

MCC, Department of Botany

M. PHIL. BOTANY

PLANT PHYSIOLOGY

PAPER II & III

Paper-II Biochemistry and Plant Physiology

- Unit-I** Photosynthesis: Function and model. C₃ and C₄ plants. Structure, function and biochemistry.
- Unit-II** Genetic control of flower development. Arabidopsis model system, *Apetala* model system.
- Unit-III** Importance of plant membranes in photosynthesis, respiration and transport. Cyanide resistant respiration, electron transport structure and function of mitochondria, NADP electron transport.
- Unit-IV** Plant responses to stress.
- Unit-V** Seed germination.
- Unit-VI** Ascent of sap. Absorption and translocation of water and mineral salts.

Paper-III Plant Growth and Development

- Unit-I** PGR's in crop improvement.
- Unit-II** Tissue culture techniques (refer M.Sc. syllabus).
- Unit-III** Tissue culture of genetic engineering and crop improvement.
- Unit-IV** Genetic engineering for crop improvement. Genetically modified foods.
- Unit -V** Structure of caryopsis of cereal grains, grain-filling in cereals.
- Unit-VI** Histochemistry.