

COURSE- LABORATORY PRACTICAL (BSCBO-304)

SYLLABUS

BLOCK-1- CELL BIOLOGY, MOLECULAR BIOLOGY AND BIOTECHNOLOGY

Unit-1- Study cell structure from onion/ tradescantia leaf peels; and Demonstration of staining and mounting methods

Unit-2- Estimation and relationship between nucleus and cell volume at shoot/ root apices by camera lucida/micrometer method.

Unit-3- Chromosome study during cell division

Unit-4- Biotechnology exercise

BLOCK-2-ECONOMIC BOTANY, GENETICS AND PLANT BREEDING

Unit-5-Identification, collection and maintenance of economically important plants and plant product mentioned in the syllabus

Unit-6- Exercises on genetic problems: To work out the laws of inheritance, to work out the mode of inheritance linked genes.

Unit-7-Study of the floral biology of some of the locally available crops plants: such as wheat, pea, mustard, brinjal, tomato.

Unit-8-Emasculation techniques in the field along with bagging and labelling

BLOCK-3-PLANT PHYSIOLOGY AND BIOCHEMISTRY

Unit-9- To perform endosmosis and exosmosis using potato tuber and egg osmoscope, and Demonstration of imbibitions, plasmolysis and deplasmolysis and the effects of temperature on the permeability of plasma membrane.

Unit-10- To study structure of stomata, their opening and closing, stomatal frequency and Comparison of rate of transpiration

Unit-11- To study the effect of intensity and quality of light on the rate of photosynthesis by wilmott's bubbler and to study R.Q. by Ganong's respirometer in different seeds

Unit-12- Demonstration of colour tests and micro chemical tests for carbohydrates, proteins and lipids