

# UPSC Botany Optional Syllabus

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### Paper I:

1. Microbiology and Plant Pathology
2. Cryptogams: Algae, Fungi, Bryophytes, Pteridophytes
3. Phanerogams: Gymnosperms, Angiosperms (Morphology, Anatomy, Embryology, Taxonomy)
4. Plant Resource Development: Importance of forestry, agriculture, horticulture, and medicinal plants
5. Morphogenesis and Tissue Culture
6. Cell Biology
7. Genetics, Molecular Biology, and Evolution

### Paper II:

1. Physiology and Biochemistry
2. Plant Growth and Development
3. Ecology and Phytogeography
4. Economic Botany
5. Cell Structure and Function
6. Biotechnology
7. Plant Breeding, Genetic Engineering, and Applications in Crop Improvement