Model Curriculum

Ice Cream Processing Technician

SECTOR: FOOD PROCESSING
SUB-SECTOR: DAIRY PRODUCTS
OCCUPATION: PROCESSING
REF ID: FIC/Q2004, V1.0
NSQF LEVEL: 4

Skill India
कौशल भारत - कुशल भारत

FICSI
Food Industry Capacity and Skill Initiative

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Certificate

CURRICULUM COMPLIANCE TO QUALIFICATION PACK – NATIONAL OCCUPATIONAL STANDARDS

is hereby issued by the

FOOD INDUSTRY CAPACITY AND SKILL INITIATIVE (FICSI)

for the

MODEL CURRICULUM

Complying to National Occupational Standards of
Job Role/ Qualification Pack: '**Ice Cream Processing Technician**'
QP No. '**FIC/Q2004, NSQF Level 4**'

Date of Issuance: **December 31, 2015**

Valid up to: **December 30 2016**

** Valid up to the next review date of the Qualification Pack*

Authorised Signatory
(Food Industry Capacity and Skill Initiative)

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Ice Cream Processing Technician

CURRICULUM / SYLLABUS

This program is aimed at training candidates for the job of an “Ice Cream Processing Technician”, in the “Food Processing” Sector/Industry and aims at building the following key competencies amongst the learner

Program Name	**Baking Technician/ Operative**		
Qualification Pack Name & Reference ID.	FIC/Q2004, v1.0		
Version No.	1.0	**Version Update Date**	31/12/2015
Pre-requisites to Training	Preferably class 8th (Normal literacy of reading, writing and understanding) and 2-3 years’ experience in a dairy processing unit		
Training Outcomes	**After completing this programme, participants will be able to:** • Produce all types of ice-cream in semi-automated and fully-automated units; • Handle ice-cream processing machineries while maintaining process parameters • Plan production sequence as per production order • Observe food safety and hygiene standards at work.		

This course encompasses 5 out of 5 National Occupational Standards (NOS) of "Ice Cream Processing Technician" Qualification Pack FIC/Q2004, Version 1.0 issued by issued by Food Industry Capacity and Skill Initiative.

Sr. No.	Module	Key Learning Outcomes	Equipment Required
1	**Introduction to the training program** **Theory Duration** (hh:mm) 01:30 **Practical Duration** (hh:mm) 00:00 **Corresponding NOS Code** Bridge Module	• Introduce each other and build rapport with fellow participants and the trainer.	White board/Chart papers, marker
2	**Introduction to Food Processing Industry** **Theory Duration** (hh:mm) 02:30 **Practical Duration** (hh:mm) 00:00 **Corresponding NOS Code** Bridge Module	• Define food processing • List the various sectors of the food processing industry	White/Black Board/Chart Paper, Marker/computer and projector, Trainer's Guide, Student Handbook
3	**Introduction to Dairy Industry** (hh:mm) 06:00 **Practical Duration** (hh:mm) 00:00 **Corresponding NOS Code** FIC/N2013 FIC/N2014 FIC/N2015	• State the need for processing milk • List the various units within a dairy processing plant • Describe milk • State the composition of milk • State the composition of ice-cream • List the different types of ice-cream • Explain the process of producing ice-cream	White/Black board/ Chart paper, Markers/ computer and projector, Trainer's guide, student handbook, sample of milk

Sr. No.	Module	Key Learning Outcomes	Equipment Required
4	**Introduction to Dairy Processing Plant** **Theory Duration** (hh:mm) 03:00 **Practical Duration** (hh:mm) 03:00 **Corresponding NOS Code** FIC/N2014 FIC/N2015	• List the machineries used in a dairy processing plant • List the equipment used for ice-cream processing • Explain the process of testing milk for accepted quality standards • Demonstrate the test for checking the quality of milk • Describe the procedure for organoleptic test of milk • Describe the procedure for COB test of milk	White/Black board/ Chart paper, Markers/ computer and projector, Trainer's guide, student handbook, milk testing kits for organoleptic and COB tests
5	**Organizational Standards and Norms** **Theory Duration** (hh:mm) 06:00 **Practical Duration** (hh:mm) 06:00 **Corresponding NOS Code** FIC/N2013	• State the roles and responsibilities of an ice-cream processing technician • State how to conduct yourself at a workplace • State the personal hygiene and sanitation guidelines • State the food safety hygiene standards to follow in a work environment	White/Black board/ Chart paper, Markers/ computer and projector, Trainer's guide, student handbook
6	**Preparation and Maintenance of Work Area and Process Machineries** **Theory Duration** (hh:mm) 08:00 **Practical Duration** (hh:mm) 10:00	• State the materials and equipment used in the cleaning and maintenance of the work area • State the common detergents and sanitizers used in cleaning work area and machineries • State the properties of the cleaning agents used • State the methods of cleaning and sanitization • Describe CIP method of cleaning • Describe SIP method of cleaning • Demonstrate the process of preparing the work area for scheduled production • Explain the method of managing and disposing waste material • Describe the functions to be	White/Black board/ Chart paper, Markers/ computer and projector, Trainer's guide, student handbook, approved sanitizers for cleaning of the work area and machineries, approved lubricators, dustbins, necessary tools to attend minor repair work in process machinery, Motor (AC), Different Size of Stainless Steel (SS) Pipes, Different Size of Angles (SS), Different Size of Joint (SS), Different Size of Valves (SS), Plates of Heat Exchanger (SS), mixy, Weighing Machine, gas with burners and cream freezer

