Short Term Course (PLANT TISSUE CULTURE) Syllabus

A.Y.-2020-21

(Theory+Practicals-2 Credits)

Department of Biotechnology

Theory:

| Sr.No. | Contents | Lectures |
|--------|---|----------|
| 1 | Introduction and History of Plant Tissue Culture | 1 |
| 2 | Infrastructure And Organization of PTC Laboratory- General & | 2 |
| | aseptic laboratory, different work areas, equipments & | |
| | instruments required. | |
| 3 | Aseptic Techniques- sterilization, aseptic work station, | 2 |
| | precaution to maintain aseptic conditions. | |
| 4 | Culture Media- Nutritional requirements of the explants, PGRs | 3 |
| | and their in vitro roles, media preparation. | |
| 5 | Callus Culture technique | 2 |
| 6 | Anther and pollen culture | 2 |
| 7 | Suspension culture technique. | 2 |
| 8 | Organ culture technique. | 2 |
| 9 | Applications of PTC / visit to PTC Laboratory. | 3 |

Practicals:

| Sr.No. | Title | No.of Practical |
|--------|---|-----------------|
| 1 | Asceptic manipulation washing,capping,packing and sterilization | 2 |
| 2 | Preparation of Media | 2 |
| 3 | Callus culture Technique | 2 |
| 4 | Suspension culture | 1 |
| 5 | Shoot tip culture | 1 |
| 6 | Organ culture | 1 |
| 7 | Anther Culture | 1 |