**Question bank 2024**

Mushroom Cultivation- Elective / 4th class, plant protection department

### Section 1: Definitions

**Define the following concepts:**

* Spore print
* Grain spawn
* Compost
* Compost supplements
* Pasteurization
* Mycelium
* Substrate
* Sterilization
* Agar media
* Spawn run
* Fruiting body
* Autoclave
* Casing layer
* Inoculation
* Hyphae

### Section 2: Answer the Following Questions (Processes and Techniques)

1. What is the purpose of composting? Explain.
2. Describe the steps involved in preparing a mushroom growing substrate.
3. Explain the process of spawn preparation and its importance in mushroom cultivation.
4. What are the benefits of adding gypsum (calcium sulfate) to the compost?
5. Outline the steps for pasteurizing mushroom substrate.
6. Describe the method for creating a spore print.
7. Compare and contrast primary and secondary decomposers.
8. Differentiate between saprophytic, mycorrhizal, and parasitic mushrooms with examples.
9. What is the difference between aerobes and anaerobes organisms during composting?
10. Describe the role of microorganisms in the composting process.
11. Explain the ecological importance of mycorrhizal fungi.
12. Provide 5 general rules and advice for collecting mushrooms.
13. Discuss common problems encountered in mushroom cultivation and their solutions.
14. List and describe common diseases that affect mushroom crops.
15. Identify common pests that affect mushroom cultivation and methods for controlling them.
16. Explain the importance of maintaining sterile conditions during mushroom cultivation.
17. Describe the process of inoculating a substrate with mushroom spawn.
18. Explain the significance of temperature and humidity control in mushroom cultivation.
19. Discuss the nutritional and medicinal benefits of cultivated mushrooms.
20. Explain how mushrooms can be used in bioremediation.
21. Describe the process of mycoremediation and give an example of its application.
22. Explain the economic impact of mushroom cultivation on a small-scale farm.
23. Discuss the challenges and opportunities in commercial mushroom farming.
24. Explain the process of scaling up from a home-based mushroom cultivation setup to a commercial operation.

### Section 3: Draw

1. Draw and label a simplified mushroom life cycle.
2. Draw the composting process highlighting the roles of aerobes and anaerobes.
3. Create a diagram illustrating the equipment setup for spawn preparation.
4. Sketch the stages of mushroom formation from spore to fruiting body.
5. Draw the structure of a typical mushroom, labeling all key parts.

### Section 4: Fill in the Blanks

1. Mushrooms reproduce through the release of \_\_\_\_\_\_\_\_\_\_.
2. The main body of a mushroom that grows underground is called \_\_\_\_\_\_\_\_\_\_.
3. \_\_\_\_\_\_\_\_\_\_ is the process of heating the substrate to kill unwanted organisms.
4. A common supplement added to mushroom compost to enhance growth is \_\_\_\_\_\_\_\_\_\_.
5. \_\_\_\_\_\_\_\_\_\_ is a technique used to create pure mushroom cultures in a lab setting.
6. Mushrooms that form a symbiotic relationship with plant roots are called \_\_\_\_\_\_\_\_\_\_.
7. \_\_\_\_\_\_\_\_\_\_ and \_\_\_\_\_\_\_\_\_\_ are two common diseases that affect mushroom crops.
8. To control humidity during mushroom cultivation, growers often use \_\_\_\_\_\_\_\_\_\_.
9. The first step in preparing mushroom compost is \_\_\_\_\_\_\_\_\_\_.
10. One of the main pests in mushroom cultivation is \_\_\_\_\_\_\_\_\_\_.