

M.Sc.(Ag.) Semester – I Examination, 2014

Plant Protection

Course : PPC-501 (Principles of Plant Pathology)

Time: 3 Hours

Full Marks: 50

Questions are of value as indicated in the margin

Answer **any five** questions

1. What do you mean by infection? Write different stages of infection with suitable examples. 1+9=10
 2. Define toxin. How does it differ from enzymes? Classify toxins on the basis of their origin and specificity with suitable examples. Write the mechanisms involved in toxin reaction with host tissues. 1+2+5+2=10
 3. Describe the various modes of survival and spread of plant pathogens in relation to annual and perennial crops. 10
 4. Write short notes on (**any four**): 2.5×4=10
 - i) Co-evolution of fungi
 - ii) Hypersensitive response
 - iii) SAR
 - iv) Growth regulator and its role in pathogenesis
 - v) Biological control agents in disease management
 - vi) Enzymatic degradation of cellulose
 5. 'Elicitors are the determinant of pathogen avirulence' – Justify the statement with suitable diagram. 10
 6. Discuss the various pre-existing structural and chemical defenses observed in plants against pathogen infections. 10
 7. What do you mean by decision making? How does it help in disease management? Describe the various principles and methods of plant disease management. 1+2+7=10
 8. Differentiate the following (**any four**): 4×2.5=10
 - i) Infection cycle and Disease cycle
 - ii) Phytoalexin and Plantibody
 - iii) Appressorium and Haustorium
 - iv) Tyloses and Abscission layer
 - v) Pathogen elicitors and Host signaling compound
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