Sr. No.	Module	Key Learning Outcomes	Equipment Required
	Corresponding NOS Code FIC/N2013 FIC/N2014 FIC/N2015	carried out before starting production • Explain the maintenance procedure to be followed for dairy processing machineries before starting production • Explain the lubrication system followed in the dairy industry • State the different types of maintenance procedures • Demonstrate how to use tools safely • Demonstrate the process of lubricating machineries • Attend to minor repairs and faults in process machineries • Prepare the machines and tools required for production	
7	**Food Microbiology** **Theory Duration** (hh:mm) 05:30 **Practical Duration** (hh:mm) 08:00 **Corresponding NOS Code** FIC/N2014 FIC/N2015	• State the types of food microbes • State the causes for food spoilage • State the process for food spoilage • State the criteria to check food spoilage • State the need for food preservation • State the different types of food preservation processes	White/Black board/ Chart paper, Markers/ computer and projector, Trainer's guide, student handbook
8	**Preparation for Processing Dairy Products** **Theory Duration** (hh:mm) 08:00 **Practical Duration** (hh:mm) 20:00 **Corresponding NOS Code** FIC/N2014 FIC/N2015	• Describe the process of planning production sequence to maximize capacity utilization of resources • Demonstrate the process of production planning • State the factors affecting operation efficiency during production • List the ingredients required for production • State the production process of pasteurization • Explain the process of separation and bactofugation • State the method of standardization of milk	

Sr. No.	Module	Key Learning Outcomes	Equipment Required
		• State the method of homogenization of milk • State the method of heat exchange during pasteurization • Explain the process of HTST pasteurization • Explain the process of LTLT pasteurization	
9	**Processing Dairy Products** **Theory Duration** (hh:mm) 14:00 **Practical Duration** (hh:mm) 30:00 **Corresponding NOS Code** FIC/N2014 FIC/N2015	• State the process for producing ice-cream • List the composition of different types of ice-cream • Demonstrate the process of making the mix • State the method of pre-heating ice-cream mix • State the method of blending the ice-cream mix • State the process of filtration for making an ice-cream mix • State the method of homogenization of ice-cream mix • State the method of pasteurization of ice-cream mix • State the method of cooling the ice-cream mix • State the method of ageing the ice-cream mix • State the method of freezing the ice-cream mix • State the method of estimating the overrun in ice-cream • List the factors to consider during the packing of ice-cream • List the materials used for packaging ice-cream • State the method of hardening and storage in ice-cream • Demonstrate the process of producing plain ice-cream • Demonstrate the process of producing frozen desserts • Demonstrate the process of producing premium ice-cream • Demonstrate the process of producing kulfi • Demonstrate the process of producing syrup • Demonstrate the process of cleaning the work area and machineries after production	Different Size of Valves (SS), Plates of Heat Exchanger (SS), Mixy, Muslin Cloth, Weighing Machine, Milk Sampling Bottle, Milk Stirer, Nut bolts (different Sizes), Can (Aluminium/SS), Thermometer, Test Tube (Glass), Test Tube Holder, Gas with Burner, Measurment Cane, Utensils to Heat the Milk, Joints/angles Opener, Cream Freezer, Fillers, Wrappers and Packers, Moulds (Ice Cream Moulds)

