

**M.Sc. BOTANY**  
**FOURTH SEMESTER**  
**MYCOLOGY & PLANT PATHOLOGY**  
**MSB-403 F**  
[USE OMR SHEET FOR OBJECTIVE PART]

**SET**  
**A**

Duration: 3 hrs.

Full Marks: 70

Time: 30 mins.

Marks: 20

( Objective )

Choose the correct answer from the following:

1 × 20 = 20

- Downy mildew disease is caused by:  
a. *Albugo* sp  
b. *Puccinia* sp  
c. *Peronospora* sp  
d. *Ustilago* sp
- Phytoplasma contain:  
a. RNA only  
b. RNA and DNA  
c. DNA only  
d. RNA or DNA
- The average population of endospheric microorganisms in soil is:  
a.  $10^2$  -  $10^4$  microbial cell/ml  
b.  $10^6$  -  $10^8$  microbial cell/ml  
c.  $10^8$  -  $10^9$  microbial cell/ml  
d.  $10^4$  -  $10^8$  microbial cell/ml
- Which of the following factors are responsible for the spreading of plant diseases?  
a. Air  
b. Rainfall  
c. Humidity  
d. All of these
- The mature particle of a plant virus is generally known as:  
a. Capsid  
b. Viriod  
c. Virion  
d. Nucleocapsid
- Which of the following is not a seed-borne disease?  
a. Red rot of sugarcane  
b. Blast of rice  
c. Potato mosaic  
d. Moulting of wheat
- Bunchy top of Banana plant disease is caused due to:  
a. Bacteria  
b. Fungi  
c. Nematode  
d. Virus
- Activated carbon is used in the process of:  
a. Absorption sampling  
b. Condensation sampling  
c. Adsorption sampling  
d. None of these
- What is the full form of SAR  
a. Systematic Acquired Resistance  
b. Systematic Anti Resistance  
c. Synergy Acquired Resistance  
d. Seasonal Anti Resistance
- This is the smallest organism capable of autonomous growth and reproduction:  
a. Mycoplasma  
b. Virus  
c. Viroid  
d. Nostoc

11. Which of the following is not a common symptom of plant disease?
  - a. Necrosis
  - b. Leaf curls
  - c. Chlorosis
  - d. Perfect flowering
12. Effective fungicide for the control of blast disease of rice is:
  - a. Tricyclazole
  - b. Plantvax
  - c. Bordeaux mixture
  - d. Mancozeb
13. Cell wall lack microorganism are known as:
  - a. Bacteria
  - b. Virus
  - c. MLO
  - d. Fungi
14. Mycoplasma is:
  - a. Eukaryotic and unicellular
  - b. Prokaryotic and unicellular
  - c. Eukaryotic and multicellular
  - d. None of these
15. The environmental factor responsible for host susceptibility is:
  - a. Rainfall
  - b. Temperature
  - c. Wind
  - d. Relative humidity
16. Which of these is a bacterial disease that affects the plant?
  - a. Mosaic
  - b. Smut
  - c. Blister
  - d. Crown Gall
17. The first event of plant disease cycle is:
  - a. Invasion
  - b. Penetration
  - c. Inoculation
  - d. None of the above
18. The late blight disease of potato is most serious when the:
  - a. Temperature is high
  - b. Temperature is low
  - c. Soil pH is acidic
  - d. Soil pH is alkaline
19. Father of Indian Mycology is:
  - a. R. S. Singh
  - b. Robert Kuch
  - c. D. Muller
  - d. E.J. Butler
20. Which one is the component of the disease triangle?
  - a. Pathogen
  - b. Host
  - c. Environment
  - d. All of the above

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**( Descriptive )**

Time : 2 hr. 30 mins.

Marks : 50

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

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| 1. Write a short note on Phytoplasma and Mycoplasma.   | 5+5=10 |
| 2. Describe briefly the chemical and biological control of plant diseases.   | 5+5=10 |
| 3. Describe briefly the symptoms of plant diseases caused by virus and bacteria.                                       | 10     |
| 4. Write the different techniques used in Aeromicrobiology? Mention some plant diseases caused by air borne pathogens. | 6+4=10 |
| 5. Write a short note on:<br>a) Plant quarantine<br>b) Dissemination of plant pathogens                                | 5+5=10 |
| 6. Describe the major changes in host physiology which occur due to the attack of plant pathogens.                     | 10     |
| 7. Write short notes on:<br>a) Systematic acquired resistance in plants.<br>b) Seed borne diseases in plants.          | 5+5=10 |
| 8. Write a brief note on various approaches of biotechnology in plant disease management.                              | 10     |

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