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

III SEMESTER  **AGRICULTURE AND RURAL DEVELOPMENT** TIME:30HRS

AGRD 271P (1) **PRINCIPLES OF PLANT PATHOLOGY-II** MARKS:50

w.e.f 2024-2025 (23AK Batch) **PRACTICAL SYLLABUS**

**OBJECTIVES:**

∙ To study Pathogenesis

∙ To study about living entities that cause diseases in plants

∙ To study about mechanism by which the diseases causing agents

**COURSE OUTCOMES:**

**CO1:** Explain about Survival of plant pathogens and kinds of inoculum primary and secondary inoculum, pattern of survival

**CO2:** Outline about Toxins - pathotoxins, phytotoxins and vivotoxins , selective (host specific) and non-selective (host non-specific) toxins

**CO3**: Explain about Dispersal of plant pathogens - active dispersal

**EXPERIMENTS:**

1. Acquaintance with various laboratory equipment. **(3hrs)**

2. Preparation of culture media Potato Dextrose Agar (PDA) for fungi and Nutrient Agar (NA) for bacteria. **(3hrs)**

3. Isolation of fungal and bacterial pathogens.  **(3hrs)**

4. Preservation of disease samples - dry and wet methods.  **(3hrs)**

5. Demonstration of Koch’s postulates for fungi.  **(3hrs)**

6. Demonstration of Koch’s postulates for bacteria. **(3hrs)**

7. Study of different groups of fungicides and antibiotics. **(3hrs)**

8. Preparation of fungicides - Bordeaux mixture, Bordeaux paste and cheshunt Compound. **(3hrs)**

9. Methods of application of fungicides - soil application.  **(3hrs)**

10. Methods of application of fungicides - seed treatment.  **(3hrs)**

**SCHEME OF EVALUATION**

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| S.No. | Experiment | Marks (50) |
| 01 | Major Experiment | 15Marks |
| 02 | Minor Experiment | 10Marks |
| 03 | Viva | 10Marks |
| 04 | Record | 10Marks |
| 05 | Skills | 05Marks |