

KERALA AGRICULTURAL UNIVERSITY
B.Sc.(Hons.) Agriculture – 2007 Admission – IIIrd Semester
Final Examination – February/March 2009

Title : Path. 2102

Max. marks: 80

Course: Principles of Crop Disease Management (1+1) Time : 3 hours

I.A. Fill up the blanks

(20x 0.5=10)

1. Bordeaux mixture was discovered by
2. Gene for gene concept was proposed by
3. The full form of DIPA is
4. is the father of modern plant pathology
5. Bunchy top disease of banana was introduced to India from

I B. Name the following

6. A Botanical which has anti viral property.
7. A bacteria which is used as bio control agent
8. An anti fungal antibiotic.
9. An emulsifier
10. The most widely used technique for serological indexing.

I C. Match the following

- | | |
|------------------------------|------------------------------|
| 11. Gene for gene hypothesis | a. <i>Fusarium oxysporum</i> |
| 12. Tyloses | b. Indofil M-45 |
| 13. Systemic fungicide | c. Carbendazim |
| 14. Plant quarantine station | d. Trissur |
| 15. Nucleoprotein | e. Linseed rust |
| | f. Cochin |
| | g. Virus |

I. D. State True/False

- 16 *Orobanche* is a total stem parasite
- 17 Citrus tristeza virus (CTV) is transmitted by *Pentalonia nigronervosa*
- 18 *Pseudomonas solanacearum* is widely used as a biocontrol agent
- 19 Copper carbonate is the most important component of Bordeaux paste.
20. Viruses are obligate parasites.

II. Define/ Write answer in a word or sentence

(1x10=10)

1. Cross protection
2. Vertical resistance
3. Embago
4. PR Proteins
5. Tissue culture
6. Pathogenecity

7. Phytoalexins.
8. Exclusion
9. Simple Interest diseases
10. Antagonism

III. Write short notes on any ten of the following (10 x 2 = 20)

1. ELISA
2. Gene cloning
3. Mechanism of action of *Trichoderma* as a biocontrol agent
4. PGPR
5. Koch's postulates
6. Poisoned Food technique
7. PCR
8. Chaubattia paste
9. Types of resistance
10. Phytotoxicity of fungicides
11. Systemic fungicides
12. Disease forecasting

IV. Write short essays on any four of the following (4 x 5 = 20)

1. Characteristic of an ideal fungicide
2. Cultural methods of plant disease management
3. Assessment of plant diseases
4. Movement of systemic fungicides in plants
5. Principles of plant disease management
6. Physical methods of control of plant diseases

V. Write an essay on any two (Give examples) (2x10 = 20)

1. Discuss in detail about the biotechnological approaches in plant disease management.
2. What is Integrated plant disease management ? Discuss about the concepts and advantages of this technique.
3. Define biological control. Discuss about its merits and demerits. Write briefly about the isolation and mass multiplication of a biocontrol agent which is a bacteria