

**THE OPEN UNIVERSITY OF SRI LANKA**

**B.Sc. DEGREE PROGRAMME - BOTANY - LEVEL 05**

**FINAL EXAMINATION - 2017/2018**

**BYU5301/BYE5301/BOU3101 - PLANT PATHOLOGY**

**DURATION: TWO (02) HOURS**



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**Date: 29<sup>th</sup> September 2018**

**Time: 1.30 p.m. - 3.30 p.m.**

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**ANSWER ANY FOUR (04) OF THE FOLLOWING QUESTIONS.**

**ILLUSTRATE YOUR ANSWER WITH FULLY LABELED DIAGRAMS WHEREVER NECESSARY.**

1. Differentiate between the following:
  - (a) Hyperplasia and hypertrophy
  - (b) Inoculation and infection
  - (c) Microcyclic rusts and macrocyclic rusts
  - (d) Stylet-borne viruses and circulative viruses
  
2. Name and classify the causative organism/s, describe the diagnostic symptoms and the disease cycle and recommend methods of disease management for any two (02) of the following plant diseases:
  - (a) Late blight of potato
  - (b) Powdery mildew of rose
  - (c) White root of rubber
  
3. (a) What are Koch's postulates and for what purpose are they used in plant pathology?  
(b) Why are the Koch's postulates modified for pathogens such as viruses?  
(c) List out the properties used to identify and characterize plant pathogenic viruses.

4. Name the type/s of the following substances involved in the disease mentioned and indicate the role/s played by each of them.
  - (a) Enzymes in bacterial soft rots
  - (b) Toxins in tobacco wild-fire disease
  - (c) Growth regulators in foolish seedling disease on rice
5. Write a short essay on inanimate agents of plant disorders.
6. Give a concise account of the following:
  - (a) Survival strategies of plant pathogens
  - (b) Cultural methods of plant disease management