

M.Sc. (Ag.) Examination, 2017
Semester-II
Plant Protection
Course : PPC-508
(Epidemiology of Plant Diseases)

Time: 3 Hours

Full Marks: 50

Questions are of value as indicated in the margin.

Answer any five questions

1. Define epidemics. How the term pandemic does differ from epidemics? Delineate the factors affecting epidemics. 3+3+4=10
 2. Describe the four components of the disease pyramid and explain how they interact to determine the extent, duration, and intensity of an epidemic. Differentiate between simple interest and compound interest disease. 7+3=10
 3. What do you mean by a model in epidemiology? Discuss in brief about two models that can be used to explain different relationships in disease and used for disease forecasting. 2+8=10
 4. What are the four evolutionary forces that effect the population buildup of a pathogen in a given environment and how they play their role in doing so? 3+7=10
 5. What do you mean by “Geophytopathology”? Suggest the role of geophytopathology in plant disease epidemics. Write different types of maps used in geophytopathology. 2+4+4=10
 6. What are the different methods of measuring severity of a disease in field with special emphasis in direct estimation? What is the advantage of using scales for determination of disease? 5+5=10
 7. Define Disease progress curve. How is it related with disease spread? What do you mean by AUDPC and apparent rate of infection? Suggest the application of the same in plant disease management. 2+2+2+2+2=10
 8. Write short notes on (**any three**): 2.5x4=10
 - a. Short term and Long term forecasting system
 - b. Dutch Rules
 - c. Late blight forecasting in India
 - d. Boom and burst cycle
 - e. Role of epidemiology in IDM
 - f. Role of micro-climate in disease development
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