

KERALA AGRICULTURAL UNIVERSITY
One Time Supplementary Examination, 2004 Admission
DEPARTMENT OF PLANT PATHOLOGY

Course Code: Path 2203
Title: Principles of Crop Disease Management

Mark: 60
Time: 2½ h

I. A. Fill up the blanks

(10 x 0.5 = 5)

1. _____ is an antisporeulant
2. The disease responsible for Irish Famine is _____
3. _____ invented Bordeaux mixture
4. First systemic fungicide is _____
5. The technical name of Kocide is _____
6. The disease responsible for Bengal Famine is _____
7. The scientist who put forward Gene for gene hypothesis of disease is _____
8. _____ is a wound dressing fungicide
9. _____ is called Kittleson's Killer
10. _____ is an antifungal antibiotic

B. State True or False

(10 x 0.5 = 5)

1. Heavy application of nitrogenous fertilizer reduce incidence of fungal disease
2. Dry root rot of pulses is managed by frequent irrigation
3. Bacterial blight of rice is introduced to India from Srilanka
4. Lime is the fungitoxic ingredient in Bordeaux Mixture
5. Deep summer ploughing is practised for management of soil borne pathogens
6. Luthra's solar heat treatment is useful for control of soil borne pathogens.
7. The certificate to be accompanied with plants to be exported / imported is known as Phytprotection certificate
8. Mixed cropping is useful for management of soil and air borne plant pathogens
9. *Trichoderma* is a bacterial biocontrol agent for plant diseases
10. Polygenic resistance is also known as horizontal resistance.

II. Write short notes

(14 x 1 = 14)

1. Plant quarantine
2. Exclusion
3. Eradication
4. Heat and plant disease control
5. Phytosanitary certificate

6. Crop rotation in soil borne disease management
7. Mixed cropping in crop disease management
8. Epidemic disease
9. Horizontal resistance
10. Systemic and contact fungicide
11. Disease escape
12. List out different methods of obtaining resistant varieties
13. Quarantine measures in disease control
14. Soil solarisation and soil fumigation

III. Answer any EIGHT questions

(8 x 2 =16)

1. Discuss the role of botanicals in plant disease management with suitable examples
2. Koch's postulates
3. Advantages of biological control
4. Quarantine measures in disease control
5. What is meant by disease surveillance?
6. Antiviral principles in plant disease management
7. Hot water treatment is very effective in controlling internally seed borne diseases. Why?
8. Differentiate between Simple interest disease and compound interest disease
9. What is poisoned food technique? Write the procedure
10. Write briefly the methods of implementation of plant quarantine rules

IV. Write essay on any FIVE

(5 x 4 =20)

1. Define fungicide. Mention important characteristics of a good fungicide. How will you prepare 10 liters of 1 % Bordeaux mixture. Write the mode of action, merits and demerits of this fungicide
2. Explain mass production technique of *Trichoderma viride*
3. Explain physical methods for plant disease control.
4. What is dual culture technique? Write the procedure for dual culture technique using *Trichoderma* and *Fusarium*.
5. Briefly discuss the principles of crop disease management.
6. Describe the methods of application of biocontrol agents in plants
