



44550

**BRAINWARE UNIVERSITY**

Library
Brainware University
398, Ramkrishnapur Road, Barasat
Kolkata, West Bengal-700125

Term End Examination 2025-2026**Programme – B.Sc.(Ag)-Hons-2025****Course Name – Fundamentals of Plant Pathology****Course Code - BAG27108(T)****(Semester II)****Full Marks : 40****Time : 2:0 Hours**

[The figure in the margin indicates full marks. Candidates are required to give their answers in their own words as far as practicable.]

Group-A

(Multiple Choice Type Question)

1 x 10=10

1. *Choose the correct alternative from the following :*

- (i) Recall the scientist known as the father of plant pathology.
 - a) E.F. Smith
 - b) Anton de Bary
 - c) Butler
 - d) Koch
- (ii) Name the three components of the disease triangle.
 - a) Host–Pathogen–Vector
 - b) Host–Pathogen–Environment
 - c) Host–Soil–Climate
 - d) Crop–Pathogen–Time
- (iii) Identify the organism group classified as mesobiotic.
 - a) Fungi
 - b) Virus
 - c) Bacteria
 - d) Nematode
- (iv) Identify a gram-negative plant pathogenic bacterium.
 - a) Bacillus
 - b) Xanthomonas
 - c) Clavibacter
 - d) Streptomyces
- (v) Define mycorrhiza.
 - a) Fungus–fungus association
 - b) Fungus–root association
 - c) Fungus–bacteria association
 - d) Root–root association
- (vi) Determine the causal organism of red rust of mango.
 - a) Fungus
 - b) Bacterium
 - c) Alga
 - d) Virus
- (vii) Identify the insect vector of Tomato leaf curl virus.
 - a) Aphid
 - b) Whitefly
 - c) Thrips
 - d) Leafhopper
- (viii) Differentiate viruses and viroids based on structural organization.
 - a) Genome size
 - b) Host specificity
 - c) Presence of protein coat
 - d) Vector dependency
- (ix) Justify classification of phytoplasma as mollicutes.

- a) Presence of nucleus
- b) Lack of rigid cell wall
- c) Binary fission
- d) Endospore formation
- (x) Formulate an exclusion-based strategy to prevent introduction of an exotic plant pathogen.
- a) Cultivation of resistant varieties
- b) Seed treatment with fungicides
- c) Enforcement of plant quarantine regulations
- d) Removal of infected plants

Group-B

(Short Answer Type Questions)

2.5 x
10=25

2. List the components of the disease triangle. (2.5)
3. Describe plant diseases based on geographical distribution. (2.5)
4. State Koch Postulate. (2.5)
5. Develop the concept of viral classification based on their genome type. (2.5)
6. Name the asexual and sexual fruit bodies found in fungi. (2.5)
7. Distinguish between asexual and sexual spores in fungi. (2.5)
8. Classify bacteria based on the arrangement of flagella. (2.5)
9. Describe the basic structure of a bacterial cell wall and its significance. (2.5)
10. Explain the term mycorrhiza. (2.5)
11. Describe the principle of Exclusion with respect to plant quarantine. (2.5)

OR

Classify antibiotics based on their spectrum of activity. (2.5)

Group-C

(Long Answer Type Questions)

5 x 1=5

12. Illustrate the various kinds of hyphal modifications found in fungi with suitable examples. (5)

OR

Illustrate the methods of sexual reproduction in fungi. (5)

Library
Brainware University
398, Ramkrishnapur Road, Barasat
Kolkata, West Bengal-700125