

MAHARASHTRA STATE BOARD OF VOCATIONAL EDUCATION EXAMINATION, MUMBAI

1	Name of Syllabus	C.C. In Milk & Milk Products (401108)						
2	Max. Nos of Student	25 Students						
3	Duration	6 Months						
4	Type	Full Time						
5	Nos Of Days / Week	6 Days						
6	Nos Of Hours /Days	7 Hrs						
7	Space Required	Workshop = 1000 Sq feet <u>Class Room = 200 Sq feet</u> TOTAL = 1200 Sq feet						
8	Entry Qualification	S.S.C.						
9	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 Food Beverages. Awareness of Processed Food.						
10	Employment Opportunity	The trainee will either to be able to take up jobs with agencies which Maintain Develop Milk & Milk Product or with working experience will be in a position to start his own independent Business.						
11	Teacher's Qualification	Diploma in Food Processing/ Hotel Management. With 3 year Teaching experience in Milk & Milk Product.						
12	Training System	Training System Per Week						
		Theory			Practical		Total	
		12 Hours			30 Hours		42 Hours	
13	Exam. System	Sr. No.	Paper Code	Name of Subject	TH/PR	Hours	Max. Marks	Min. Marks
		1	40110811	Milk & Milk Product	TH-I	3 hrs	100	35
		2	40110821	Bakery, Confectionary, Milk & Dairy Product	PR-I	3 hrs	100	50
		3	40110822	Milk & Milk Product.	PR-II	6 hrs	200	100
				TOTAL			400	185

Milk & Milk Product

Practical - II - Milk & Milk Product	Theory - I - Milk & Milk Product
<p>Conduct market survey of different dairy products available.</p> <p>Survey of availability of the raw material for dairy industry</p> <p>Visit and study of a dairy plant.</p> <p>Test milk for its quality.</p> <p>Conduct primary processing of market milk & store.</p> <p>Production of</p> <ul style="list-style-type: none"> • Pasteurized milk, • Standard milk, • Toned milk, • Double toned milk • Flavored milk, • Fermented milk. <p>Store product hygienically</p>	<p>Operation Flood, importance of dairy industry opportunities of employment in the vocation.</p> <p>Property of milk, quality of raw milk</p> <p>Different products made from the milk.</p> <p>Different dairy products useful for marketing.</p> <p>Principle and methods used for milk processing.</p> <p>Quality parameters.</p> <p>Methods for production of different types of milks – pasteurized, standard, toned, double toned, flavored milk.</p> <p>Ingredients of special milks, fermented milk.</p> <p>Preparation methods of Cheese, Chhena, Mawa, Methods of preparation of Dahi, Srikhand, Cream, Buttermilk etc</p> <p>Different methods of Ghee production</p>
<p>Preparation of</p> <ul style="list-style-type: none"> • Cheese, • Chhena, • Mawa, • Dahi, • Srikhand, • Ghee, • Cream, • Buttermilk <p>Production of Ghee by different methods.</p> <p>Prepare ice cream, test quality & store.</p> <p>Prepare butter, test quality of butter, carryout overrun calculations.</p> <p>Prepare different dairy based sweets.</p> <p>Prepare different dairy products like</p> <ul style="list-style-type: none"> • Dried milk (spray dried) • Condensed milk, • Cheese <p>Operate equipment used e.g. Cream Separator, deep fridge, cheese vat, pasteurizer, kettle, butter churner, boiler, (optionally mini dairy plant).</p> <p>Carryout cleaning operation (CIP System).</p> <p>Identify fault & remove</p>	<p>Principles and methods of ice-cream production, quality of ice cream, different types of ice cream.</p> <ul style="list-style-type: none"> <input type="checkbox"/> Butter production, quality of butter. <input type="checkbox"/> Overrun calculation <input type="checkbox"/> Preparation methods of different dairy based sweets <input type="checkbox"/> Storage of sweets. <input type="checkbox"/> Other dairy products like dried milk, condensed milk, cheese. <input type="checkbox"/> Standards of milk and milk products. <input type="checkbox"/> Act 1992(41-1992) The infant milk substitute feeding bottles and infant food (regulation of production supply distribution) <input type="checkbox"/> Hygiene in dairy processing unit, cleaning systems in dairy industry. <input type="checkbox"/> Format for inspection of dairy plants fifth schedule of MMPO (Milk & Milk Product Order 1992 <input type="checkbox"/> Equipment used : Cream Separator, deep fridge, cheese vat, pasteurizer, kettle, butter churner, boiler, (optionally mini dairy plant) <input type="checkbox"/> Location of faults in plants & machines <p>Indian Food Standard</p> <ul style="list-style-type: none"> <input type="checkbox"/> Food safety standard Act 2005 & Bill2005 <input type="checkbox"/> Prevention of Food adulteration Act 1954(37-1954) <input type="checkbox"/> Meat food product order 1973 <input type="checkbox"/> Any order issued under essential commodity Act 1955 <input type="checkbox"/> Hazard Analysis and Critical Control Point(HACCP) • International Food Standard(SPS,TBT,Drug,Residues Chemicals,GMO) • Codex Alimentarius (FAO Food & Nutrition Paper) FAO2003

