

**MAHARASHTRA STATE BOARD OF VOCATIONAL EDUCATION EXAMINATION, MUMBAI**

<b>1</b>	Name of Syllabus	<b>C.C. In Food Beverage (401107)</b>							
<b>2</b>	Max. Nos of Student	25 Students							
<b>3</b>	Duration	6 Months							
<b>4</b>	Type	Full Time							
<b>5</b>	Nos Of Days / Week	6 Days							
<b>6</b>	Nos Of Hours /Days	7 Hrs							
<b>7</b>	Space Required	Workshop = 1000 Sq feet Class Room = 200 Sq feet TOTAL = 1200 Sq feet							
<b>8</b>	Entry Qualification	S.S.C.							
<b>9</b>	Objective Of Syllabus introduction	Awareness of Safety precautions Knowledge of Engineering skill, use of tools in Food Processing. Awareness of Food Preservation. Awareness of Milk & Dairy Product. Awareness of Cereal, Pulses & Oilseed Processing Awareness of Food Beverages. Awareness of Processed Food.							
<b>10</b>	Employment Opportu	The trainee will either to be able to take up jobs with agencies which Maintain Develop Food Beverages or with working experience will be in a position to start his own independent Business.							
<b>11</b>	Teacher's Qualificati	Diploma in Food Processing/ Hotel Management. With 3 year Teaching experience in Food Beverages.							
<b>12</b>	Training System	Training System Per Week							
		Theory		Practical		Total			
		12 Hours		30 Hours		42 Hours			
<b>13</b>	Exam. System	Sr. No.	Paper Code	Name of Subject		TH/PR	Hour	Max. Mark	Min. Mark
		1	<b>40110711</b>	Food Beverages		TH-I	3 hrs	100	35
		2	<b>40110721</b>	Food Product		PR-I	3 hrs	100	50
		3	<b>40110722</b>	Food Beverages.		PR-II	6 hrs	200	100
				TOTAL				<b>400</b>	<b>185</b>

## Syllabus Food Beverages

<b>Practical - II - Food Beverages</b>	<b>Theory - I - Food Beverages</b>
<p>Study of the different food beverages available in the market.</p> <ul style="list-style-type: none"> <li>□ Identify different food beverages and their categories.</li> <li>□ Select different raw materials for food beverage production.</li> <li>□ Select ingredients for soft drink production</li> </ul>	<p>Introduction, importance of food beverages for entrepreneurship development, scope of food beverages, need of particular beverage</p>
<p>Prepare different soft drinks</p> <ul style="list-style-type: none"> <li>□ Pack soft drinks (Bottling, poly pouches, pepsu type, can, etc).</li> <li>□ Test quality in soft drinks &amp; water.</li> <li>□ Prepare different types of fruit juices.</li> <li>□ Prepare beverages hygienically</li> </ul>	<p>Types of beverages</p> <ul style="list-style-type: none"> <li>□ Definition and classification of food beverages</li> <li>□ Raw materials used for beverages, and their properties.</li> <li>□ Standards for food beverages.</li> <li>□ Types &amp; methods of preparation of fruit juices, syrups, sherbets, fermented and non fermented beverages, alcoholic beverages,</li> <li>□ Carbonated and non carbonated beverages, synthetic juices, soft drinks types and methods of preparation.</li> <li>□ Quality of water for beverages</li> </ul>
<p>Prepare Ready-To-Serve (RTS) fruit beverages,</p> <ul style="list-style-type: none"> <li>□ Produce squash, fruit juice, nectar, concentrate.</li> <li>□ Test quality of beverage.</li> <li>□ Prepare malt syrup, badam, pista, herbal, concentrates, rose syrup.</li> <li>□ Purify beverages using proper techniques.</li> <li>□ Prepare mineral water from mini water treatment plant.</li> <li>□ Test quality of packaged water</li> </ul>	<p>Food additives used in beverages.</p> <ul style="list-style-type: none"> <li>□ Quality control in a beverage industry</li> <li>□ Principle and methods for fruits juice manufacture, machinery used in different fruits juice extraction</li> <li>□ Methods of preparation of Ready-To-Serve (RTS) fruit beverages.</li> <li>□ Methods of preparation of Squash, fruit juice, nectar concentrate, syrup, sherbets.</li> <li>□ Process of manufacture of fruits juices.</li> <li>□ Quality control in Beverage industry.</li> <li>□ FPO standards for fruit Beverages.</li> <li>□ Beverage from other materials &amp; grains</li> <li>□ Malt, vegetable (tomato), herbs &amp; medicin</li> </ul>
<p>Prepare soda water.</p> <ul style="list-style-type: none"> <li>□ Pack, label and store of soda water.</li> <li>□ Prepare malt extract.</li> <li>□ Prepare beer.</li> <li>□ Prepare cider, vinegar, banana, pineapple beverages.</li> <li>□ Operate all equipment safely.</li> <li>□ Identify and remove faults in machines</li> </ul>	<p>Principle and method for production of mineral water.</p> <ul style="list-style-type: none"> <li>□ Quality standard (BIS) of water.</li> <li>□ Different types of water, RO, UV, Ozonated water.</li> <li>□ Principle and Method of soda water production, Quality standards, raw material used.</li> <li>□ Equipment used e.g. Juice extractor, pulper, fermenter, vinegar generator, crown corking machine, bottle filling machine, Soda water machine, basket press, filter press.</li> <li>□ Safety &amp; hygiene.</li> </ul>

