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63/1 (SEM-4) SEC2/BOTSE4022

2025

BOTANY

Paper : BOTSE4022

(Mushroom Culture Technology)

Full Marks : 50

Pass Marks : 20

Time : Two hours

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

1. Choose the correct answer from **any five** of the following : 1×5=5

(a) Raw materials for mushroom cultivation when treated overnight with treatment like fermentation which cause less change in the physico-chemical characteristics, it is called :

(i) Compost

(ii) Substrate

- (iii) Media
- (iv) Supplements
- (b) Components (other than processed raw materials) which are given or required in mushroom cultivation as a source of mycelia in the cultivation bags are called :
 - (i) Culture
 - (ii) Supplements
 - (iii) Paddystraw
 - (iv) Spawn
- (c) Which of the following mushroom is deadly poisonous ?
 - (i) Cantharellus group
 - (ii) Amanita group
 - (iii) Lepiota group
 - (iv) Always mushroom with annuli rings
- (d) Oyster mushroom are mostly winter mushroom which are grown in temperature _____.
 - (i) $35\pm 2^{\circ}\text{C}$
 - (ii) $45\pm 2^{\circ}\text{C}$

- (iii) $10\pm 2^{\circ}\text{C}$
- (iv) $25\pm 2^{\circ}\text{C}$
- (e) What is the pH of the medium where mycelium are grown ?
 - (i) Alkaline
 - (ii) Neutral
 - (iii) Slightly acidic
 - (iv) Any pH depending on the species
- (f) Conceptually mushroom cultivation is a _____.
 - (i) Solid waste management technology
 - (ii) Cheap horticultural technology
 - (iii) Circular economy enhancement technology
 - (iv) Vertical farming technology
- (g) Mushroom are _____.
 - (i) Multi Cellular Protein Food
 - (ii) Single Cell Protein Food
 - (iii) High Protein Food
 - (iv) Low Protein Food

- (h) Milky mushroom are grown in
- (i) $25 \pm 2^\circ\text{C}$
 - (ii) $35 \pm 2^\circ\text{C}$
 - (iii) $40 \pm 2^\circ\text{C}$
 - (iv) $15 \pm 2^\circ\text{C}$
- (i) Mushroom are very low in _____.
- (i) Starch and fat
 - (ii) Protein and fat
 - (iii) Carbohydrate and Fat
 - (iv) Vitamins and fat
- (j) False Truffle is a competitor to mushroom cultivation and cause huge damage to _____ mushroom.
- (i) Oyster
 - (ii) Button
 - (iii) Milky
 - (iv) Paddystraw

2. Answer the following questions : **(any five)**
2×5=10

- (a) Define biotransformation.
- (b) What is pasteurization in mushroom cultivation ?
- (c) Differentiate between substrate and compost.
- (d) What is shelf life of mushroom ?
- (e) What are the quality control parameters in mushroom cultivation ?
- (f) Explain about nutrient composition of mushroom.
- (g) Write short notes on the medicinal mushrooms.

3. Answer the following questions : **(any five)**
5×5=25

- (a) Justify NE Region of India as paradise for mushroom industry.
- (b) Justify how mushroom cultivation helps in minimizing agricultural crop residue.
- (c) Write short notes on value added products of mushrooms.

- (d) Justify why mushrooms are regarded as superfood.
- (e) Justify mushroom as tool for Agri-business in NER states.
- (f) Write short notes on disease management of mushroom.
- (g) Write short notes on spawn.
- (h) Describe different substrates used in mushroom industry.
- (i) Write notes on long method of compost production of button mushroom.

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

- (a) Describe the process of production of Paddystraw Mushroom or Oyster mushroom.
- (b) Describe the process of obtaining pure culture from mushroom.
- (c) Write the various value added product from mushroom

