

M.Sc. BOTANY
FOURTH SEMESTER
MYCOLOGY & PLANT PATHOLOGY
MSB-403 F

(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

- Who amongst the following discovered the 'Mistletoe' as the first plant parasite?
 - Charles Darwin
 - Carolus Linnaeus
 - Theophrastus
 - Albertus Magnus
- One of the following scientists is an 'Aeromycologist', who was he?
 - S. T. Tilak
 - E.A. Bessey
 - Gaumann
 - J.D. Hooker
- Who established that 'Late Blight Disease' of potato was caused by a fungus?
 - Anton de Bary
 - Tillet brothers
 - Dickinson
 - Shear Dodge
- The 'Germ theory of disease' was propounded by whom?
 - Louis Pasteur
 - Robert Koch
 - Alexander Flemming
 - Benthum
- Sir E.J. Butler worked on which branch of Botany?
 - Mycology and Plant Pathology
 - Genetics
 - Plant Physiology
 - Plant Ecology
- 'Powdery Mildew Disease' of grapes is caused by which of the following organisms?
 - Uncinula necator*
 - Erysiphe graminis*
 - Candida utilis*
 - Penicillium italicum*
- Which of the following disease is known as St. Anthony's fire?
 - Ergot of rye
 - Loose smut of wheat
 - Bean rust
 - Smut of sugarcane
- Which of the following diseases is caused by *Synchytrium endobioticum*?
 - Wort disease of potato
 - Potato Scab
 - Early blight of potato
 - Late blight of potato
- Who wrote a book on 'Spore dispersal mechanism of fungi'?
 - C.T. Ingold
 - Cunninghum
 - A.K. Pandey
 - Woronin
- Which of the following organism is responsible for the 'Wilt disease of *Cajanus cajan*'?
 - Fusarium oxysporum*
 - Uromyces appendiculata*
 - Ustilago nuda*
 - Ustilago avenae*

11. Tikka disease of ground nut is caused by:
 a. *Cercospora personata*
 c. *Colletotrichum musae*
 b. *Colletotrichum falcatum*
 d. *Alternaria alternata*
12. Damping of seedling is a:
 a. Soil borne disease
 c. Water borne disease
 b. Air borne disease
 d. None of disease
13. Fishes' eggs are infected by which of the following fungi?
 a. *Saprolegnia parasitica*
 c. *Rhizoctonia solani*
 b. *Allomyces javanica*
 d. *Aspergillus terreus*
14. The theory for identifying previously unknown pathogen was propounded by:
 a. Leuwenhoek
 c. de Barry
 b. Robert Koch
 d. K.C. Mehta
15. Irish famine in 1840s broke due to:
 a. *Phytophthora infestans*
 c. *Puccinia recondita*
 b. *Phytophthora palmivora*
 d. *Penicillium notatum*
16. Lethal yellowing of coconut is due to which of the following organisms?
 a. Phytoplasma
 c. Fungi
 b. Bacteria
 d. Virus
17. *Xanthomonas citri* is the pathogen of which of the following disease?
 a. Anthracnose of mango
 c. Wilt of cotton
 b. Citrus canker
 d. Red rot of sugarcane
18. Bunchy top of banana is due to:
 a. Bacteria
 c. Mycoplasma
 b. Fungus
 d. Virus
19. Sigatoka disease of banana is caused by:
 a. *Mycosphaerella musicola*
 c. *Mucor mucedo*
 b. *Aspergillus flavus*
 d. *Rhizopus stolonifer*
20. *Ganoderma lucidum* is a:
 a. Wood inhabiting fungi
 c. Aquatic fungi
 b. Soil inhabiting fungi
 d. Coprophillus fungi

[PART-B : Descriptive]

Time : 2 hrs. 40 min.

Marks : 50

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

1. Write an account on the history and development of Plant Pathology. 10
2. a. Write briefly the symptoms of plant disease due to fungi. 5+5=10
 b. Write a note on Koch's postulation.
3. a. Write a flow chart on plant disease cycle and discuss. 4+6=10
 b. Draw a Plant Disease Triangle, label it and describe the role of its different arms.
4. a. Write about the plant disease control in relation to quarantine method. 6+4=10
 b. What is plant disease epidemiology? Mention its different factors.
5. Discuss the role of enzyme on the incidence of plant disease. 10
6. What is an obligate parasite? Exemplify it and write a vivid description of the polymorphic character of this fungus. 4+6=10
7. Write a note on- 5+5=10
 a. Mycotoxin in relation to plant disease.
 b. Victoria blight of oats.
8. a. Write a note on citrus canker. 5+5=10
 b. Give a detail description of 'Tobacco mosaic disease'.

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