

GOVERNMENT DEGREE COLLEGE, NANDIKOTKUR

DEPARTMENT OF BOTANY

Plant Pathology and Plant Diseases

Unit 1: Plant Pathogens, Survival, and Dispersal

Short Answer Questions:

1. Define plant pathology and explain its importance.
2. List some examples of plant pathogenic organisms and the diseases caused by them.
3. What are the criteria for classifying plant diseases?
4. Explain the concept of active and passive dispersal of plant pathogens.
5. Write a brief account of the survival mechanisms of plant pathogens.

Long Answer Questions:

1. Discuss the scope and objectives of plant pathology.
2. Describe the major famines in world history caused by plant diseases.
3. Explain the different methods by which plant pathogens survive in nature.
4. Compare and contrast active and passive dispersal mechanisms of plant pathogens with examples.

Unit 2: Infection and Pathogenesis in Plants

Short Answer Questions:

1. What is the infection process in plants? Explain pre-penetration, penetration, and post-penetration stages.
2. Discuss the role of enzymes in plant pathogenesis.
3. Write a note on the role of toxins in plant diseases.
4. How do growth regulators contribute to plant pathogenesis?
5. Describe the defense mechanisms employed by plants against pathogens.

Long Answer Questions:

1. Explain the stages of the infection process in plants with relevant examples.

2. Discuss the roles of enzymes, toxins, and growth regulators in plant pathogenesis.
3. Write an essay on the various defense mechanisms of plants against pathogenic infections.
4. Elaborate on the post-penetration processes involved in plant pathogenesis.

Unit 3: Plant Disease Management

Short Answer Questions:

1. What is plant disease epidemiology? Why is it important?
2. Explain the concept of plant disease forecasting and its applications.
3. Write a note on biological control methods for plant disease management.
4. What is host plant resistance? How does it help in managing plant diseases?
5. Define Integrated Disease Management (IDM) and explain its advantages.

Long Answer Questions:

1. Describe the general principles of plant disease management.
2. Discuss the regulatory, cultural, and biological methods used in plant disease control.
3. Explain the role of remote sensing in plant pathology and disease management.
4. Write an essay on Integrated Disease Management (IDM), highlighting its importance and implementation.

Unit 4: Diseases of Field Crops

Short Answer Questions:

1. What are the symptoms and management strategies for blast of rice?
2. Explain the etiology and disease cycle of bacterial blight in rice.
3. Write a note on the management of downy mildew in bajra.
4. Describe the symptoms of phytophthora blight in pigeon pea.
5. What are the management practices for tikka leaf spot in groundnut?

Long Answer Questions:

1. Discuss the symptoms, etiology, and management of blast and Tungro in rice.
2. Explain the disease cycle and control measures for ergot in bajra.
3. Write an essay on the major diseases of pigeon pea and their management.
4. Describe the symptoms, etiology, and disease cycle of rust and root rot in groundnut.

Unit 5: Diseases of Horticultural Crops**Short Answer Questions:**

1. What are the symptoms of Phomopsis blight in brinjal, and how is it managed?
2. Describe the etiology and management of powdery mildew in okra.
3. Write a note on alternaria fruit spot in pomegranate.
4. What are the symptoms and control measures for bud rot in coconut?
5. Explain the management strategies for yellow vein mosaic in okra.

Long Answer Questions:

1. Discuss the symptoms, etiology, disease cycle, and management of basal stem rot in coconut.
2. Write an essay on the major diseases of brinjal and their management practices.
3. Describe the symptoms and management of alternaria fruit spot and anthracnose in pomegranate.
4. Explain the disease cycle and control measures for little leaf in brinjal.