

D-1518

Sub. Code

34611

DISTANCE EDUCATION

M.Sc. (Botany) DEGREE EXAMINATION, DECEMBER 2025.

First Semester

PLANT DIVERSITY

(CBCS 2018 – 2019 Academic Year Onwards)

Time : Three hours

Maximum : 75 marks

PART A — (10 × 2 = 20 marks)

Answer ALL questions.

1. What is meant by alternation of generations in algae?
2. What is the role of flagella in algal reproduction?
3. What is meant by a fungal thallus?
4. How do fungi disperse their spores?
5. Name the components of a lichen thallus.
6. What is the primary function of a bryophyte sporophyte?
7. What is the characteristic feature of the sporophyte in Andreales?
8. Mention one characteristic feature of *Lepidodendron*.
9. Define coralloid roots.
10. How is *Caytonia* important in the evolution of seed plants?

PART B — (5 × 5 = 25 marks)

Answer ALL questions, choosing either (a) or (b).

11. (a) Explain the different types of thallus organization found in algae with examples.

Or

- (b) Compare the reproductive features of Cyanophyceae and Chlorophyceae.

12. (a) Discuss the various modes of reproduction in fungi.

Or

- (b) Compare the life cycle patterns of Phycomycetes and Ascomycetes.

13. (a) Explain in detail the different structural types of lichens with examples.

Or

- (b) Discuss the role of sporophytes in bryophyte reproduction.

14. (a) Evaluate the structural variations in gametophytes of Anthocerotales and Bryales.

Or

- (b) Describe in detail the structure and reproduction of *Sphenophyllum*.

15. (a) List out the general characteristics of Cycadales.

Or

- (b) Explain the structure and importance of *Cycadeoidea* as a fossil Gymnosperm.

PART C — (3 × 10 = 30 marks)

Answer any THREE questions.

16. Describe in detail the reproductive structures and life cycles of Phaeophyceae and Rhodophyceae.
 17. Discuss the various mechanisms of spore dispersal in fungi with suitable examples.
 18. Compare the structural variations in gametophytes and sporophytes of Marchantiales and Sphaerocarpales.
 19. Explain in detail the classification of Pteridophytes by Reiners, highlighting the major groups.
 20. Analyze in detail the classification of Gymnosperms by K.R. Sporne, highlighting the major groups.
-

D-1519

Sub. Code

34612

DISTANCE EDUCATION

M.Sc. (Botany) DEGREE EXAMINATION, DECEMBER 2025.

First Semester

PLANT TAXONOMY

(CBCS 2018 – 2019 Academic Year Onwards)

Time : Three hours

Maximum : 75 marks

PART A — (10 × 2 = 20 marks)

Answer ALL questions.

1. How the binominal name different from common name.
2. Define biotype.
3. Write about taxonomic hierarchy.
4. What are biosystematics?
5. How is a lectotype chosen?
6. Why need valid publication?
7. Draw the floral diagram of Rubiaceae.
8. Write the floral formula of Verbenaceae.
9. Recall the calyx and corolla of characters of Sapindaceae.
10. What is haustoria?

PART B — (5 × 5 = 25 marks)

Answer ALL questions, choosing either (a) or (b).

11. (a) Enumerate the merits and demerits of Bentham and Hooker system of classification.

Or

- (b) Summarize the scope and application of plant taxonomy.

12. (a) Briefly explain the principle and applications of numerical taxonomy.

Or

- (b) Justify the principle and applications of chemotaxonomy.

13. (a) Elaborate the nomenclature types.

Or

- (b) Give a brief account on principles of priority and its limitations.

14. (a) Discuss about the vegetative and floral characters of Arecaceae.

Or

- (b) Explain the vegetative and floral characters of Loranthaceae.

15. (a) Describe the family characters of Polygalaceae and Tiliaceae.

Or

- (b) List out the salient features of Geramiaceac.

PART C — (3 × 10 = 30 marks)

Answer any THREE questions.

16. Elaborate the vegetative and floral characters of Meliaceae with example.
 17. Discuss the vegetative and floral characters of Aristolochiaceae with example.
 18. Analyze vegetative, floral characters and economic importance of Apocynaceae.
 19. Explain in detail about Hutchinson system of classification.
 20. Describe the vegetative and floral characters of Cyperaceae with example.
-

D-1520

Sub. Code

34613

DISTANCE EDUCATION

M.Sc. DEGREE EXAMINATION, DECEMBER 2025.

First Semester

Botany

BIOLOGICAL TECHNIQUES IN BOTANY

(CBCS 2018 – 2019 Academic Year Onwards)

Time : Three hours

Maximum : 75 marks

SECTION A — (10 × 2 = 20 marks)

Answer ALL the questions.

1. What is the concept of magnification.
2. Define photomicrography.
3. What is stage micrometer?
4. State about lipoproteins.
5. Define embedding.
6. What is staining?
7. Write the role of mobile phase in chromatography.
8. Simply clarify the isotope.
9. Recall the purpose of amplification.
10. What is hybridization in blotting?

SECTION B — (5 × 5 = 25 marks)

Answer ALL questions, choosing either (a) or (b).

11. (a) Draw the legible diagram with parts of a typical compound microscope.

Or

- (b) Explain the parts of rotary microtome.

12. (a) Briefly elaborate stages involved in microtomy.

Or

- (b) Summarize the steps involved in calibration of micrometer.

13. (a) Examine the common staining procedure for carbohydrate.

Or

- (b) Justify the steps involved in permanent whole mount method.

14. (a) Analyze the principle of Two-dimensional gel electrophoresis.

Or

- (b) Describe the principle and applications of TLC.

15. (a) List out the uses of radioisotopes.

Or

- (b) Enumerate the advantages and applications of RAPD.

SECTION C — (3 × 10 = 30 marks)

Answer any **THREE** questions.

16. Elaborate the steps involved in northern blotting technique and applications.
 17. Interpret the gel documentation principle.
 18. Justify the principle, instrumentation, types of HPLC.
 19. Explain the different types of microtomes.
 20. Analyze the procedure of micrometry and its types.
-