

cat. No: Fmau. 2103

Title: Forest Pathology (2+1)

Marks: 50

Time : 2 hours

I. State True or False:

(10 x 1=10)

1. All parasites are tree pathogens.
2. Robert Hoartig is the father of forest pathology.
3. Rust causing organism of pine is a polycyclic pathogen.
4. Damping-off caused by *Pythium aphanidermatum* is a destructive plantation disease.
5. Dutch elm disease is a fungal disease caused by *Endothea parasitica*.
6. Little leaf and witches' broom are characteristic symptoms of tree phytoplasma diseases.
7. Heart rot is a serious disease in *Tectona grandis*.
8. Pathological wilt is a soil borne disease.
9. All tree diseases are disseminated by wind.
10. Rhizomorph is a vegetative dormant structure.

II. Write short notes on ANY FIVE:

(5x 2=10)

1. Mention any 4 asexual fruiting bodies with the pathogenic fungi producing them.
2. List the stages in pathogenesis.
3. Enlist the Factors governing epidemics of a disease.
4. Classify the tree diseases based on extent of occurrence.
5. Methods of detecting wood decay.
6. Role of ecto-mycorrhizae in tree disease management.
7. One example for a systemic fungicide, contact fungicide, wound dresser and a nematicide.

III Write answers on ANY FIVE:

(5 x 4=20)

1. Describe the life cycle of *Swertia* felt rust of Chir pine.
2. Mycorrhizal associations and its role in tree disease management.
3. Cultivation protocol for any one edible mushroom.
4. Briefly explain the types of timber decay, their causal organisms and management practices.
5. Koch postulates.
6. Importance of quarantine in tree disease management.
7. Cultural methods in plant disease management.

IV. Write essay on any ONE

(1 x 10=10)

1. Write the importance of nursery diseases. Explain symptoms, etiology, seriousness, sources of infection, spread and integrated management practices for a destructive nursery disease of Eucalyptus.
2. Define integrated disease management. Explain the silvicultural and chemical methods in tree disease management.