

2025

(FYUGP)

(2nd Semester)

BOTANY

(MINOR)

Paper : BCC/M-02

(Mycology and Phytopathology)

Full Marks : 75

Pass Marks : 40%

Time : 3 hours

(PART : B—DESCRIPTIVE)

(Marks : 50)

*The figures in the margin indicate full marks
for the questions*

- 1. Explain the cell wall structure and mode
of nutrition in fungi. 5+5=10**

Or

Write short notes on the following : 5×2=10

- (a) Slime molds**
**(b) Asexual and sexual reproduction of
lichen**

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(Turn Over)

2. Illustrate the life cycle of *Synchytrium* with diagram. 8+2=10

Or

Write short notes on the following : 5×2=10

- (a) Characteristic feature of Oomycota
- (b) Thallus structure of *Phytophthora*

3. Explain the life cycle of *Puccinia*. 10

Or

Write short notes on the following : 5×2=10

- (a) Bioluminescence
- (b) Parasexuality

4. Write short notes on the following : 5×2=10

- (a) Mycofungicides
- (b) Industrial use of fungi

Or

Describe the role of fungi in nanotechnology. 10

5. Describe the different plant quarantine methods in disease control. 10

Or

Write notes on the following : 5×2=10

- (a) Damping-off disease
- (b) General symptoms of plant diseases

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(FYUGP)

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BOTANY

(MINOR)

Paper : BCC/M-02

(Mycology and Phytopathology)

(PART : A—OBJECTIVE)

(Marks : 25)

The figures in the margin indicate full marks for the questions

Choose the correct answer by putting a Tick (✓) mark
in the brackets provided : 1×15=15

1. Fungi which can grow only on living host plant are called

(a) obligate parasites ()

(b) obligate saprophytes ()

(c) facultative parasites ()

(d) saprophytes ()

2. Hartig nets are found in

- (a) endomycorrhiza ()
- (b) ectomycorrhiza ()
- (c) oomycetous fungi ()
- (d) ascomycetous fungi ()

3. Which of the following are sexual spores in fungi?

- (a) Arthrospores ()
- (b) Ascospores ()
- (c) Sporangiospores ()
- (d) Chlamydospores ()

4. A button-like structure which penetrates the host and draws nutrients is

- (a) rhizoid ()
- (b) appressorium ()
- (c) rhizomorph ()
- (d) haustoria ()

5. Mycelium of class Oomycetes is always

- (a) coenocytic ()
- (b) septate ()
- (c) cross-septa ()
- (d) None of the above ()

6. Pseudomycelium is formed in

- (a) *Synchytrium* ()
- (b) *Rhizopus* ()
- (c) yeast ()
- (d) *Pythium* ()

7. Which type of fungicide is potentially most effective and economical?

- (a) Soil fumigant ()
- (b) Paste ()
- (c) Systematic fungicide ()
- (d) Dust ()

8. A fungus which requires only one single host for completion of its life cycle is called

(a) heteroecious ()

(b) autoecious ()

(c) heterothallism ()

(d) heterosporous ()

9. Teliospore is a/an

(a) sexual spore ()

(b) asexual spore ()

(c) vegetative spore ()

(d) chlamydospore ()

10. Which fungal disease is commonly associated with 'damping-off' in seedlings?

(a) Powdery mildew ()

(b) Rust ()

(c) Downy mildew ()

(d) *Rhizoctonia solani* ()

11. Parasexuality was first discovered by

- (a) Pontecorvo ()
- (b) Erikson ()
- (c) de Bary ()
- (d) Robert Koch ()

12. Dictyospore is a spore with

- (a) only horizontal septa ()
- (b) only vertical septa ()
- (c) both horizontal and vertical septa ()
- (d) No septa ()

13. Once the pathogen has established in an area, the steps taken to remove or destroy is known as

- (a) exclusion ()
- (b) eradication ()
- (c) protection ()
- (d) prevention ()

14. What is the primary reproductive structure of most fungi?

(a) Ascus ()

(b) Basidium ()

(c) Spore ()

(d) Mycelium ()

15. Which scientist is considered as the 'Father of Phytopathology'?

(a) Louis Pasteur ()

(b) Antonie van Leeuwenhoek ()

(c) Heinrich Anton de Bary ()

(d) Robert Koch ()

(7)

Answer/Write notes on any *five* of the following in short :// 2x5=10

1. What is a dolipore septum?

2. What is a disease triangle in plant pathology?

3. Differentiate between homothallism and heterothallism.

(10)

4. Define coenocytic hyphae and mycelium.

5. Differentiate between telemorph and anamorph.

6. Role of haustorium

7. What is plasmodium?

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