THE OPEN UNIVERSITY OF SRI LANKA

B.Sc. DEGREE PROGRAMME – BOTANY – LEVEL 05

FINAL EXAMINATION – 2011/2012

BOU3101 – PLANT PATHOLOGY

BTU3102/BTE5102 - PLANT PATHOLOGY I

DURATION : TWO (02) HOURS

DATE : 06th January 2012 **TIME: 1.30 p.m. – 3.30p.m.**

ANSWER ANY FOUR (04) OF THE FOLLOWING QUESTIONS.

ILLUSTRATE YOUR ANSWERS WITH FULLY LABELLED DIAGRAMS WHEREVER NECESSARY.

01. a. What are rust diseases?

b. Describe the different types of spores produced by rust fungi.

c. Give one (01) historically important rust disease in Sri Lanka and name its causative organism.

d. Explain how the rust disease you mention in (c) spreads and recommend suitable control measures.

02. Write a short account on:

a. Insects as plant virus vectors.

b. Dormant propagules as survival structures of plant pathogens.

03. a. What are soft rots?

b. How do soft rot pathogens initiate disease and develop in the host tissue?

c. Name one (01) common bacterial soft rot and one (01) common fungal soft rot giving the causative organism for each of the examples you mention.

d. How are post-harvest soft rots on fruits and vegetables controlled?

04. Distinguish between:

a. Biotrophs and necrotrophs.

b. Inoculation and infection.

c. Hyperplasia and hypertrophy.

05. a. Briefly describe the nature and composition of viruses.

b. What properties are used in the identification of plant pathogenic viruses?

06. With the aid of fully labelled diagrams, describe the following and indicate how each of these affect their host.

a. Haustorial development of *Sphaerotheca pannosa* f .sp *rosae* on rose.

b. Transfer of T_2 plasmids of *Agrobacterium tumefaciens* on its host cell.

c. Establishment of *Fusarium oxysporum* f.sp. *lycopersici* on tomato.