



17544



## BRAINWARE UNIVERSITY

**Term End Examination 2024-2025**  
**Programme – B.Sc.(FND)-Hons-2024**  
**Course Name – Mushroom Cultivation**  
**Course Code - BFD20002**  
**( Semester II )**

*Library*  
Brainware University  
398, Ramkrishnapur Road, Barasat  
Kolkata, West Bengal-700125

**Full Marks : 60**

**Time : 2:30 Hours**

[The figure in the margin indicates full marks. Candidates are required to give their answers in their own words as far as practicable.]

### **Group-A**

(Multiple Choice Type Question)

1 x 15=15

1. Choose the correct alternative from the following :

- (i) What is the term used to describe the above-ground reproductive structure of a mushroom?
  - a) Hyphae
  - b) Mycelium
  - c) Fruiting body
  - d) Spore print
- (ii) List one common vegetative character that distinguishes most edible mushroom.
  - a) Foul odor
  - b) Slime on the cap
  - c) Well-defined gills
  - d) Bright red coloration
- (iii) Indicate the main benefit of cultivating mushrooms in the food industry.
  - a) They are a good source of protein and vitamins
  - b) They help control pests and diseases
  - c) They improve soil fertility
  - d) They are used in biofuel production
- (iv) Explain the reason of soaking the substrate before sterilization :
  - a) Reduce the moisture content, making sterilization more efficient.
  - b) Increase the population of competing microorganisms
  - c) Improve heat penetration for more effective sterilization.
  - d) Decrease the nutritional value of the substrate for mushrooms.
- (v) Explain the reason of aseptic technique during spawn production.
  - a) To ensure the grains cook evenly during sterilization.
  - b) To prevent contamination of the spawn by unwanted microorganisms.
  - c) To maintain a specific moisture content in the spawn.
  - d) To speed up the colonization process by the mushroom mycelium.

- (vi) Select the "spawning" referred to in mushroom cultivation.
- a) The process of introducing light to the developing mushrooms
  - b) The addition of a casing layer to the mushroom bed surface
  - c) Inoculating the prepared substrate with spawn
  - d) The harvesting of mature mushrooms from the bed
- (vii) What is the main purpose of a casing layer used in some mushroom beds?
- a) To provide additional nutrients for the mushrooms
  - b) To increase the light exposure for developing mushrooms
  - c) To suppress the growth of competing microorganisms
  - d) To retain moisture in the substrate
- (viii) Write the Indian mushroom production is currently dominated by:
- a) Shiitake mushroom
  - b) Oyster mushroom
  - c) Paddy straw mushroom
  - d) All of these
- (ix) Explain the reason of soaking the substrate before sterilization:
- a) Reduce the moisture content, making sterilization more efficient.
  - b) Increase the population of competing microorganisms.
  - c) Improve heat penetration for more effective sterilization.
  - d) Decrease the nutritional value of the substrate for mushrooms.
- (x) Select the purpose of a casing layer used in some mushroom beds is to:
- a) Provide additional nutrients for the mushrooms.
  - b) Suppress the growth of competing microorganisms.
  - c) Increase the light exposure for developing mushrooms.
  - d) Retain moisture in the substrate.
- (xi) Identify the mushroom is commonly used in traditional Chinese medicine to promote longevity and vitality.
- a) *Hericium erinaceus*
  - b) *Lentinula edodes*
  - c) *Trametes versicolor*
  - d) *Cordyceps sinensis*
- (xii) Recommend a value-added product that can be made from mushrooms:
- a) Fresh mushroom salad mix
  - b) Mushroom powder for soups and sauces
  - c) Whole, cooked mushrooms
  - d) Sliced raw mushrooms
- (xiii) Analyze the following statement: "Mushrooms can be a profitable crop for entrepreneurs." Explain your reasoning.
- a) This statement is entirely false.
  - b) This statement is partially true. The high demand for mushrooms, coupled with proper cultivation and processing techniques, can make them profitable.
  - c) Only specific types of mushrooms are commercially viable.
  - d) The shelf life of mushrooms is too short for them to be profitable.
- (xiv) Select the entrepreneurial skill is essential for a successful mushroom processing business.
- a) Rapidly expanding production without quality control
  - b) Pricing products below market value
  - c) Creating innovative value-added mushroom products
  - d) Ignoring customer feedback
- (xv) What is an essential aspect of quality assurance in mushroom canning?
- a) Ensuring the canning process is conducted at room temperature
  - b) Checking for proper sealing to prevent contamination
  - c) Adding excessive salt or sugar for preservation
  - d) Allowing canned mushrooms to sit at room temperature for extended periods

**Group-B**  
(Short Answer Type Questions)

3 x 5=15

2. List three medicines from the poisonous mushroom. (3)
3. Write a note on mushroom polysaccharide. (3)
4. Explain the benefits of mushroom cultivation. (3)
5. Describe the importance of sterilization in mushroom cultivation. (3)
6. Compare any 2 edible mushrooms based on the habitat and distribution. (3)

OR

Analyse the importance of oyster mushroom in terms of nutritional value. (3)

**Group-C**  
(Long Answer Type Questions)

5 x 6=30

7. Express carbohydrate, fibre and vitamin content of different mushrooms. (5)
8. Evaluate the importance of terpenoids extraction from mushroom. (5)
9. Explain the value- added mushroom products. (5)
10. Describe the beneficial effect of polysaccharide of mushroom. (5)
11. Explain the common source of disease of mushroom. (5)
12. Express the mushroom preservation process through caning. (5)

OR

Determine the marketable products of mushroom. (5)

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