B.Sc. Semester - I

Major Course-2 - BOTANY

Practical Paper
BS23MJ1BO2 : Algae, Fungi and Plant Anatomy)

1. *Nostoc*: Mounting and Permanent Slide Permanent Slides of Colony

2. *Oedogonoium*: Mounting - Vegetative thallus and Macrandrous and Nanedrous species. Permanent slides of sexual reproduction, cap cell.

3. *Ectocarpus*: Mountings - Thallus and Reproductive structure; Permanent Slides of – Thallus, Unilocular and plurilocular sporangia.

4. *Batrachospermum:* Mounting - vegetative thallus, Cystocarp; Permanent slides of antheridia, archegonia and cystocarp.

5. *Mucor*: Mounting - Reproductive structure- Sporangia; Permanent slides of Sporangia and Zygospore

6. *Albugo*: Mounting – Reproductive structures; Permanent slides of Vegetative structure and Reproductive structures.

7. *Puccinia:* – Herbarium specimens of Black Stem Rust of Wheat and infected Barberry leaves; Mounting – Uredospore and Telutospore; Permanent slides of Uredospore, Telutospore, Pycnidiospores and Aecidiospores,

8. Study of simple tissue (parenchyma, collenchyma, sclerenchyma) and complex tissue through P.S.

9. Study of Dermal tissue system through permanent Slides:

(a) Types of epidermis- Uniseriate: Cucurbita/ Sunflower stem T.S.;

Multiseriate: *Nerium*/ *Ficus* leaf T.S. OR Orchid root T.S.

(b) Epidermal outgrowths: Through P.S.

Stellate hairs: *Gossypium*/ *Abutilon* leaf

Branched hairs: *Tectona*/ Ashwaghandha

leafStinging hairs: *Mucuna*/ *Urtica* leaf

Peltate hairs: *Fern* rachis (Ramenta)

Peltate glands: *Avicinnia*/ *Ipomea biloba* leaf

Glandular hairs: *Martynia*/ *Jetropa* leaf

Stomata: Monocot, Dicot leaf

10. Study of Nodal anatomy from given plant material.

(a) *Clerodendron* (b) *Nerium* (c) *Polyalthia*

11. Study of Normal secondary growth in Sunflower Root and Stem using double staining (Fast green and Safranin only) temporary preparation technique.

12. Study of Anomalous secondary growth in *Salvadora* stem using double staining (Fast green and Safranin only) temporary preparation technique.

13. Study of Anomalous secondary growth in *Dracaena* stem using double staining (Fast green and Safranin only) temporary preparation technique.

14. Study of Abnormal secondary growth in fleshy Root- Radish using double staining (Fast green and Safranin only) temporary preparation technique.

15. Study of Abnormal secondary growth in fleshy Root- Beet using double staining (Fast green and Safranin only) temporary preparation technique.