pteridospermales.

   (b) Describe the economic importance of gymnosperms.

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(DBOT02)

ASSIGNMENT-1

M.Sc. (Previous) DEGREE EXAMINATION, MAY/JUNE 2025.

First Year

Botany

SYSTEMATICS OF ANGIOSPERMS AND PLANT ECOLOGY

MAXIMUM MARKS:30

ANSWER ALL QUESTIONS

1. Theophrastus.
2. Demerits in Takhtajan system of classification.
3. Infraspecific categories.
4. Typification.
5. Energy flow.
6. Hydrological cycle.
7. Continental drift.
8. Alternate energy sources.

(DBOT02)

ASSIGNMENT-2

M.Sc. (Previous) DEGREE EXAMINATION, MAY/JUNE 2025.

First Year

Botany

SYSTEMATICS OF ANGIOSPERMS AND PLANT ECOLOGY

MAXIMUM MARKS:30

ANSWER ALL QUESTIONS

1. (a) Describe the vegetation types and add a note on its past and present distribution.

   (b) Give an account of Bessey system of classification and add a note on its merits and demerits.

2. (a) Describe the principles of plant taxonomy.

   (b) Explain the role of cytology in resolving taxonomic disputes.

3. (a) Describe the biogeochemical cycles of carbon and sulphur.

   (b) Describe the succession of plant communities.

4. (a) Describe the principles of plant geography.

   (b) Describe the floristic regions of the world.

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(DBOT03)

ASSIGNMENT-1

M.Sc. (Previous) DEGREE EXAMINATION, MAY/JUNE 2025.

First Year

Botany

CYTOLOGY, GENETICS AND PLANT BREEDING

MAXIMUM MARKS:30

ANSWER ALL QUESTIONS

1. G-banding.

2. Centromere versus telomere.

3. Aneuploids.

4. Autopolyploids.

5. Induced mutations.

6. 15:1 ratio.

7. Test cross versus back cross.

8. Plant introduction.

(DBOT03)

ASSIGNMENT-2

M.Sc. (Previous) DEGREE EXAMINATION, MAY/JUNE 2025.

First Year

Botany

CYTOLOGY, GENETICS AND PLANT BREEDING

MAXIMUM MARKS:30

ANSWER ALL QUESTIONS

1. (a) Describe cell cycle.

   (b) Describe the evolution of karyotype.

2. (a) Describe the structural changes in chromosomes.

   (b) Describe the evolution of major crop plants.

3. (a) Describe the chromosome mapping in eukaryotes.

   (b) Describe the chi-square test for goodness of fit.

4. (a) Describe the breeding methods in self pollinated crops.

   (b) Describe the breeding methods in vegetatively propagated plants.

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(DBOT04)

ASSIGNMENT-1

M.Sc. (Previous) DEGREE EXAMINATION, MAY/JUNE 2025.

First Year

Botany

PLANT PHYSIOLOGY AND METABOLISM

MAXIMUM MARKS:30

ANSWER ALL QUESTIONS

1. Chemical properties of water
2. Facilitated diffusion
3. Km value
4. CAM pathway
5. Classification of proteins
6. b-oxidation
7. Hormone receptors
8. Vernalisation

(DBOT04)

ASSIGNMENT-2

M.Sc. (Previous) DEGREE EXAMINATION, MAY/JUNE 2025.

First Year

Botany

PLANT PHYSIOLOGY AND METABOLISM

MAXIMUM MARKS:30

ANSWER ALL QUESTIONS

1. (a) Describe the stomatal regulation of transpiration.

   (b) Describe the role of macro and micro nutrients in plant metabolism.

2. (a) Describe the mechanisms of electron and proton transport.

   (b) Give an account of photorespiration and its significance.

3. (a) Describe the mechanism of nitrogen fixation.

   (b) Describe the classification, structure and functions of lipids.

4. (a) Describe the photochemical and biochemical properties of phytochrome.

   (b) Give an account of heat shock proteins.

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