

THE OPEN UNIVERSITY OF SRI LANKA
 B.Sc. DEGREE PROGRAMME – BOTANY – LEVEL 05
 FINAL EXAMINATION – 2023/2024
 BOU 5301 / BOU 3101 – PLANT PATHOLOGY
 DURATION: TWO (02) HOURS



Date: 11th October 2023

Time: 9.30am – 11.30am

ANSWER ANY FOUR (04) OF THE FOLLOWING QUESTIONS.

ILLUSTRATE YOUR ANSWER WITH FULLY LABELED DIAGRAMS WHEREVER NECESSARY.

1. Differentiate between the following:
 - a) Stylet-borne viruses and circulative viruses
 - b) Protectant fungicides and systemtic fungicides
 - c) Crop rotation and crop sanitation
 - d) Pre-emergence damping off and post-emergence damping off
2. Write an essay on the survival of plant pathogens.
3. Late blight and early blight are two (02) economically important diseases of potato (*Solanum tuberosum*) found in Sri Lanka.
 - a) For each of the diseases:
 - i. Name and classify the causative organism.
 - ii. Describe the diagnostic symptoms.
 - b)
 - i. With the aid of fully labeled diagrams, briefly outline the disease cycle of late blight of potato
 - ii. Recommend methods of disease management.
4. Write a short account on:
 - a) Bacterial soft rots.
 - b) Typical progress curve of disease during the development of a plant disease epidemic.
 - c) Macrocytic fungi.
5.
 - a) What is an inoculum?
 - a) Name the groups of plant pathogenic microorganisms, and list out the types of inocula produced by **each** of the types you mentioned.

- b) Briefly outline how these inocula are dispersed by:
 - i. Wind
 - ii. Water
 - iii. Man
- 6. With the aid of fully labeled diagrams, describe the following:
 - a) Sporangiphore morphology of the downy mildews.
 - b) Conidiospores of *Fusarium oxysporum*.
 - c) Asexual fruit bodies of *Colletotrichum lindemuthianum*.
 - d) Sexual reproductive structures of powdery mildews.

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