

**UNIVERSITY OF RUHUNA**  
**BACHELOR OF SCIENCE (GENERAL) DEGREE LEVEL II - (SEMESTER I)**

**EXAMINATION – JANUARY – 2022**

**SUBJECT: BOTANY**

**COURSE UNIT: BOT 2121 (Plant Pathology)**

**Time: One hour**

**Answer all questions**

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**(Use the space provided for your answers)**

(Q1)

(A) Name five different plant diseases found in **Sri Lanka** caused by different taxonomic groups of organisms.

<b>Group of Organism</b>	<b>Name of the disease</b>
1. ....	.....
2. ....	.....
3. ....	.....
4. ....	.....
5. ....	.....

(5X2=10 Marks)

(B) Give a definition for a “**diseased plant**”.

.....  
.....

(05 Marks)

(C) What are the typical characteristics of a **noninfectious disease**?

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(5X03=15 Marks)

(D) State the components of “disease triangle”.

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(10 Marks)

(E) Briefly explain the effect of one of the components mentioned above on development of disease.

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(10 Marks)

(F) State four different routes that pathogens used to get access into plants and provide an example for each.

Route	Pathogen
1. ....	.....
2. ....	.....
3. ....	.....
4. ....	.....

(4X2=08 Marks)

(G) What is an “appressorium”?

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.....

(05 Marks)

(H) State the main functions of an appressorium.

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.....

(03 X2=06 Marks)

(I) Name three symptoms associated with Phytoplasma diseases of plants.

- (1) .....
- (2) .....
- (3) .....

(03 X 3=09 Marks)

(J) Name characteristic features of "Phytoplasmas".

- (1) .....
- (2) .....
- (3) .....
- (4) .....
- (5) .....

(02X 5=10 Marks)

(K) What are the routes that plant viruses use to spread in nature?

- (1) .....
- (2) .....
- (3) .....

(01X3= 03 marks)

(L) Name three plant virus diseases found in Sri Lanka.

- (1) .....
- (2) .....
- (3) .....

(02X3=06 Marks)

(M) Name four enzymes that are used by fungal pathogens for invading plant tissues.

- (1) .....
- (2) .....
- (3) .....
- (4) .....

(01X4=04 Marks)

(Q2)

(A) Name four histological defense structures that are important for a plant to defend from pathogens.

- (1) .....
- (2) .....
- (3) .....
- (4) .....

(02X4 = 08 Marks)

(B) Give a definition for "**Phytoalexins**".

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.....

(12 marks)

(C) What is the main difference between "Phytoalexins" from "Phytoanticipens"?

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.....

(05 Marks)

(D) What is an "**elicitor**" of plant-pathogen interactions?

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(08 Marks)

(E) How does an elicitor interact with a plant cell?

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.....

(05 Marks)

(F) Name three important events in the hypersensitive reaction (**HR**) in plants.

- (1) .....
- (2) .....
- (3) .....

(02X3 = 06 Marks)

(G) State four physiological changes you would observe that occur in diseased plants.

- (1) .....
- (2) .....
- (3) .....
- (4) .....

(02X4 = 08 Marks)

(H) What are "soil-borne plant pathogens"?

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.....  
.....

(04X3 = 12 Marks)

(I) How do soil-borne pathogens disseminate in nature?

.....  
.....  
.....

(03 Marks)

(J) State three examples for soil-borne pathogens.

- (1) .....
- (2) .....
- (3) .....

(03X3 = 09 Marks)

(K) Provide three measures that you would apply to control soil-borne pathogens.

- (1) .....
- (2) .....
- (3) .....

(03X3 = 09 Marks)

(L) Name three symptoms of soil-borne disease of plants.

- (1) .....
- (2) .....
- (3) .....

(02X3 = 06 Marks)

(M) State three adverse effects of use of chemical pesticides in agriculture.

- (1) .....
- (2) .....
- (3) .....

(02X3 = 06 Marks)

(N) Name three survival (over wintering) structures of plant pathogens.

- (1) .....
- (2) .....
- (3) .....

(01X3 = 03 Marks)

**(100 Marks)**

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