



THE OPEN UNIVERSITY OF SRI LANKA
B.Sc. DEGREE PROGRAMME - BOTANY – LEVEL 05
FINAL EXAMINATION – 2014/2015
BOU3101 – PLANT PATHOLOGY
BTU3102/BTE5102 – PLANT PATHOLOGY I

DURATION: TWO (02) HOURS

Date : 16th May 2015

Time : 01.00 p.m. – 03.00 p.m.

ANSWER ANY FOUR (04) OF THE FOLLOWING QUESTIONS.
ILLUSTRATE YOUR ANSWER WITH FULLY LABELLED DIAGRAMS
WHEREVER NECESSARY.

01.
 - (a) Briefly state the nature and composition of viruses.
 - (b) What criteria are used in the identification of plant pathogenic viruses?
02.
 - (a) Name three (03) economically important diseases of potato (*Solanum tuberosum*) commonly found in Sri Lanka.
 - (b) Four each of the diseases you mention in (a):
 - i. name the causative organism.
 - ii. describe the diagnostic symptoms.
 - (c) For any one (01) of the diseases above:
 - i. classify the causative organism.
 - ii. outline the disease cycle.
 - iii. recommend suitable control measures.
03. Write short notes on:
 - (a) Pectolytic enzymes and their role in disease development.
 - (b) Range of reproductive structures among the powdery mildews.
 - (c) Biological control of plant diseases.

04. (a) What are vascular wilts?
- (b) How do the causative organisms affect the vascular system of the host plants; both anatomically and physiologically, to bring about the above changes?
- (c) Give one (01) common example each for a bacterial wilt and a fungal wilt. Name the causative organism for each of the examples you give.
- (d) What measures are taken to control vascular wilts?
05. Distinguish between the following:
- (a) Biotrophs and necrotrophs.
- (b) Microcyclic rusts and macrocyclic rusts.
- (c) Protectant fungicides and systemic fungicides.
- (d) Stylet-borne viruses and circulative viruses.
06. (a) What are plant disease epidemics?
- (b) What are the three (03) main factors necessary for the development of an epidemic?
- (c) Briefly describe how these factors affect the progress curve of a plant disease during an epidemic.

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