

PRACTICAL REQUIREMENTS

DEPARTMENT OF BOTANY

SESSION-2018-2019

- 1) Anti - A antibody, Anti - B antibody, Anti -Rh serum

Permanent slide- 1. Laggard ,
2. Inversion Bridge,
3. Translocation Ring,
4. Reproductive structure of soredia & apothecium (Lichen)

PTERIDOPHYTE

Class work materials (**Co. Biosco**)

- 1) Riccia with capsule
- 2) Marchantia vegetative
- 3) Marchantia with gemma cup
- 4) Marchantia with anteridiophore and archegoniophore
- 5) Marchantia sporophyte
- 6) Anthoceros vegetative
- 7) Anthoceros sporophyte
- 8) Pellia vegetative
- 9) Pellia sporophyte
- 10) Porella with antheridial branch and archegonial branch
- 11) Porella sporophyte

Permanent slides (**from reputed co.**)

- 1) Marchantia gemma cup T.S.
- 2) Marchantis section of antheridiophore
- 3) Marchantia section of archegoniophore
- 4) Porella section of antheridial branch
- 5) Porella section of archegonial branch

3RD YEAR HONS/ ECOLOGY

Chemicals

- 1) $K_2Cr_2O_7$ - 1(N) [Potassium dichromate- 1(N) solution form]
- 2) Concentrated H_2SO_4 [Sulfuric Acid]
- 3) Concentrated H_3PO_4 [Phosphoric acid]
- 4) Diphenyle amine
- 5) $(NH_4)_2Fe(SO_4)_2 \cdot 6H_2O$ [Ammonium Ferrous Sulfate Hexahydrate]-0.4(N)

Phycology

A. Class work materials (**Co. Biosco**):

- (1) Nostoc with Heterocyst and Akinete

- (2) Chlamydomonas- Vegetative and Sexual
- (3) Volvox- Vegetative and sexual
- (4) Oedogonium- Macrandrous and Nannandrous type
- (5) Coleochaete- Vegetative and sexual
- (6) Chara with globule and nucule
- (7) Vaucheria with Oogonium and Antheridium
- (8) Ectocarpus with sporangia and gametangia
- (9) Fucus- Vegetative and Sexual
- (10) Polysiphonia with carposporangia

B. Permanent slides (from a reputed co.)

- (1) Polysiphonia with carposporangia
- (2) Coleochaete- Vegetative and sexual
- (3) Chara with globule and nucule

C. Other equipments

- (1) Gas burner- Minimum 5 in number

Anatomy

A. Class Work Materials (Co. Biosco):

- (1) Stem of Cucurbita
- (2) Stem of Sunflower
- (3) Stem of Maize
- (4) Stem of Dracaena
- (5) Stem of Bignonia
- (6) Stem of Boerhaavia
- (7) Stem of Techoma
- (8) Root of Vanda
- (9) Root of Tinospora
- (10) Stem/ Branch of Tectona

B. Permanent slide (from a reputed co.)

- (1) Stem T.S. of Dracaena
- (2) Stem T.S. of Bignonia
- (3) Stem T.S. of Techoma
- (4) Stem T.S. of Sunflower
- (5) Stem of Maize
- (6) Parenchyma, collenchyma and Sclerenchyma tissue

- (7) Ring porous wood
- (8) Diffuse porous wood
- (9) Tyloses
- (10) Different types of stomata
- (11) Leaf T.S. of Nerium
- (12) Stem T.S. of Ipomea carnea
- (13) Secretary tissue
- (14) Lithocyst
- (15) Kranz anatomy
- (16) Laticifer cell.

C. Chemicals

- (1) 100% Alcohol if required
- (2) Safranin solution
- (3) Light green solution
- (4) Xylene
- (5) DPX
- (6) Clove oil
- (7) Phenaphthalin
- (8) Potassium iodide(KI)
- (9) Floroglucinol solution
- (10) Alpha-naphthol.

For 3Rd Year General

- (1) TTC powder form
- (2) Crystal Violet
- (3) 3 different coloured beads

Economic Botany:

Materials:

- 1. Soyabean Seed
- 2. Groundnut seed
- 3. Soyabean seed dust (for micro chemical test)
- 4. Ground nut seed dust („)
- 5. Black Pepper (for section)
- 6. Fennel („)

7. Clove (,,)
8. Tea leaves
9. Coffee plant specimen and beans
10. Tectona grandis- young stem
11. Pinus –young stem
12. Cotton- fruit and seed
13. jute stem.

Microbiology: Model or Chart

1. Model or chart of T- phage.
2. TMV
3. Electron micrograph of Bacterium
4. Binary fission,
5. root nodule
6. Conjugation
7. Lytic and Lysogenic cycle

ANATOMY:

Chart or Model

1. Chart of Apical Meristem of Root
2. „ „ „ Shoot
3. Vascular cambium.
4. Chart of xylem Tracheary elements--- Tracheids, vessel element, thickenings, perforation plate.
5. Chart of sieve tube,, sieve plate, companion cells, phloem fibres
6. Chart of Monocot, Dicot and secondary growth (ROOT)
7. Chart of secretory tissue,
8. Chart of Lithocyst
9. C4 Kranz anatomy

Permanent Slide (PTERIDOPHYTES)

10. Psilotum (synangium)
11. Work out material of Psilotum (synangium)