

BOTANY (Subsidiary)**Paper I**

**Algae, Fungi, Bacteria, Virus, Bryophyta, Pteridophyta,
Gymnosperm, Embryology and Economic Botany**

Time - 3 hours

Full Marks - 75

Ten questions to be set, six from Group A and four from Group B.
Five to be answered, selecting three from group A and two from group B.

Group A

1. Algae - Morphology, structure, reproduction and life history of the following genera : *Volvox*, *Oedogonium*, *Ectocarpus*, *Batrachospermum*, *Anabaena*.
2. Fungi - Morphology, structure, reproduction and life history of the following genera : *Synchytrium*, *Phytophthora*, *Peziza*, *Erysiphe*, *Puccinia*, *Ustilago*
3. Microbiology - A brief knowledge of Microbiology, Ultra structure and economic importance of Bacteria and Virus.
4. Bryophyta - Morphology, structure, reproduction (important characteristics), life history and classification of *Marchantia*, *Anthoceros* and *Sphagnum*.
5. Pteridophyta - Morphology, structure, reproduction (important characteristics), life history and classification of *Lycopodium*, *Equisetum* and *Marsilea*.
6. Gymnosperm - Morphology, structure, reproduction (important characteristics), life history and classification of *Cycas* and *Pinus*.

Group B

1. Embryology - A: Micro and Megasporogenesis
B. Micro and Megagametogenesis
C. Endosperm
D. Embryo
2. Economic Botany - Systematic position and morphological nature

of the parts and the economic importance of the following :-
Wheat, Rice, Gram, Pea, Tea, Mustard, Mango, Shisham, Vashak,
Carrot.

BOTANY (SUBSIDIARY)

Practical

Time - 3 hours

Full Marks - 25

1. Morphology and structural details of following forms prescribed in the syllabus
Algae - One
Fungi-One
Bryophyta - One
Temporary slide preparation 3×3= 9 marks
2. Morphology and structural details of the forms of Pteridophyta or Gymnosperm prescribed in the course and its permanent stained microscopic slide preparation 4 marks
3. Identification and comment upon the following five spots :
Algae-One, Fungi-One, Bryophyta-One, Pteridophyta/Gymnosperm-One, Embryology-One 5 marks
4. **Practical Records** 5 marks