

<b>PG–CN–1040      MBOTN–11</b>
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**P.G. DEGREE EXAMINATION —  
DECEMBER 2023**

**Botany**

**First Year**

**PLANT DIVERSITY – I**

**(ALGAE, FUNGI, LICHENS AND BRYOPHYTES)**

**Time : 3 hours**

**Maximum marks : 70**

**PART A — (5 × 5 = 25 marks)**

**Answer any FIVE questions each in 300 words.**

1. Write about the general characters of Algae.
2. Give an account on the economic importance of Fungi.
3. Explain the brief account of mushroom cultivation.
4. Give an account on the economic importance of Bryophytes.
5. Describe the types of Lichens.

6. Describe the vegetative reproduction of Riccia.
7. Write notes on Mycorrhiza.
8. Write notes on Chlorophyceae.

PART B — ( $3 \times 15 = 45$  marks)

Answer any THREE questions each in 1000 words.

9. Describe in detail account on F.E.Fritsch classification.
10. Explain the different type of life cycle in Algae.
11. Give a detailed account on the life cycle of Porella.
12. Describe the structure and reproduction of Marchantia.
13. Shortly explain the following,
  - (a) Diatoms
  - (b) Isogamy
  - (c) SCP
  - (d) VAM
  - (e) Gemmae

**P.G. DEGREE EXAMINATION —  
DECEMBER, 2023.**

**Botany**

**First Year**

**PLANT DIVERSITY – II  
(Pteridophytes, Gymnosperms and Palaeobotany)**

**Time : 3 hours**

**Maximum marks : 70**

**PART A — ( $5 \times 5 = 25$  marks)**

**Answer any FIVE questions out of Eight questions in  
300 words.**

**All questions carry equal marks.**

1. Explain the reproduction in Pteridophytes.
2. Simplify the salient features of Gymnosperms.
3. Why is Araucaria called Christmas tree? – Discuss
4. How adaptation is related with Palaeobotany?
5. Evaluate the uses of coal balls in Palaeobotany.

6. Assign the basic concept, technique and significance in Palaeobotany.
7. Elucidate the morphology of Podocarpus.
8. Examine the economic importance of Pteridophytes.

PART B — ( $3 \times 15 = 45$  marks)

Answer any THREE questions out of Five questions in 1000 words.

All questions carry equal marks.

9. Elaborate heterospory and origin of seed habit in Pteridophytes with suitable examples.
  10. Outline classification of Gymnosperms.
  11. Describe the life cycle of Ginkgo.
  12. Comprehend the era in Geological time scale.
  13. Summarize the types and importance of fossil fuels.
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**Botany**

**First Year**

**MICROBIOLOGY, IMMUNOLOGY AND PLANT  
PATHOPLOGY**

**Time : 3 hours**

**Maximum marks : 70**

**SECTION A — (5 × 5 = 25 marks)**

Answer any FIVE questions each in 300 words.

1. Explain the electron microscope.
2. Explain in details of Bacterial reproduction.
3. Describe the Lytic cycle and Lysogenic cycle.
4. Write notes on Tobacco Mosaic Virus (TMV).
5. Write notes on B and T-cell.
6. Write detailed notes on Acquired Immunity.
7. Write about the bacterial staining.
8. Explain the Transmission of Virus.

SECTION B — ( $3 \times 15 = 45$  marks)

Answer any THREE questions each in 1000 words.

9. Explain in detail the five kingdom system of classification by R.H.Wittaker.
  10. Write detailed account on Food spoilage.
  11. Shortly explain the following
    - (a) Biochemical Oxygen Demand (BOD)
    - (b) Mycotoxin.
    - (c) Bacteriophage
    - (d) Immunology
    - (e) Pathogen
  12. Explain in detail about the antigen-antibody reaction.
  13. Describe the detail account on the various methods of gene transfer.
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**Botany**

**First Year**

**MORPHOLOGY, PLANT ANATOMY AND  
EMBRYOLOGY**

**Time : 3 hours**

**Maximum marks : 70**

**SECTION A — (5 × 5 = 25 marks)**

Answer any FIVE questions each in 300 words.

1. Explain the phyllotaxy of leaves with diagram.
2. Write note on apical cell theory of meristem.
3. Write short note on Stomata and its types.
4. Explain the different types of Stele with diagram.
5. Describe the Monocot Root with diagram.
6. Write note on Megasporogenesis with diagram.
7. Write floral Parts of Simple Flower.
8. Give an account on Denderochronology.

SECTION B — ( $3 \times 15 = 45$  marks)

Answer any THREE questions each in 1000 words.

9. Describe in detailed account the different types of inflorescence.
  10. Write detailed account on fruits.
  11. Write note on Meristematic tissue and Permanent tissue.
  12. Shortly notes on following.
    - (a) Xylem
    - (b) Phloem
    - (c) Tracheids
    - (d) Sieve cells
    - (e) Sclereids
  13. Write about the structure and types of Ovule.
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**Botany**

**First Year**

**PLANT TAXONOMY AND ECONOMIC BOTANY**

**Time : 3 hours**

**Maximum marks : 70**

**SECTION A — (5 × 5 = 25 marks)**

Answer any FIVE questions each in 300 words.

1. Write about the Binomial Nomenclature.
2. Give short note on Phylogenetic Taxonomic system.
3. Write short note on Principles of International Code of Botanical Nomenclature.
4. Write the family description of Orchidaceae.
5. Write note on Origin of Rice and Growing Environment.
6. Write short note on Essential Oils.

7. Write the family description of Meliaceae.
8. Differentiation of Dicot and Monocot.

SECTION B — ( $3 \times 15 = 45$  marks)

Answer any THREE questions each in 1000 words.

9. Explain the detailed account on Bentham and Hooker system of plant classification.
10. Write the family description of the following families. Draw diagram wherever necessary.
  - (a) Annonaceae
  - (b) Cucurbitaceae
11. Describe the Herbarium and Preparation of Herbarium.
12. Explain the detailed account on Commercial Crops.
13. Describe the significance of Plant Taxonomy.

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