<b>Practical - I - Food Product</b>
Identification of different food products available in market
Categorise the food items based on properties
Using dryers dry fruits & vegetables
Carry out treatment prior to drying
Production of different types pickle e.g. fermented, oil, vinegar pickles from fruits and vegetables, mixed pickles
Preparation of tomato ketchup, sauce, puree, paste, chutneys
Operation of canning machinery <input type="checkbox"/> Canning operations <input type="checkbox"/> Caning of seasonal fruits & vegetables
Preparation of seasonal fruits <input type="checkbox"/> Preparation of different fruit jams like, mango, apple, pineapple, banana, amla, guava, papaya, mixed fruit etc <input type="checkbox"/> Preparation of jelly from fruits like, apple, guava, jackfruit etc. <input type="checkbox"/> Preparation of jam and jelly marmalades <input type="checkbox"/> Testing of pectin in fruits <input type="checkbox"/> Testing of end point in jam and jelly
Preparation of glazed fruits, candy, fruit bar and toffees
Preparation of synthetic vinegar <input type="checkbox"/> Preparation of fermented vinegar <input type="checkbox"/> Preparation of different fruit vinegar, flavoured vinegars
Preparation of products from wastes e.g. Vinegar from pineapple waste, pectin from citrus fruits waste and protein isolate mango kernel, starches
Tests for quality evaluation
Analysis of fruits and vegetables for their quality
Pack the given food products and seal

### List of equipment, tools and instruments

Sl. No.	Item/ Specification	Quantity proposed for a batch of 25 trainees
1.	Juice extractor	01
2.	Pulper	01
3.	Vinegar generator	01
4.	Fermenter,	01
5.	Crown corking machine	01
6.	Bottle filling machine	01
7.	Vacuum filter	01
8.	Soda water machine	01
9.	Basket press	01
10.	Filter press	01
11.	Pouch packing machine	01
12.	Farm fill seal machine	01
13.	Centrifuge	01
14.	Working table	02

### Trainees Kit

Sl. No.	Item/ Specification	Quantity proposed for a batch of 25 trainees
1.	Hand operated moisture meter (to be shared)	04
2.	Litmus papers	10
3.	Product catalogue of different product	As required
4.	Hand sealing machine (to be shared)	04
5.	Bottle cap tightening machine (to be shared)	04
6.	Hand operated plastic packaging machine (to be shared)	04
7.	Food colour packets	As required
8.	Preservatives packets	As required
9.	Spring balance (to be shared)	04
10.	Fruit knife (to be shared)	08
11.	Spoons (different sizes)	10 sets
12.	Measuring glass (to be shared)	08
13.	Hand gloves	10
14.	Apron	10
15.	Cap	10
16.	Boots	10
17.	Hand bag big size	10

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