

M.Sc. (Ag.) Plant Protection Examination 2015

Semester -II

Course : PPC - 508

(Epidemiology of Plant Diseases)

Time : Three Hours

Full Marks : 50

Questions are of value as indicated in the margin.

Answer **any five** questions

1. Define epidemics. State the objectives of studying epidemiology. How the term pandemic differs from epidemics? 2+3+5=10
 2. What is the role of models in epidemiology? What are the fundamental differences between exponential and monomolecular models. 4+6=10
 3. What is disease forecasting? Discuss in brief about late blight of potato forecasting methods used. 3+7=10
 4. What are evolutionary forces that affect the population building of new races of pathogens? Write a brief account of recent techniques for detection of new races. 6+4=10
 5. Describe a disease pyramid. Write the role of each component on disease development of epidemic scale. 2+8=10
 6. Write short notes on (**any five**) : 5×2=10
 - (i) Disease surveillance
 - (ii) Microclimate analysis
 - (iii) Disease intensity
 - (iv) Objectives of disease monitoring
 - (v) Gene deployment
 - (vi) Vertifolia effect
 - (vii) Polyetic diseases
 7. Give brief account of the following: (**any two**) 2×5=10
 - (i) Area under disease progress curve
 - (ii) Advantage of scale in measurement of disease.
 - (iii) Gompertz model of epidemics
 - (iv) Indian stem rust rule
 - (v) Durable resistance
 8. Explain briefly about different methods of plant disease assessment. How it is related with crop loss models? 8+2=10
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