

**Class XII**

**MUSHROOM PRODUCING TECHNICIAN (MPRT)**

**Semester III**

**Detail of Theory Syllabus**

<b>SL no</b>	<b>Content</b>	<b>Details</b>	<b>Marks</b>	<b>Periods</b>
1.	Introduction to mushroom	<ul style="list-style-type: none"><li>• History of mushroom fungi</li><li>• Nutritional and medicinal properties of of edible mushrooms -- <i>Pleurotus</i>, <i>Volvariella</i> and <i>Agaricus</i> mushroom</li><li>• Types of edible , poisonous and medicinal mushroom</li><li>• <i>Scope and opportunity in mushroom cultivation</i></li></ul>	8	12
2.	Mushroom Spawn (seed) production/ procurement	<ul style="list-style-type: none"><li>• Preparation of pure culture</li><li>• Preparation of mother spawn</li><li>• Production of planting spawn</li><li>• Storage /Transportation of spawn</li><li>• Criteria for selection of good quality spawn</li></ul>	6	09
3	Cultivation of Button mushroom	<ul style="list-style-type: none"><li>• Procurement of raw materials</li><li>• Wetting of substrate materials/ formulation</li><li>• Outdoor fermentation in stacks/ turning schedule by long method</li><li>• Short method of composting done in two phases: phase -1 (Outdoor/ bunker) and phase -2 bulk pasteurisation chambers)</li><li>• Spawning of compost/ spawn run</li><li>• Casing and case run</li><li>• Cropping and harvesting of mushroom</li><li>• Post harvest handling</li></ul>	8	12
4.	Insect - Pests management in cultivated mushroom	<ul style="list-style-type: none"><li>• Major insect pests - Mushroom flies/ nematodes/mites</li></ul>	4	06
5.	Mushroom growing unit	<ul style="list-style-type: none"><li>• Construction of mushroom growing unit</li></ul>	4	06
<b>TOTAL</b>			<b>30</b>	<b>45</b>

**Class XII**  
**Semester IV**

SL no	Content	Details	Marks	Periods
1.	Cultivation of Oyster mushroom	<ul style="list-style-type: none"> <li>• Procurement of raw materials</li> <li>• Substrate formulation</li> <li>• Substrate wetting and treatments: Hot water/ steam</li> <li>• Spawning of substrate and filling in container/ bag spawn run</li> <li>• Exposing of bags for cropping</li> <li>• Cropping and harvesting of mushroom</li> <li>• Post-harvest handling</li> </ul>	8	15
2.	Cultivation of Paddy Straw mushroom	<ul style="list-style-type: none"> <li>• Procurement of raw materials: Paddy straw bundles</li> <li>• Substrate wetting and treatments: Hot water/ steam</li> <li>• Stacking of paddy straw bundles in a heap and spawning in layers</li> <li>• Polythene cover of the heap for spawn run</li> <li>• Cropping and harvesting of mushrooms</li> <li>• Post harvest handling</li> </ul>	8	15
3.	Disease management incultivated mushroom	<ul style="list-style-type: none"> <li>• Dry Bubble and wet bubble – major diseases of cultivated mushroom</li> <li>• Competitor/weed molds encountered: Green, yellow and plaster</li> <li>• moulds/ Coprinus</li> </ul>	6	15
4.	Entrepreneurial skills and economics for small enterprise	<ul style="list-style-type: none"> <li>• Explore the market and marketing concepts</li> <li>• Economics of different types of mushroom</li> </ul>	4	09
6.	Management of spent substrates and waste disposal of various mushroom	<ul style="list-style-type: none"> <li>• Management of spent substrates and waste disposal of various mushroom</li> </ul>	4	09
<b>Total</b>			30	63

## Detail of Practical Syllabus

SL no	Content	Details	Marks	Periods
1	Selection of types of Mushroom and sites	<ul style="list-style-type: none"> <li>• Orientation to a mushroom farm</li> <li>• Identification of different types of mushroom</li> <li>• Selection of appropriate Mushroom cultivation sites</li> </ul>	5	10
2.	Production of Mushroom Spawn (seed)	<ul style="list-style-type: none"> <li>• Preparation of pure culture</li> <li>• Preparation of mother spawn</li> <li>• Production of planting spawn</li> <li>• Storage /Transportation of spawn</li> </ul>	6	15
3.	Production of Button mushroom	<ul style="list-style-type: none"> <li>• Wetting and mixing of ingredients</li> <li>• Short method of composting done in two phases: phase -1 (Outdoor/ bunker) and phase -2 bulk pasteurisation chambers)</li> <li>• Spawning of compost/ spawn run</li> <li>• Casing and case -run</li> <li>• Cropping and harvesting of mushroom</li> <li>• Packaging storing and grading of Mushroom</li> </ul>	8	25
4.	Production of Oyster mushroom	<ul style="list-style-type: none"> <li>• Substrate wetting and treatments: Hot water/ steam</li> <li>• Spawning of substrate and filling in container/ bag, spawn run</li> <li>• Exposing of bags for cropping</li> <li>• Cropping and harvesting of mushrooms</li> <li>• Packaging storing and grading of Mushroom</li> </ul>	8	25
5.	Production of Paddy Straw mushroom	<ul style="list-style-type: none"> <li>• Substrate wetting and treatments: Hot water/ steam</li> <li>• Stacking of paddy straw bundles in a heap and spawning and covering of the heap with polythene for spawn run</li> <li>• Cropping and harvesting of mushrooms</li> <li>• Packaging storing and grading of Mushroom</li> </ul>	8	25
	<b>TOTAL</b>		30	100

**Topic for Project (Choose any one topic for project formulation)**

<b>SL no</b>	<b>Content</b>	<b>Details</b>	<b>Marks</b>	<b>Periods</b>
1	Pest Management and control	<ul style="list-style-type: none"><li>• Identification and management of pests by chemical and non - chemical methods</li></ul>	20	44
2.	Disease Management and control	<ul style="list-style-type: none"><li>• Disease identification and management by chemical and non -chemical methods</li></ul>		
3.	Design and develop mushroom production growing unit	<ul style="list-style-type: none"><li>• Construction of mushroom growing unit using locally available materials</li></ul>		
4.	Development of Entrepreneurial skills and economics -	<ul style="list-style-type: none"><li>• Market survey</li><li>• Calculation of Cost Benefit ratio of mushroom production</li></ul>		
	<b>TOTAL</b>		<b>20</b>	<b>44</b>