

U.G. 2nd Semester Examination - 2023**BOTANY****[HONOURS]****Course Code : BOT-H-CC-T-04****(Diversity of Fungi and Plant Pathology)****Full Marks : 40****Time : 2½ Hours***The figures in the right-hand margin indicate marks.**Candidates are required to give their answers in their own words as far as practicable.*

1. Answer any five questions: 2×5=10
- a) Define biotroph and necrotroph with example.
 - b) Distinguish between apothecium and perithecium.
 - c) Define spawn and compost in mushroom cultivation.
 - d) Name two fungi involved in production of organic acid and mycoprotein.
 - e) Define susceptibility and resistance.
 - f) What is hypertrophic symptom? Give example.
 - g) Define inoculum and infection.

[Turn over]

h) What is hypersensitive response in plant defense mechanism?

2. Answer any two questions: $5 \times 2 = 10$

a) Briefly discuss the asexual reproduction of *Rhizopus*. 5

b) Discuss the asexual reproductive cycle of *Phytophthora* by word diagram only. What is apical papilla? 4+1

c) How do pathogens penetrate the host surface during development of a disease? What is elicitor? 4+1

d) Mention the importance of phytoalexins in plant defense response. 5

3. Answer any two questions: $10 \times 2 = 20$

a) Define gametangial copulation. Discuss the process of sexual reproduction in heterothallic species of *Rhizopus* with suitable diagram. Mention the role of Trisporic acid in this process. 2+6+2

b) Describe the structure of VAM with suitable diagram. What is Hartig net? Mention the importance of mycorrhizae in agriculture and forestry. 2+2+6

c) Discuss the different types of plant diseases based on occurrence and severity. Write a brief note on Plant Quarantine. 6+4

d) Name the causal organism of Bacterial Blight disease of rice. Discuss the symptoms, disease cycle, and control measures of this disease. 1+3+3+3