

Roll No. ....

Total Pages : 3

**MDQ/D-23**

**5228**

## **APPLIED MYCOLOGY**

Paper–BOT-304(b)

Time Allowed : 3 Hours]

[Maximum Marks : 80

**Note** : Attempt **five** questions in all, selecting **one** question from each Unit. Question No. **1** is compulsory. All questions carry equal marks.

### **Compulsory Question**

1. Answer the following : 8×2=16
- (a) Differentiate between primary metabolites and secondary metabolites.
  - (b) Difference between beer, wine and whisky.
  - (c) Difference between bakers' yeast and beverages yeast.
  - (d) Two examples of biocontrol of weeds with fungal pathogens.
  - (e) Three examples of edible and non-edible mushrooms.
  - (f) Differentiate between endomycorrhizal and ectomycorrhizal fungi.
  - (g) Two examples of oriental food production.
  - (h) Biodeterioration of paper.

### **UNIT-I**

2. Attempt any **two** of the following : 2×8=16
- (a) Role of microbes in beer production.
  - (b) Role of microbes in Citric acid production.
  - (c) Alcohol production by microbes.
3. Short notes on any **two** of the following : 2×8=16
- (a) Role of microbes in antibiotic production.
  - (b) Role of microbes in glutamic acid production.
  - (c) Biotransformation of steroids by microbes.

### **UNIT-II**

4. What are biofertilizers? Explain the role of endomycorrhizal fungi as biofertilizers with suitable examples. 16
5. Define biocontrol agents. Explain the mechanism of biocontrol agents with suitable examples. 16

### **UNIT-III**

6. Explain any **two** of the following : 2×8=16
- (a) Role of microbes in cheese production.
  - (b) Role of microbes in single cell protein production.
  - (c) Role of microbes in fungal toxicity.

7. Short notes on any **two** of the following :  $2 \times 8 = 16$

- (a) Role of microbes in bread production.
- (b) Commercial production of button mushroom.
- (c) Baker's yeast production by microbes.

#### UNIT-IV

8. Attempt any **two** of the following :  $2 \times 8 = 16$

- (a) Isolation of fungi from soil.
- (b) Three methods of preservation of culture.
- (c) Important culture centres of India and abroad.

9. Short notes on any **two** of the following :  $2 \times 8 = 16$

- (a) Isolation of pathogen from infected leaf.
- (b) Common culture media.
- (c) Sterilization of media and glassware.