Bakery, Confectionary, Milk & Dairy Product

Practical - I - Bakery, Confectionary, Milk & Dairy Product
Production of quality flour for bread, biscuit and cakes Production of plain, fermented, malt, rye flour
Flour, fat, bakers yeast, sugar and salt, I.S.I. standards for flour, fat, Baker's yeast. <ul style="list-style-type: none"> • Use of different food machinery for bread production
Production of plain bread, fermented bread, protein rich bread and special breads Production of different types of popular biscuits
Production of different types of specialized biscuits. Production of different types of other products like cookies, crackers
Production of different types of popular cakes Production of different types of specialized cakes
Preparation of corn starch, starch biscuits, Namkins, snacks
Testing of raw material and product for their quality.
Handling of equipment safely Fault identification and removal of faults
Pack the given food products and seal
Testing of milk for its quality Primary processing of market milk. Storage of milk
Production of pasteurized milk Production of standard, toned, double toned flavoured milks, fermented milk. Storage of products
Preparation of Cheese, Chhana, Mawa,/ Preparation of Dahi, Srikhand, Ghee, Cream, buttermilk etc.
Production of Ghee by different methods
<ul style="list-style-type: none"> • Preparation of butter. Test of quality of butter
Preparation of different dairy based sweets.
Preparation of ice cream. Quality evaluation of ice cream Storage of ice-cream Preparation of different dairy products like dried milk, condensed milk, cheese
Handling of equipment safely Fault identification and removal of faults Safe operation
Pack the given food products and seal

List of equipment, tools and instruments

Sr No	Name of Equipment	Qty
1.	Mini dairy plant	01
2.	Milk Chiller	01
3.	Milk cans	10
4.	Cream separator,	01
5.	Cheese vat	01
6.	Plate pasteurizer	01
7.	Butter churner	01
8.	Boiler	01
9.	Deep fridge	01
10.	kettle	02
11.	Mawa machine	01
12.	Crown capping machine	04
13.	Form fill-seal machine	01
14.	Ice cream plant	01
15.	Working table SS	02
16.	Water purifier	01
17.	Centrifuge	02
18.	Laboratory spray dryer	06
19.	Gerber tubes for fat estimation	01

Trainees Kit

Sl. No.	Item/ Specification	Quantity proposed for a batch of 25 trainees
1.	Hand operated moisture meter (to be shared)	04
2.	Moulds of biscuit & breads (to be shared)	08
3.	Spring balance (to be shared)	04
4.	Bread cutting knife	10
5.	Knife of different size (set)	10
6.	Spoons	10
7.	Measuring glass (to be shared)	08
8.	Fruit knife	10
9.	Dies (to be shared)	04
10.	Hand gloves	10
11.	Apron	10
12.	Cap	10
13.	Boots	10
14.	Hand bag	10
