MINOR (MI)

MI – 1: Plant Science-I   **Credits 04 (Full Marks: 75)**

MI – 1T: Plant Science-I   **Credits 03**   **[45L]**

Course contents:

UNIT	Topic	No. of Lectures
1	**Introduction to microbial world-** Whittaker's five-kingdom system **Virus:** General characteristics, classification (Baltimore), Economic importance. **Bacteria:** General characteristics, Bergey's Classification, Economic importance. **Algae:** General characteristics; habitat, classification (Van Den Hoek, 1995), lifecycle patterns of *Volvox* and *Batrachospermum*, Economic importance. **Fungi:** General characteristics,Classification (Ainsworth, up to Order), life cycle patterns of *Rhizopus* and *Agaricus*, economic importance. Brief account of lichen and mycorrhiza.	15
2	**Bryophytes:** General characteristics, classification (Proskauer, 1957), morphology, anatomy and reproduction of *Riccia*, *Anthoceros* and *Funaria*, economic importance of bryophytes. **Pteridophytes:** General characteristics, Classification (Sporne, 1975), morphology, anatomy and reproduction of *Lycopodium*, *Adiantum* and *Marsilea*. Economic importance	15
3	**Gymnosperms:** General characteristics, Classification (Sporne, 1965), morphology, anatomy and reproduction of *Cycas* and *Pinus*. Economic importance. **Paleobotany:** Geological time scale and important events, Types of plant fossils.	15

MI – 1P: Plant Science-I (Practical)   **Credits 01**

Course Outline

1. Electron micrographs/Models of viruses – T-Phage and Sars-CoV2.
2. Study of Curd organisms through Gram staining.
3. Study of vegetative and reproductive structure of *Volvox*, and *Batrachospermum.*
4. Study of morphology and reproductive structure of *Rhizopus* and *Agaricus.*
5. Study of morphology of thallus and reproductive structure of *Riccia*, *Anthoceros* and *Funaria.*
6. Study of morphology vegetative and reproductive structure of *Lycopodium*, *Adiantum* and *Marsilea.*
7. Study of morphology and vegetative structure of *Cycas* and *Pinus.*
8. Study of fossil types (impressions, compressions, petrifaction).

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