BRAINWARE UNIVERSITY

Term End Examination 2024-2025
Programme – B.Sc.(Ag)-Hons-2022/B.Sc.(Ag)-Hons-2023/B.Sc.(Ag)-Hons-2024
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) In which year was the Irish Famine first reported?
a) 1845 b) 1934
c) 1876 d) 1943

(ii) What is the origin of the term Pathology?
a) Indian b) Latin
c) Greek d) French

(iii) Who is the father of Indian Plant Pathology?
a) B.B Mundkur b) K.C Mehta
c) E.J Butler d) M.C Srinivasan

(iv) Which pathogen was partially responsible for Bengal Famine?
a) Helminthosporium oryzae b) Fusarium solani
c) Puccinia graminis d) Phytophthora infestans

(v) What are the three components of the disease triangle?
a) Susceptible host, virulent pathogen and favourable environment b) Resistant host, avirulent pathogen and unfavourable environment
c) Host, pathogen and temperature d) Host,pathogen and humidity

(vi) Primary inoculum of Sclerotium rolfsii overwinters/oversummers in which of these following?
a) Root b) Infected crop debris
c) Soil d) Both infected crop debris and soil

(vii) Infer the phenomenon that is denoted by hypertrophy.

a) Increase in no. of cell
b) Increase in size of cell
c) Tumor formation
d) Rotting

(viii) Cadang cadang disease is caused by which pathogen?

a) Viroid
b) Virus
c) Phytoplasma
d) MLO

(ix) Which of these produces haustoria?

a) By fungi parasitizing animal tissues
b) By hypha of obligate parasite
c) Artificial cultures
d) After the hypha become intercellular

(x) Choose the right option: Striga is a

a) Partial stem parasite
b) Partial root parasite
c) Total stem parasite
d) Total root parasite

(xi) In which of the following plant diseases, domestic quarantine exists?

a) Rice blast
b) Red rot of sugarcane
c) Late Blight of potato
d) Wart of potato

(xii) Infer the correct option: Dithane Z-78 belongs to which group of fungicides?

a) Oraganomercurials
b) Dithiocarbamates
c) Heterocyclic N-compound
d) Elemental Sulphur

(xiii) Transformation is the process of multiplication found in which of the following?

a) Bacteria
b) Fungi
c) Bacteriophage
d) Phytomonas

(xiv) Infer the correct answer: Which one is an organomercurial fungicide?

a) Cerasan
b) Bavistin
c) Captan
d) Zineb

(xv) The cell wall of Oomycetes composed of which of the following?

a) Chitin
b) Peptidoglycan
c) Lipoprotein
d) Cellulose

(xvi) 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

(xvii) Infer the correct answer: Which fungicide is specific towards Oomycetes fungi?

a) Vitavax
b) Carbendazim
c) Metalaxyl
d) Plantvax

(xviii) Show the correct answer: Which class of bacteria has Streptomyces been categorized into?

a) Proteobacteria
b) Firmibacteria
c) Thallobacteria
d) Mollicutes

(xix) Infer the correct answer: What is the term used for pitcher shaped ascocarp?

a) Perithecium
b) Cleistothecium
c) Apothecium
d) Ascostroma

(xx) Infer the correct answer: Name an antifungul antibiotic.

a) Griseofulvin
b) Blasticidin
c) Kasugamycin
d) All of these

Group-B

(Short Answer Type Questions) 2.5 x 10=25

2. Compare between Virus and Viroid. (2.5)
3. Describe the gene-for-gene hypothesis of disease development in plants. (2.5)
4. Name five non-host specific toxins and their producers. (2.5)
5. What is inoculum? Classify inoculum with suitable examples. (2.5)
6. Explain different principles of plant disease management. (2.5)
7. Infer the concept of parasexuality in fungi. (2.5)
8. Illustrate the four types of ascocarp. (2.5)
9. Describe different elements of disease tetrahedron. (2.5)
10. Describe the characteristics of virus. (2.5)
11. Explain the mode of action of copper or sulphur fungicides along with suitable examples. (2.5)

OR

Interpret the different methods of application of fungicides with examples. (2.5)

Group-C

(Long Answer Type Questions) 5 x 1=5

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

OR

Assess the structure of a typical bacterial cell. (5)

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