

**JSS COLLEGE FOR WOMEN (AUTONOMOUS)
SARASWATHIPURAM, MYSORE-09**

LESSON PLAN

Name of the Teacher: Dr. Abhijith M Singh

Department: Biotechnology

Academic year and Semester: 2021-2022

Program: B.Sc.

Class and Section: V SEM (BMBt & BCBt)

Scheme: CBCS

Course Name: B.Sc

Course Code: FME 230

Title of the Paper : DSE – Plant Tissue Culture, Animal Cell Culture & Reproductive Technology

| Sl NO | Month | Topic to be covered |
|-------|-------|---|
| 1 | OCT | Plant tissue culture: Introduction, development of plant tissue culture. Laboratory organization and culture techniques: General requirements, aseptic conditions, media preparation, sterilization, pre treatment to explants. Problems and solutions associated with tissue culture. Principles of tissue culture: Growth regulators- auxin, cytokinin, gibberellic acid, |
| 2 | NOV | Callus culture- Definition of callus, initiation, sub culture and organogenesis Organ culture- Ovary and ovule culture, Embryo culture Cyto-differentiation, factors affecting differentiation. |
| 3 | DEC | Micro propagation: Stages and applications Haploid Culture : Anther culture and its applications Germplasm conservation – Method and applications. |
| 4 | JAN | Somaclonal variations: Production of plants for disease resistance and desired agronomic traits Somatic embryogenesis: protocol and importance of somatic embryogenesis. Synthetic seeds – Types, production and applications. |
| 5 | FEB | Suspension cultures: Batch and continuous cell suspension culture. Applications of suspension culture. Activity: Assignment and seminar in the classroom. |

Abhijith M Singh

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