

Session: 2025-26			
Part A – Introduction			
Subject	BOTANY		
Semester	5 th		
Name of the Course	Mushroom Production Technology		
Course Code	B25-VOC-147		
Course Type: (CC/MCC/MDC/CC-M/DSEC/VOC/DSE/PC/AEC/VAC)	VOC-1		
Level of the course (As per Annexure-I)	100-199		
Pre-requisite for the course (if any)			
Course Learning Outcomes(CLO):	After completing this course, the learner will be able to: 1. Students will be able to understand the nutritional and medicinal value of edible mushrooms. 2. Students will develop a conceptual understanding of various procedure and techniques used for mushroom cultivation. 3. Students will gain knowledge about the storage procedure of different types of edible mushrooms. 4. Students will be able to understand the harvest, post harvest and marketing procedure of cultivated mushrooms. 5. Students will gain the knowledge of practical aspects of mushroom cultivation		
	Theory	Practical	Total
Credits	2	2	4
Contact Hours	2	4	6
THEORY			
Max. Marks: 50 Internal Assessment Marks: 15 End Term Exam Marks: 35	Time: 3 Hours		
Practical			
Max. Marks: 50 Internal Assessment Marks: 15 End Term Exam Marks: 35	Time: 4 Hours		
Part B-Contents of the Course			
Instructions for Paper- Setter 1. Nine questions will be set in all. All questions will carry equal marks. 2. Question No.1 will be short answer type covering the entire syllabus and will be compulsory. The remaining eight questions will be set unit wise selecting two questions from each unit. The candidate will be required to attempt question No. 1 and four more questions selecting one question from each unit.			
Unit	Topics		Contact Hours
I	Introduction to Mushroom Farming What are mushrooms? Types of edible mushrooms: Button, Oyster, Paddy straw, Milky Nutritional and medicinal value of mushrooms Role of mushrooms in health and income generation		7
II	Basic Biology, Infrastructure, and Materials Scope of mushroom farming in India (urban & rural) Government support schemes and success stories Required infrastructure: low-cost models for home or backyard farming Tools and materials: spawn, substrate, bags, racks, casing soil Safety and hygiene: do’s and don’ts to avoid contamination		7

III	Step-by-Step Cultivation Techniques Substrate preparation (paddy straw, wheat straw, sawdust, etc.) Spawn inoculation: how to mix spawn with substrate Bag filling and incubation techniques Managing temperature and humidity in a simple setup Identification of growth stages Pests, diseases, and how to prevent them using simple methods	8
IV	Harvesting, Post-Harvest Handling, and Business Skills When and how to harvest mushrooms Cleaning, drying, and basic storage Cost estimation and profit calculation Small-scale packaging ideas Marketing channels: local markets, organic shops, hotels, door delivery How to start a mushroom business: legal requirements, FSSAI basics, local markets Connecting with training centres, KVKs, MSME support	8
V*	Practical & Skill Development • Identification of substrates and hands-on preparation • Practical demonstration of spawn mixing and bag filling • Setting up a mini mushroom unit in class or farm • Daily observation of growth and noting changes. • Demonstration of harvesting and post-harvest care • Drying and packaging techniques using simple tools • Preparing a business plan (basic costing, pricing, profit margin) • Visit to a nearby mushroom farm or training centre. • Guest talk by a local mushroom entrepreneur • Distribution of DIY mushroom kits for home practice	60
Suggested Evaluation Methods		
Internal Assessment: >Theory • Class Participation : 04 • Seminar/presentation/assignment/quiz/class test etc. : 04 • Mid-Term Exam : 07 >Practical • Class Participation : 05 • Seminar/Demonstration/Viva-voce/Lab records etc. : 10 • Mid-Term Exam : NA		End Term Examination Theory : 35 Practical : 35
Part C-Learning Resources		
Recommended Books/e-resources/LMS: • Sharma, V. P., & Kumar, S. (2020). Mushroom Cultivation: A Practical Approach. Daya Publishing House. • Suman, B. C., & Sharma, V. P. (2007). Mushroom Cultivation in India. Daya Publishing House. • Kumar, S., & Sharma, V. P. (2017). Edible Mushrooms: Cultivation, Bioactive Molecules, and Health Benefits. Studium Press. • Singh, M., Vijay, B., Kamal, S., & Wakchaure, G. C. (2011). Mushroom Cultivation Technology. ICAR. • Chandra, S. (2020). Entrepreneurship Development in Mushroom Farming. New India Publishing Agency • Bhatt, B. P., & Singh, R. (Eds.). (2020). Mushroom: A Potential Agribusiness for Rural Development. ICAR.		