

Total number of printed pages-4

1 (Sem-4/FYUGP) BOT 41 MJ

2026

BOTANY

(Major)

Paper : BOT4400104MJ

(Mycology and Phytopathology)

Full Marks : 45

Time : 2 hours

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

1. Choose the correct option for each question :
1×5=5

(a) When a fungus is originally a saprophyte but can live as a parasite then it is called _____.

- (i) Obligate parasite
- (ii) Facultative saprophyte
- (iii) Facultative parasite
- (iv) Saprophyte

(b) The club-like structure in Basidiomycetes where spores are formed exogenously is called _____.

- (i) Ascus
- (ii) Basidium
- (iii) Conidiophore
- (iv) Sporangium

(c) Name of the fruiting body found in *Penicillium* is _____.

- (i) Cleistothecium
- (ii) Apothecium
- (iii) Perithecium
- (iv) Hysetrothecium

(d) Which fungus is mostly used in bread making ?

- (i) *Penicillium notatum*
- (ii) *Phytophthora infestans*
- (iii) *Aspergillus niger*
- (iv) *Saccharomyces cerevisiae*

(e) The causal organism of "Red Rust Disease of tea" is _____.

- (i) *Cephaleuros parasitica*
- (ii) *Claviceps purpurea*
- (iii) *Alternaria solani*
- (iv) *Exobasium vexen*

2. Write short answers of **any five** of the following :
2×5=10

(a) Distinguish between zoospores and sporangiospores.

(b) Define mycelium and hypha.

(c) What is a dikaryotic life cycle ?

(d) What is prosorus ?

(e) What is a Cleistothecium ?

(f) What is clamp connection ?

(g) Distinguish between uredospore and telentospore.

(h) What is an anamorphic form of a fungus ?

(i) Write the important features of ectomycorrhizae.

(j) Name *two* species of fungi which are edible mushrooms.

3. Answer **any four** of the following :

5×4=20

- (a) Write *any one* classification of fungi you have studied from your syllabus.
- (b) Define heterothallism. Explain its discovery.
- (c) Mention *at least five* asexual spores of fungi along with its development.
- (d) How do biocontrol agents help in plant disease control? Explain *any one* of BGA as controlling agent.
- (e) Write short note on Rhizomorph.
- (f) Explain asexual reproduction in *Synchytrium*.
- (g) Write about the systematic position of yeast as per the modern classification.
- (h) Write a short note on Citrus Canker.

4. Answer **any one** of the following : 10×1=10

- (a) Explain how fungi economically help in industry and agriculture.
- (b) Describe haplobiontic and diplobiontic type of life cycles of *Saccharomyces*.
- (c) Discuss the dikaryotic stages of the life cycle of *Puccinia graminis tritici*.
- (d) Give an account of host-pathogen relationship.