

MBS-457: PHYTOPATHOLOGY

40 h

Unit I

(10 h)

History and Scope of Pathology, Nature and Concept of plant diseases, Parasitism, Disease symptoms, Plant pathogenic Organisms, Disease Triangle, and Plant disease Cycle, Phytopathological Methods.

Unit II

(10 h)

General aspects of plant diseases by Viruses, Mycoplasmas, Bacteria, Fungi, Protozoa, Nematodes – symptoms, Etiology, Transmission and Life Cycle, Non Parasitic diseases, Management of Plant Disease by Physical, Chemical and Biological Methods, Cultural Practices, Plant Quarantine, Integrated Disease Management Concepts.

Unit III

(10 h)

Host –Parasite Interactions, Mechanism of Penetration and Infection, Pre penetration and Infection, Invasiveness – Bio trophic and Neotrophic Pathogens, Effect of Infection, Physiological Functions of Hosts, Translocation of Water and Mineral Nutrients, Organic Nutrients, Respiration and Permeability.

Unit IV

(10 h)

Structural and Biochemical Host Defence Mechanisms. Genetics of Host – Parasite Interaction, Genes and Variability in Pathogens, Genetics of Virulence and Resistance, Gene to Gene concept, Horizontal and Vertical Resistance, **Development of Epidemics, Disease Forecasting, Post-Harvest Diseases, Seed Borne diseases.**