

2024

(FYUGP)

(2nd Semester)

BOTANY

(Minor)

Paper Code : 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*

UNIT—I

1. (a) Explain the thallus organization of fungi
as well as its mode of nutrition. 5+5=10

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(Turn Over)

(2)

Or

- (b) Write short notes on the following : 5+5=10
- (i) Nature of associations of algal and fungal partners
 - (ii) Mycorrhizae and its significance

UNIT—II

2. (a) Discuss in detail the life cycle of phytophthora. 10

Or

- (b) Write short notes on the following : 5+5=10
- (i) Characters of zygomycota
 - (ii) Rhizopus

UNIT—III

3. (a) Give a detailed note with appropriate diagrams in regard to the life cycle of Saccharomyces. 10

Or

- (b) Write short notes on the following : 5+5=10
- (i) Characters of ascomycota
 - (ii) Heterokaryosis

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(Continued)

(3)

UNIT—IV

4. (a) What are secondary metabolites? Explain the role of fungal species in secondary metabolites. Add a note on biofertilizers. 2+4+4=10

Or

- (b) Write short notes on the following : 5+5=10
- (i) Application of fungi in baking
 - (ii) Fungi in biological control

UNIT—V

5. (a) Explain the plant disease of citrus canker in detail. 10

Or

- (b) Write short notes on the following : 5+5=10
- (i) Disease cycle
 - (ii) White rust of crucifers

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(**Mycology and Phytopathology**)

(PART : A—OBJECTIVE)
(Marks : 25)

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SECTION—I

(Marks : 15)

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

1. The chemical component of cell wall in fungi is

- (a) cellulose ()
- (b) lipid ()
- (c) chitin ()
- (d) lysine ()

2. _____ are specialized cells produced by fungi from which a penetration peg emerges that pierces the host tissues.

- (a) Haustorium ()
- (b) Stromata ()
- (c) Parenchyma ()
- (d) Appressorium ()

3. The fungal component of lichens is

- (a) mycology ()
- (b) mycobiont ()
- (c) phycology ()
- (d) phycobiont ()

4. Which saprophytic fungi is also known a bread mold?

- (a) Aspergillus ()
- (b) Saccharomyces ()
- (c) Agaricus ()
- (d) Rhizopus ()

5. Advanced forms of Chytridiomycetes attached to the substratum with the help of

- (a) rhizoids ()
- (b) lichens ()
- (c) hyphae ()
- (d) None of the above ()

6. Some members of fungal organisms live completely within the cells of the host called

- (a) holocarpic ()
- (b) eucarpic ()
- (c) endobiotic ()
- (d) epibiotic ()

7. The name Saccharomyces is related to

- (a) baking ()
- (b) brewing ()
- (c) baking and brewing ()
- (d) None of the above ()

8. The terminal binucleate cell of the ascogenous hyphae elongate then bend itself to form a hook-like structure known as
- (a) crozier ()
- (b) trichogyne ()
- (c) mycelium ()
- (d) rhizomorph ()
9. The fruit bodies appear in circle in grassy lands, forming the 'fairy-ring' in
- (a) Mucor ()
- (b) Agaricus ()
- (c) Synchytrium ()
- (d) Yeast ()
10. Sir Alexander Fleming (1929) isolated penicillin from
- (a) *Penicillium chrysogenum* ()
- (b) *Penicillium cephalosporin* ()
- (c) *Penicillium notatum* ()
- (d) None of the above ()

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11. Toxins produced by ingested fungal species are known as
- (a) mycotoxins ()
- (b) aflatoxins ()
- (c) cytotoxins ()
- (d) exotoxins ()
12. ____ is the ability to cause disease.
- (a) Pathogen ()
- (b) Pathogenicity ()
- (c) Inoculum ()
- (d) Inoculum potential ()
13. Those diseases which are limited to a definite area of varying extent of an organ, or only to a particular part of the plant is
- (a) systemic diseases ()
- (b) soil-borne diseases ()
- (c) seed-borne diseases ()
- (d) localised diseases ()

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(6)

14. Citrus canker is a _____ disease.

- (a) fungal ()
- (b) viral ()
- (c) bacterial ()
- (d) None of the above ()

15. A regulatory mechanism that exporting and importing countries use to ensure that diseases are not carried by the material being trade is

- (a) quarantine ()
- (b) prevention ()
- (c) disease management ()
- (d) pathogen management ()

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SECTION—II
(Marks : 10)

Write on any *five* of the following in few sentences : 2×5=10

1. Prosenchyma

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2. Isogamy and anisogamy

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3. Gametangial contact

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4. Fructicose lichen

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5. Parasexuality

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6. Nanotechnology

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(13)

7. Damping off disease

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