P P SAVANI UNIVERSITY

First Semester of B.Sc. (Hons.) Agriculture End Semester Examination

July - 2022

SGAG1150–Fundamental of Plant Pathology

26.07.2022, Tuesday Time: 10:00 a.m. to 12:00 p.m. Maximum Marks: 50

Instruction:

1. Draw a neat and labeled diagram whenever it is required.
2. Start new questions from new page.

Q.1 Multiple choice questions (01 mark each) **(15)**

1.1 Non-cellular, sub microscopic entities which replicate only in living cells and consist of either DNA or RNA and surrounded by protein coat

a. Virus
c. Bacteria
b. Prions
d. Fungi

1.2 Dodder is

a. Partial stem parasite
c. Complete stem parasite
b. Partial root parasite
d. Complete Root parasite

1.3 They can grow and reproduce in nature only in living hosts

a. Saprophytes
c. Necrotrophs
b. Biotrophs
d. Prototrophs

1.4 Father of India plant pathology

a. Julius Kuhn
c. Anton de bary
b. E. F. Smith
d. E. J. Butler

1.5 4th Koch's Postulates was given by

a. Robert Koch
c. E. F. Smith
b. Robert Harting
d. None

1.6 Use of Iodine in Gram staining

a. Primary stain
c. Counter stain
b. Decolorizer
d. Mordent

1.7 Example of Epidemic disease

a. Late blight of potato
c. Rust of pea
b. Coffee rust
d. Brown leaf spot of rice

1.8 Disease completes more than one disease cycle in one season

a. Monocyclic disease
c. Polycyclic disease
b. Both
d. None

1.9 Mycelium present in

a. Bacteria
c. Fungi
b. Virus
d. Nematode

1.10 Brown spot of Paddy is caused by

a. *Alternaria solani* c. *Puccinia* sp.

b. *Pyricularia oryzae* d. *Helminthosporium oryzae*

1.11 Irish famine caused by

a. *Alternaria solani* c. *Phytophthora infestans*

b. *Helminthosporium oryzae* d. None

1.12 Low molecular antimicrobial compound produced after infection are known as

a. Phytoalexins c. Hypersensitivity

b. tyloses d. None

1.13 Example of monocyclic disease

a. wilt c. smut

b. rust d. Leaf spot

1.14 Excessive increase in cell size is known as

a. Hypertrophy c. Atrophy

b. hypotrophy d. None

1.15 Growth promoting substances

a. Auxin c. Gibberellin

b. Cytokinins d. All of above

Q.2 Define/ Explain (Attempt any six- 01 marks each) **(06)**

2.1 Fungi

2.2 Endophytic mycellium

2.3 Plant Pathology

2.4 Pathogen

2.5 Disorder

2.6 Saprophyte

2.7 Tylosis

2.8 Hypersensitivity

Q.3 Fill in the blank (01 mark each) **(05)**

3.1 Cell wall of Bacteria is made up of_____

3.2 Gram positive bacteria looks colour_____after gram staining

3.3 Bacteria lacking flagella is called_____

3.4 Mycelium without septa is known as_____

3.5 Name the first plant virus discovered_____

Q.4 Short notes (Attempt any six- 02 marks each) **(12)**

4.1 Give general characteristics of Fungi

4.2 Types of flagella present in bacteria

4.3 List the biochemical defense mechanism and explain any one

4.4 Draw and explain Disease triangle and Disease pyramid

4.5 Difference between Monocyclic and Polycyclic diseases

4.6 Enlist Koch's postulates

4.7 Enlist different types of fungicide formulations and explain any two

4.8 Give contribution of any four scientists related to plant pathology

Q.5 Answer the following questions in detail (Attempt any three- 04 marks each) **(12)**

5.1 Explain Flowering plant parasites

5.2 Write the role of growth regulators in pathogenesis

5.3 List the structural defense mechanism of plants along with example

5.4 Give classification of plant diseases

5.5 Explain any four Important plant pathogenic organisms

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