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BRAINWARE UNIVERSITY

Term End Examination 2025-2026

Programme – B.Sc.(Ag)-Hons-2021/B.Sc.(Ag)-Hons-2023

Course Name – Diseases of Field and Horticultural Crops and their Management-II

Course Code - CC-BAG673 (T)/CC-BAG673(T)

(Semester VI)

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) What are the typical symptoms of wheat rust diseases?

- | | |
|--------------------------------------|--|
| a) Yellowing and weakening of leaves | b) Black powdery spores on leaves |
| c) White powdery patches on leaves | d) Dark brown pustules on stems and leaves |

(ii) Which pathogen causes red rot disease in sugarcane?

- | | |
|-----------------------------|--------------------------|
| a) Colletotrichum falcatum | b) Ustilago scitaminea |
| c) Sclerotinia sclerotiorum | d) Phakopsora pachyrhizi |

(iii) Name the disease in mustard plants that is caused by Albugo candida.

- | | |
|----------------------|-------------------------|
| a) White rust | b) Sclerotinia stem rot |
| c) Alternaria blight | d) Downy mildew |

(iv) Choose the recommended physical management approach against sugarcane smut.

- | | |
|------------------------|-------------------------|
| a) Hot water treatment | b) Genetic modification |
| c) Chemical pesticides | d) Crop rotation |

(v) Name the causal agent responsible for causing gram wilt disease.

- | | |
|------------------------------------|--------------------------|
| a) Fusarium oxysporum f.sp. ciceri | b) Botrytis cinerea |
| c) Ascochyta rabiei | d) Meloidogyne incognita |

(vi) Name the pathogen causing anthracnose in cotton.

- | | |
|----------------------------|-------------------------|
| a) Colletotrichum gossypii | b) Fusarium oxysporum |
| c) Xanthomonas campestris | d) Alternaria alternata |

(vii) Name the pathogen which is responsible for causing black arm disease in cotton.

- | | |
|----------------------------|-------------------------|
| a) Xanthomonas campestris | b) Alternaria alternata |
| c) Colletotrichum gossypii | d) Rhizoctonia solani |

(viii) What is the characteristic symptom of malformation disease in mango?

- | | |
|--|-------------------------------------|
| a) Powdery white growth on leaves | b) Circular black lesions on fruits |
| c) Abnormal growth of shoots, leaves and inflorescence | d) Yellowing of stem and leaves |

- (ix) Choose a suitable method to manage malformation in mango.
- Soil drenching with herbicides
 - Pruning during dormancy and use of acaricides and systemic fungicides
 - Adding excessive nitrogen fertilizer
 - Decreasing drainage around the tree base
- (x) Name the pathogen that is responsible for citrus canker.
- Xanthomonas citri
 - Phytophthora citrophthora
 - Candidatus Liberibacter asiaticus
 - Pseudomonas syringae
- (xi) Name the disease of grapevine which is caused by Plasmopara viticola and results in the appearance of yellow lesions on the leaves.
- Anthrachnose
 - Downy mildew
 - Crown gall
 - Fire blight
- (xii) Name the pathogen responsible for causing powdery mildew in cucurbits.
- Fusarium oxysporum
 - Botrytis cinerea
 - Pseudoperonospora cubensis
 - Erysiphe cichoracearum
- (xiii) Name the causal organism (teleomorph) of red rot disease in sugarcane.
- Fusarium moniliforme
 - Ustilago scitaminea
 - Alternaria alternata
 - Glomerella tucumanensis
- (xiv) Infer the spread of pea rust.
- By windborne urediospores
 - Through contaminated irrigation water
 - By insects
 - Through infected tubers
- (xv) Identify the growth regulator which can be used to manage mango malformation.
- IAA
 - IBA
 - NAA
 - 2,4-D
- (xvi) Infer the insect association with citrus canker.
- Phyllocnistis citrella
 - Aceria cajani
 - Diphorina citri
 - Toxoptera citricidus
- (xvii) Infer the nature of spread of Fusarium oxysporum.
- Through infected pruning tools
 - By rain splashes
 - By soil-borne chlamydospores
 - Through insect vectors
- (xviii) Infer the insect vector of potato leaf roll virus?
- Aphids
 - Whiteflies
 - Thrips
 - Mites
- (xix) The causal organism of wart disease in potatoes is from which group?
- Fungi
 - Bacteria
 - Nematodes
 - Viruses
- (xx) Identify the best fungicide which is used to control downy mildew in cucurbits.
- Mancozeb
 - Carbendazim
 - Metalaxyl
 - Chlorothalonil

Group-B

(Short Answer Type Questions)

2.5 x
10=25

- Discuss the management strategies of powdery mildew or downy mildew of grape. (2.5)
- Design suitable management approaches for viral diseases of potato. (2.5)
- Discuss the management strategies for black stem rust of wheat. (2.5)
- Construct suitable management practices for red rot disease of sugarcane. (2.5)
- Infer the effect of red rot on sugarcane and its dispersal. (2.5)
- Describe the symptoms and causal organism of anthracnose of mango. (2.5)
- Discuss suitable management strategies for wilt disease of gram. (2.5)
- Describe the symptoms of black arm of cotton and name the causal organism. (2.5)
- Describe the symptoms and causal organism of apple scab. (2.5)

11. Discuss the management strategies for loose smut of wheat. (2.5)

OR

Develop the management strategies against wilt diseases in cucurbits. (2.5)

Group-C

(Long Answer Type Questions)

5 x 1=5

12. Elaborate the symptoms, causal organism, disease cycle and management of mango malformation. (5)

OR

Compile the symptoms, causal organism, disease cycle and management of black arm disease of cotton. (5)
