

PROGRAMME: MASTER OF SCIENCE BOTANY (MSCBOT20)

Year/ Semester: Ist semester

Course Code: MBOT-505(L)

Course Name: LABORATORY COURSE-I

Syllabus

BIOLOGY AND DIVERSITY OF VIRUSES AND BACTERIA (Lab Course)

BLOCK-I : VIRUSES

Unit-1: Methods of Sterilisation

Unit-2: Preparation of Media

Unit-3: Culturing Methods

Unit-4: Staining Techniques

Unit-5: Symptoms of Some viral and mycoplasmal diseases

BLOCK-2: BACTERIA

Unit-6: Models of Bacteriophage and HIV

Unit-7: Transmission of Virus diseases

Unit-8: Isolation and Enumeration of Bacteria from soil and water

Unit-9: Observation of symptoms of plant diseases caused by Bacterial pathogens

BIOLOGY AND DIVERSITY OF ALGAE (Lab Course)

BLOCK – I: ALGAE- I

Unit- 1: *Nostoc, Lyngbya, Spirulina* and *Tolypothrix*

Unit- 2: *Chlamydomonas, Volvox, Chlorella* and *Ulva*

Unit- 3: *Enteromorpha, Oedogonium, Cosmarium* and *Caulerpa*

Unit- 4: *Ectocarpus, Dictyota* and *Sargassum*

Unit- 5: *Gellidium, Gracilaria, Cyclotella* and *Navicula*

BLOCK – II: ALGAE- II

Unit- 6: Collection and Identification of Algae in and Around Local Area

Unit- 7: Observations of Algal Blooms and Bioindicators of Water Quality

Unit- 8: Preparation of Culture Media for Micro Algae

Unit- 9: Preparation of Herbarium for Macro Algae

GYMNOSPERMS AND PLANT ANATOMY(Lab Course)

BLOCK – I: GYMNOSPERMS –I

Unit- 1: *Zamea* and *Gingko*

Unit -2: *Thuja* and *Pinus*

Unit -3: *Araucaria* and *Taxus*

Unit -4: *Ephedra* and *Gnetum*

BLOCK – II: GYMNOSPERMS -II

Unit-5: *Leginopteris*

Unit -6: *Medullosa*

Unit -7: *Ptilophyllum* and *Glassopteris*

Unit -8: *Pentaxylon*

BLOCK – III: ANATOMY OF ANGIOSPERMS

Unit- 9: Study of Meristematic and Permanent Tissues and Tissue System

Unit- 10: Secondary Growth in Roots and Stems

Unit- 11: Leaf Anatomy

Unit- 12: Anamalous Secondary Growth

Unit- 13: Wood Structure

BIOCHEMISTRY (Lab Course)

BLOCK – I: BIOCHEMISTRY –I

Unit- 1: Estimation of Fructose by Recorcinol Method

Unit -2: Estimation of Amino acids by Ninhydrin Method

Unit -3: Estimation of Protein by Biuret Method

Unit -4: Separation and Identification of Amino acids by using TLC Method

BLOCK –II: BIOCHEMISTRY –II

Unit- 5: Determination of Amylase Activity

Unit- 6: Determination of Catalase Activity

Unit- 7: Estimation of Reducing Sugars

Unit- 8: Determination of Iodine Number of Edible Oils