

M.Sc. BOTANY  
FOURTH SEMESTER  
MYCOLOGY & PLANT PATHOLOGY  
MSB - 402F

( Use Separate Answer Scripts for Objective & Descriptive )

Duration: 3 hrs.

Full Marks: 70

[ PART-A: Objective ]

Time: 20 min.

Marks: 20

*Choose the correct answer from the following:*

*1X20=20*

1. Name the disease of plant in which leaves, branches, fruits all are affected
  - a. Mosaic disease of tobacco
  - b. grey blight of tea
  - c. citrus canker
  - d. none of the above
2. Leaf rust of coffee is caused by
  - a. *Hemileia* sp.
  - b. *Cercospora* sp.
  - c. *Koleroga* sp.
  - d. *Fusarium* sp.
3. Which of the following disease is directly related to altered level of Auxin in plants
  - a. Red rust of wheat
  - b. Smut of wheat
  - c. *Alternaria* leaf spot
  - d. Clubrot of Crucifers
4. Fungal pathogens can enter their host by means of
  - a. Enzymes (Cutinases)
  - b. Mechanically (Appresoria)
  - c. stomatal pores
  - d. all of the above
5. Imperfect fungi lack sexual reproduction and possess a special recombination known as
  - a. Heterosexuality
  - b. Disexuality
  - c. Parasexuality
  - d. Homothalium
6. White rust of crucifers is caused by
  - a. *Ralstonia* sp.
  - b. *Albugo candida*
  - c. *Fusarium* sp.
  - d. *Didymella* sp
7. Victorin toxic produced by
  - a. *Cercospora* sp.
  - b. *Alternaria* sp.
  - c. *Cochilobolus* sp
  - d. *Aspergillus* sp.
8. Wilt disease of sugarcane caused by
  - a. *Cephalosporium sacchari*
  - b. *Puccinia kuehnii*
  - c. *Ceratocystis paradoxa*
  - d. *Ustilago scitaminea*
9. Onion white rot is caused by fungi
  - a. *Trichoderma* sp.
  - b. *Alternaria brassicae*
  - c. *Penicillium* sp
  - d. *Sclerotiana* sp

10. *Ustilago tritici* causes
  - a. Smut of wheat
  - b. Red rust of wheat.
  - c. Black rust of wheat
  - d. All of the above
11. Orellanin toxin is produced by
  - a. *Conocybe filaris*
  - b. *Cortinarius* sp.
  - c. *Amanita* sp.
  - d. *Lepiota* sp.
12. The fungal partner in ectomycorrhiza belongs to the class
  - a. Basidiomycetes
  - b. Ascomycetes
  - c. Zygomycetes
  - d. All of the above.
13. Black root rot of tea caused by
  - a. *Marcophoma* sp.
  - b. *Rosellina arcuata*
  - c. *Marasmius* sp.
  - d. *Colletotrichum* sp.
14. Tentoxin is produced by
  - a. *Alternaria alternata*
  - b. *Phytophthora infestans*
  - c. *Fusarium* sp.
  - d. *Trichoderma* sp.
15. Exclusion of plant disease by legislation is known as
  - a. Disease resistance
  - b. Biological control
  - c. Plant quarantine
  - d. Integrated Disease Management
16. The fungi *Sclerotium rolfsii* causing Collar rot disease in
  - a. *Cajanus cajan*
  - b. *Cicer arietinum*
  - c. *Secale cereale*
  - d. *Lens culinaris*
17. The endomycorrhizas are also known as
  - a. Hartig nets
  - b. vesicular arbuscular mycorrhiza (VAM)
  - c. mat forming mycorrhiza
  - d. intracellular mycorrhizas
18. The pathogen causing a simple interest disease in plant is called?
  - a. Polycyclic pathogen
  - b. Monocyclic pathogen
  - c. Phytoalexins
  - d. All of the above
19. Which of these is a bacterial disease that affects the plants?
  - a. Mosaic
  - b. Blister
  - c. Crown gall
  - d. Smut
20. The pathogen which spread internally throughout the host shows
  - a. Localized invasion
  - b. Resistance
  - c. Perennation
  - d. Systemic invasion

**( PART-B :Descriptive )**

Time : 2 hrs. 40 min.

Marks : 50

***[Answer question no.1 & any four (4) from the rest]***

1. Write a short note on scope of plant pathology? Write a short note on Citrus Canker? 5+5=10
2. Briefly discuss the different modes of reproduction of fungi? Write a note on defense mechanism in plants? 5+5=10
3. Briefly explain the fungal diseases of Tea and Rubber with their symptoms and management? 5+5=10
4. Briefly explain the causal organism, symptoms, management of various diseases of Crucifers and Tobacco? 5+5=10
5. Write a short note on disease forecasting? Write a short note on economic importance of Mushrooms? 3+7=10
6. Discuss the agricultural importance of Mycorrhiza? Write a short note on blight disease of chickpea? 5+5=10
7. Briefly explain the causal organism, symptoms, management of fungal disease of tomato and powdery mildew of grapes? 5+5=10
8. Write a short note on host parasitic interactions in plants? Briefly explain the post-harvest fungal diseases in fruits and vegetables? 5+5=10

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