ST. JOSEPH’S COLLEGE FOR WOMEN (AUTONOMOUS) VISAKHAPATNAM

B.SC.(HONORS) AGRICULTURE AND RURAL DEVELOPMENT WITH SINGLE MAJOR

# I SEMESTER **AGRICULTURE AND RURAL DEVELOPMENT** Time: 3hrs/week

AGRD171 (2)  **INTRODUCTION TO PLANT PATHOLOGY** Marks:100

w.e.f AK 2023-2024 (Admitted batch)  **SYLLABUS**

**OBJECTIVES:**

* To prevent and control disease of economic importance
* To prevent the introduction and spread of pests.
* To study different groups: fungi, bacteria, fastidious vesicular bacteria
* To Study about Nematodes and General morphology and reproduction

**Course Outcomes:** At the end of the course, students will be able to

**CO1:** Explain the scope and concepts of plant pathology.

**CO2:** Compare morphological and anatomical characters of fungi

**CO3:** Outline the rules of nomenclature and classification of fungi.

**CO4:** Identify viruses and classify plant parasites.

**CO5:** Explain different plant nematodes and characters.

**UNIT – I: (6 Hrs.)**

1. Importance of plant diseases, scope and objectives of Plant Pathology.

2. Important plant pathogenic organisms,

3.Different groups: fungi, bacteria, fastidious vesicular bacteria, phytoplasmas, spiroplasmas, viruses, viroids, algae, protozoa, phanerogamic parasites and nematodes with examples of diseases caused by them.

**UNIT – II: (6 Hrs.)**

1. Diseases and symptoms due to abiotic causes. Fungi: General characters, definition of fungus, somatic structures,

2. Types of fungal thalli, fungal tissues, Modifications of Thallus, reproduction (asexual and sexual).

**UNIT – III: (6 Hrs.)**

1. Nomenclature, Binomial system of nomenclature, rules of nomenclature.

2. Classification of fungi. Key to divisions, sub-divisions, orders and classes. Bacteria and mollicutes: general morphological characters.

**UNIT – IV: (6 Hrs.)**

1. Basic methods of classification and reproduction. Viruses: nature, architecture, multiplication and transmission. Study of phanerogamic plant parasites.

**UNIT-V: (6 Hrs.)**

1. Nematodes: General morphology and reproduction

2. Classification, symptoms and nature of damage caused by plant nematodes (Heterodera, Meloidogyne, Anguina etc.)

**References Text Books:**

1. Alexopoulos, C.J., Mims C.W. and Blackwell M. 1996. Introductory Mycology.

2. Wiley Eastern Ltd., New York. Mandahar, C.L. 1987.

3. Introduction to Plant Viruses. S. Chand and Co., New Delhi.

4. Mehrotra, R.S. and Aneja, K.R. 1990. An Introduction to Mycology.