



BRAINWARE UNIVERSITY

Term End Examination 2023-2024

Programme – B.Sc.(Ag)-Hons-2022/B.Sc.(Ag)-Hons-2023

Course Name – Fundamentals of Plant Pathology

Course Code - CC-BAG271(T)

(Semester II)

Full Marks : 50

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 20=20

1. Choose the correct alternative from the following :

- (i) State the name of the causal organism of Wheat black Rust is
- | | |
|---------------------------|----------------------|
| a) Phytophthora infestans | b) Puccinia graminis |
| c) Albugo candida | d) Fusarium solani |
- (ii) State the origin of the term 'Phyton' in phytopathology.
- | | |
|-----------|-----------|
| a) Indian | b) Latin |
| c) Greek | d) French |
- (iii) Select the correct option for the name of the causal organism of Coffee rust.
- | | |
|------------------------------|---------------------------|
| a) Rhizoctonia solani | b) Hemileia vastatrix |
| c) Clavibacter michiganensis | d) Xanthomonas campestris |
- (iv) Select the correct option: Dithane Z-78 belongs to...
- | | |
|----------------------------|----------------------|
| a) Organomercurials | b) Dithiocarbamates |
| c) Heterocyclic N-compound | d) Elemental Sulphur |
- (v) Choose the correct option: Insect-resistant cotton plants have been successfully genetically engineered by inserting a gene from a/an
- | | |
|-----------|-------------|
| a) Virus | b) Bacteria |
| c) Insect | d) plant |
- (vi) Name the smallest known viroid...
- | | |
|--------------------------------|---------------------------------|
| a) Potato spindle tuber viroid | b) Citrus exocortis |
| c) Avocado sunblotch Viroid | d) Coconut cadang cadang viroid |
- (vii) What is the protein coat of virus is known as
- | | |
|--------------|-----------------|
| a) Capsomere | b) Capillatum |
| c) Capsid | d) Coat protein |

- (viii) Name the vector group which spread the viroids primarily from diseased to healthy plants
- a) Aphids
b) Thrips
c) Mealy bugs
d) None of these
- (ix) Select the correct option: Bacteria belongs to.
- a) Eukaryotes
b) Prokaryotes
c) Both Prokaryotes & Eukaryotes
d) None of these
- (x) Identify the name of the first scientist who described the plant parasitic nematode?
- a) P.A. Michaeli
b) M. Tillet
c) T.J. Needham
d) M. Berkeley
- (xi) Identify the term referred to the fungi that lacks the crosswall/septa
- a) Holocarpic
b) Coenocytic
c) Flagellate
d) Eucarpic
- (xii) Infer the correct option for Rhizomorph formation, which is the characteristic feature of...
- a) Armillaria mellea
b) Rhizoctonia solani
c) Verticillium albo-atrum
d) Claviceps purpurea
- (xiii) Infer the correct option for Dolipore septum, which is the characteristic feature of...
- a) Ascomycotina
b) Basidiomycotina
c) Deuteromycotina
d) Oomycotina
- (xiv) Show the correct answer for Zygosporangium, which is formed after conjugation of...
- a) Two similar gametangia only
b) Two gametangia
c) Oogonium & Antheridium
d) Two dissimilar gametangia only
- (xv) Choose the correct scientific name of the Citrus nematode.
- a) Tylenchulus semipenetrans
b) Rotylenchulus reniformis
c) Globodera rostochinensis
d) Heterodera avanae
- (xvi) Choose the name of the Viruses that infect blue green algae.
- a) Viroid
b) Bacteriophage
c) Cyanophage
d) Mycovirus
- (xvii) Choose the type of particle that can be found in Geminiviruses.
- a) Single particle
b) Paired or twin particles
c) Filamentous ssRNA molecules
d) dsRNA molecules
- (xviii) Identify the active principle of Bordeaux mixture
- a) Copper sulphate
b) Calcium sulphate
c) Copper hydroxide
d) Calcium hydroxide
- (xix) Give examples of the name of the fungicide that shows both the apoplastic and symplastic movement within a plant.
- a) Captan
b) Propiconazole
c) Fosetyl-Al
d) Carboxin
- (xx) Interpret the technique used to produce virus free plant stock.
- a) Protoplast fusion
b) Thermotherapy
c) Meristem-tip culture
d) Cross-protection

Group-B

(Short Answer Type Questions)

2.5 x
10=25

2. List any five Indian Phytopathologists having notable contributions.

(2.5)

3. Explain the factors that influence the effectiveness of fungicides and antibiotics in controlling plant diseases? How are fungicides and antibiotics formulated for application in Plant Pathology? (2.5)
4. Interpret the importance of Plant Pathology. (2.5)
5. Name some of the plant diseases caused by nematodes. (2.5)
6. Compare between various types of fungal septation with illustrations. (2.5)
7. What is formulation? (2.5)
8. Explain the definition of Pellet? (2.5)
9. Identify the full form of ICTV? Name the modern taxonomic system in Virus. (2.5)
10. Explain the definition of the endoparasitic nematode and give few examples. (2.5)
11. Interpret the mode of action of benzene compound with suitable examples. (2.5)

OR

Explain the antifungal antibiotics with suitable examples. (2.5)

Group-C

(Long Answer Type Questions)

5 x 1=5

12. Indicate distinguishing characteristics of Mollicutes. Cite few examples caused by them. (5)

OR

Compare between monodelphic and Didelphic reproductive systems in nematode with a labelled diagram. (5)
