

# **GOVERNMENT DEGREE COLLEGE, NANDIKOTKUR**

## **DEPARTMENT OF BOTANY**

### **Mushroom Cultivation**

#### **Unit 1: Introduction and Value of Mushrooms**

##### **Short Answer Questions:**

1. Define mushrooms and describe their structure.
2. Explain the life cycle of a mushroom.
3. Discuss the historical background and scope of mushroom cultivation.
4. Differentiate between edible and poisonous mushrooms.
5. Describe the morphological features of the Button Mushroom (*Agaricus bisporus*).
6. Describe the morphological features of the Milky Mushroom (*Calocybe indica*).
7. What are the medicinal benefits of *Ganoderma lucidum* and *Pleurotus pulmonarius*?
8. Discuss the harmful effects of poisonous mushrooms.

##### **Long Answer Questions:**

1. Discuss the definition, structure, and life cycle of a mushroom in detail.
2. Compare the features and cultivation processes of edible mushrooms like the Button, Milky, and Oyster mushrooms.
3. Explain the nutraceutical value of mushrooms and their therapeutic applications, with specific examples from South India.

#### **Unit 2: Basic Requirements of Cultivation System**

##### **Short Answer Questions:**

1. What are the basic requirements for a small village mushroom farm unit?
2. Describe the layout and design of a commercial mushroom farm.
3. What are the key factors in the location of a mushroom farm?
4. What is composting? What machinery is required for compost making?
5. List the materials used for compost preparation.

##### **Long Answer Questions:**

- 1.Explain the layout, design, and facilities required for setting up a mushroom farm for both small and large-scale units.
- 2.Describe the process and machinery required for compost preparation in mushroom cultivation.

### **Unit 3: Spawning and Casing**

#### **Short Answer Questions:**

- 1.Define spawn and explain the process of spawning in mushroom cultivation.
- 2.What are the essential facilities required for spawn preparation?
- 3.What is pure culture, and how is it prepared in mushroom cultivation?
- 4.Discuss the different media used in raising pure culture.
- 5.Define casing. Why is it important in mushroom cultivation?
- 6.List the quality parameters for casing soil and the commonly used casing materials.

#### **Long Answer Questions:**

- 1.Explain the concept of spawn and the facilities required for its preparation. How is spawn substrate prepared?
- 2.Discuss the importance of casing, types of casing mixtures, and their roles in successful mushroom cultivation.

### **Unit 4: Mushroom Cultivation**

#### **Short Answer Questions:**

- 1.What are the key stages involved in mushroom cultivation?
- 2.Discuss common diseases, pests, and nematodes affecting mushroom cultivation.
- 3.What are the management strategies for controlling weed molds in mushrooms?
- 4.Explain the process of picking and packing mushrooms.
- 5.How does the shelf life of mushrooms affect their preservation?

#### **Long Answer Questions:**

- 1.Describe the entire process of mushroom cultivation, including raw material preparation, composting, spawning, casing, cropping, and post-cropping processes for any two types of mushrooms (Button, Milky, or Oyster).

2. Discuss the challenges faced during mushroom cultivation, including pests, diseases, and molds, and their management strategies.

### **Unit 5: Post Harvest Technology**

#### **Short Answer Questions:**

1. How are mushrooms preserved through freezing, dry freezing, and drying?
2. Explain the concept of quality assurance in mushroom production.
3. What are the economics of mushroom cultivation and entrepreneurship?
4. List the value-added products of mushrooms.
5. What are the various methods of mushroom canning?

#### **Long Answer Questions:**

1. Explain the different preservation techniques for mushrooms, such as freezing, drying, and canning.
2. Discuss the quality assurance processes in mushroom cultivation and the economics involved in mushroom farming and entrepreneurship.