

**DEPARTMENT OF BOTANY**  
**NIRMALAGIRI COLLEGE**  
**NIRMALAGIRI**



**CERTIFICATE COUSE IN MUSHROOM CULTIVATION**  
(NON-SEMESTER CERTIFICATE COURSE)

**SCHEME OF EXAMINATION AND SYLLABUS**

**NIRMALAGIRI COLLEGE**  
**CERTIFICATE COUSE IN MUSHROOM CULTIVATION**

**(Non-Semester}**

**(With effect from the academic year 2020 Onwards)**

**Scheme of examination and syllabus**

**INTRODUCTION**

Mushrooms are one of the most health-promoting foods on our planet Earth. An estimated 50% of edible mushrooms have a potentially positive effect on health beyond basic nutrition. According to scientific studies, mushrooms can be useful in preventing and treating serious health conditions and improving overall health. Mushrooms are rich in nutritional value. They're low in calories, but great sources of fiber and protein. They also provide many important nutrients, including vitamin B complex, selenium, potassium, copper, and vitamin D. They are rich in many antioxidants as fruits and vegetables. Moreover as a food, mushroom farming and marketing is a big profitable business with considerably low start up investment.

**OBJECTIVES**

- Embarking the confidence and personal skills for the self-employment on mushroom cultivation.
- Identify business opportunities in marketing and selling the products.

- Developing entrepreneurs by involving with different stake holders
- Identify edible and poisonous mushrooms
- Work out the economics of Mushroom Cultivation
- Production of value added products from Mushroom

**ELIGIBILITY FOR THE COURSE:**

Candidates for admission to certificate course in Mushroom Culture could possess a Higher Secondary School Education in Science subject with Biology.

**DURATION OF THE COURSE:**

Six months Certificate Course in Mushroom Cultivation and Marketing course: non-semester for 30 hrs duration. Certificates will be issued to candidates on successful completion of the course.

**SCHEME OF EXAMINATION**

<b>Sl.No:</b>	<b>Paper</b>	<b>Marks</b>
1	Paper -I - Theory	50
2	Paper -II = Practical	30
3	Internal Assessment	20
<b>TOTAL</b>		<b>100</b>

# SYLLABUS

## MUSHROOM CULTIVATION

**TOTAL HOURS: 30**

**Unit: I Mushroom morphology: 4hrs**

Introduction, General history, Different parts of a typical mushroom & variations in mushroom morphology. Key to differentiate Edible from Poisonous mushrooms. Systematic position, morphology, distribution, structure and lifecycle of *Agaricus* and *Pleurotus*.

**Unit: II Mushroom Classification: 3hrs**

Based on occurrence- Epigenous & Hypogenous, Natural Habitats- Humicolous, Lignicolous & Coprophilous. Structure and texture of fruit bodies- gilled fungi & pore fungi

**Unit: III Nutrient Profile and Health benefits of Mushroom: 3hrs**

Protein, amino acids, calorific values, carbohydrates, fats, vitamins & minerals. Health benefits of Mushroom: Antiviral value, antibacterial effect, antifungal effect, anti-tumour effect, haematological value cardiovascular & renal effect, in therapeutic diets, adolescence, for aged persons & diabetes mellitus.

**Unit: IV Cultivation of Button and Oyster Mushrooms: 4hrs**

Collection of raw materials, compost & composting, spawn & spawning methods —bed method, Polythene bag method, field cultivation; casing & case run, cropping & crop management, picking & packing.

**Unit: V Post harvest maintenance and processing of mushrooms 3hrs**

Maintenance of mushrooms, Diseases-common pests, disease prevention and control measures. Processing- Blanching, Steeping, sun drying, canning, pickling, freeze drying. Storage- short term and long term storage.

**Unit: VI Economic value of Mushrooms****3 hrs**

Production level, economic return, foreign exchange from mushroom cultivating countries and international trade.

**PRACTICALS****10 hrs**

1. Practical method of Mushroom cultivation.
2. Practical methods for preparation of some value added products from mushrooms.

**REFERENCE BOOKS:**

1. Mushroom Production and Processing Technology, Pathak Yadav Gour (2010) Published by Agrobios (India).
2. A hand book of edible mushroom, S. Kannaiyan & K. Ramasamy (1980). Today & Tomorrows printers & publishers, New Delhi
3. Handbook on Mushrooms, Nita Bahl, oxford & IBH Publishing Co.
4. Gupta P. K. Elements of Biotechnology. Rastogi Publications
5. R.D. Rai and T. Arumuganathan (2008). Post-Harvest Technology of Mushrooms, Technical Bulletin 2008, NRCM, ICAR, Chambaghat, Solan-1731213, (H.P.).
6. Hand Book of Mushroom Cultivation, Processing and Packaging, Eiri Staff, Engineers India Research Institute (2007)
7. Mushroom Cultivation (Paperback, N. Revathy, A. Vijayasamundeeswari, V.M. Indumathi, V. Gomathi), Shanlax Publications, ISBN: 9789390082735, Edition: 1, 2020

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