SY BSc BOTANY SYLLABUS

SEMESTER III

Paper- I (304101): Algae, Fungi and Plant Pathology, and Microbiology

Algae

Range of Thallus Structure and Pigmentation in Algae
Structure, Life-Cycle and Systematic Position of *Sargassum and Batrachospermum*.

Fungi

General Characters of Fungi
Structure, Life-cycle and Systematic position of *Erysiphe*, *Agaricus* and *Ustilago*
Economic Importance of Fungi.

Plant Pathology

Classification of Plant Diseases on the basis of Causative Organisms and Symptoms
Host- Parasite Interaction.
Study of the following diseases with emphasis on Symptoms, Disease Cycle and Control Measures of Rust, Early Blight and Powdery Milldew
Brief account Fungicides- Bordeaux Mixture, Lime Sulphur,Tobacco Decoction, Neem Cake & Oil

Microbiology

Microbial Techniques
Principles of Staining
Culture Media, Pure Culture Methods
Bacterial Classification: Morphological Classification, Classification based on Staining Reaction
Mycoplasma & Actinomycetes –General Account.
General Characteristics, Nomenclature, Classification, Structure, Chemical Composition, Properties and Reproduction of Bacteriophages and T. M. V. Transmission of Viruses and Role of Vectors.
Soil Microbiology –Biogeochemical Activityof Microorganisms in Soil - N2 cycle, Carbon Cycle, Sulphur Cycle, Phosphorous Cycle, Iron Cycle. Decomposition of organic matter, Microbial Degradation of Cellulose, Lignin & Starch, Biofertilizers and Biogas Production
Aquatic Microbiology - Water Contamination, Standards of Water, Methods of Waste Water
Treatment.