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[Roll No.]

BOT-553

**M.Sc. (Botany) IInd Year
Examination Dec., 2023**

**APPLIED MYCOLOGY AND
PLANT PATHOLOGY**

Time : 2 Hours]

[Max. Marks : 70

Note :- This paper is of Seventy (70) marks divided into two (02) Sections 'A' and 'B'. Attempt the questions contained in these Sections according to the detailed instructions given there in. Candidates should limit their answers to the questions on the given answer sheet. No additional (B) answer sheet will be issued.

Section-A

(Long Answer Type Questions) 2×19=38

Note :- Section 'A' contains Five (05) Long-answer type questions of Nineteen (19) marks each. Learners are required to answer any two (02) questions only.

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(1)

P.T.O.

1. Give an illustrated account of cell structure in fungi and also describe different modes of sexual reproduction in fungi.
2. How will you classify the fungi ? Explain briefly the classification proposed by Ainsworth (1973).
3. What are different types of mycorrhizae ? Explain any four types of mycorrhizae.
4. Explain symptoms, causal organism, disease cycle and control measures of wilt of potato and tomato; leaf curl of papaya, loose smut of wheat and powdery mildew of grapes.
5. What are biopesticides ? Give a detailed account of fungal biopesticides.

Section–B

(Short Answer Type Questions) 4×8=32

Note :- Section 'B' contains Eight (08) Short-answer type questions of Eight (08) marks each. Learners are required to answer any *four* (04) questions only.

1. Write a short note on the fungal diversity with examples.

2. Write brief notes on following (any *four*) :
 - (a) PCR
 - (b) RAPD
 - (c) RFLP
 - (d) Endemic diseases
 - (e) Epidemic or epiphytotic diseases
3. Give a brief account of medicinal and nutritional values of mushrooms.
4. Write a short note on any *two* of the following :
 - (a) Edible mushrooms
 - (b) Antibiotics
 - (c) Industrial importance of fungi.
5. Describe the following :
 - (a) Thallus organization in fungi.
 - (b) Asexual reproduction in fungi
6. Describe the role of fungi in degradation of hydrocarbons.
7. Write short note on bioremediation of waste water and sewage treatment.

8. Write short notes on the following:

(a) Fungi as pollution indicators

(b) Proteins from fungi