Sr. No.	Module	Key Learning Outcomes	Equipment Required
10	**Complete documentation and record keeping** **Theory Duration** (hh:mm) 02:30 **Practical Duration** (hh:mm) 05:00 **Corresponding NOS Code** FIC/N2016	• State the need for documenting and maintaining records of raw materials, processes and finished products • State the method of documenting and recording the details of raw material to final finished product • Demonstrate the process of documenting records of production plan, process parameters, and finished products • Document daily records in the ERP system effectively	White/Black board/ Chart paper, Markers/ computer and projector, Trainer's guide, student handbook
11	**Food Safety, Hygiene and Sanitation** **Theory Duration** (hh:mm) 06:00 **Practical Duration** (hh:mm) 20:00 **Corresponding NOS Code** FIC/N9001	• State the importance of safety, hygiene and sanitation in the food industry • Follow the industry standards to maintain a safe and hygiene workplace • Follow HACCP principles to eliminate food safety hazards in the process and products • Follow safety practices in the work area	Laptop, white board, marker, chart papers, projector ,trainer's guide and student handbook, protective gloves, head caps, aprons, safety goggles, safety boots, mouth covers, sanitizer, safety manual ,logbooks etc.
12	**Professional and Core Skills** **Theory Duration** (hh:mm) 02:00 **Practical Duration** (hh:mm) 05:00 **Corresponding NOS Code** FIC/N2014 FIC/N2015	• Undertake a self-assessment test • Identify personal strengths and weaknesses • Plan and schedule the work order and manage time effectively to complete the tasks assigned • Prevent potential problems from occurring • Resolve issues and problems using acquired knowledge and realize the importance of decision making • Identify potential problems and make sound and timely decision • Improve your reading skills • State the importance of listening	Board/Chart Paper/ Laptop and Projector, Trainer Handbook, Participant Handbook etc.

Sr. No.	Module	Key Learning Outcomes	Equipment Required
13	**IT Skills** **Theory Duration** (hh:mm) 03:00 **Practical Duration** (hh:mm) 08:00 **Corresponding NOS Code** Bridge Module	• State the basic functionalities of the computer to perform day to day activities • Identify parts of the computer • Use the computer keyboard effectively to type • Use computer applications effectively to record day-to-day activities • Use the word processor effectively • Use the spreadsheet application effectively • Use the computer to document day-to-day activities	Board/Chart Paper/ Laptop and Projector, Trainer Handbook, Participant Handbook etc.
14	**Field Visits** **Theory Duration** (hh:mm) 08:00 **Practical Duration** (hh:mm) 20:00 **Corresponding NOS Code** Bridge Module	• Observe the factory location, layout and safety aspects of food processing • Observe the storage facilities for raw materials and finished products • Observe the various machineries used in process • Observe the various machineries used in process • Observe the cleaning methods and processes followed to maintain the process machineries and tools • Observe the raw materials used and their storage procedures • Observe the packaging and storage processes of raw material and finished product • Observe the post-production cleaning and maintenance process followed in the industry	All the tools and equipment listed above must be available at the site of field visit
15	**Revision** **Theory Duration** (hh:mm) 02:00 **Practical Duration** (hh:mm) 03:00 **Corresponding NOS Code** Bridge Module	• Revised the knowledge gained so far	All the tools and equipment listed above must be available at the time of revision

Sr. No.	Module	Key Learning Outcomes	Equipment Required
16	**Evaluation** **Theory Duration** (hh:mm) 06:00 **Practical Duration** (hh:mm) 18:00 **Corresponding NOS Code** Bridge Module	• Assess the knowledge and skills acquired by the participants	All the tools and equipment listed above must be available for evaluation
	Total Duration **240:00** **Theory Duration** **84:00** **Practical Duration** **156:00**	Unique Equipment Required: Motor (AC), Different Size of Stainless Steel (SS) Pipes, Different Size of Angles (SS), Different Size of Joint (SS), Different Size of Valves (SS), Plates of Heat Exchanger (SS), Mixy, Muslin Cloth, Weighing Machine, Milk Sampling Bottle, Milk Stirer, Nut bolts (different Sizes), Cane (Aluminium/SS), Thermometer, Test Tube (Glass), Test Tube Holder, Gas with Burner, Measurement Cane, Utensils to Heat the Milk, Joints/angles Opener, Cream Freezer, Fillers, Wrappers and Packers, Moulds (Ice Cream Moulds)	

Grand Total Course Duration: **240Hours, 0 Minutes**
Recommended OJT Duration**: 40 Hours, 0 Minutes**

*(This syllabus/ curriculum has been approved by **SSC: Food Industry Capacity and Skill Initiative)***

Trainer Prerequisites for Job role: "Ice Cream Processing Technician" mapped to Qualification Pack: "FIC/Q2004, v1.0"

Sr. No.	Area	Details
1	**Description**	To deliver accredited training service, mapping to the curriculum detailed above, in accordance with the Qualification Pack "FIC/Q2004", Version 1.0
2	**Personal Attributes**	An aptitude for conducting training, and pre/ post work to ensure competent, employable candidates at the end of the training, and pre/post work to ensure competent, employable candidates at the end of the training. Strong communication skills, ability to work as part of a team; a passion for quality and for developing others; well-organized and focused, eager to learn and keep oneself updated with the latest in the mentioned fields.
3	**Minimum Educational Qualifications**	• Diploma in Dairy Technology with 4 years of hand on experience in a Dairy industry or • B.Sc./B. Tech/BE in Dairy Technology or Food Engineering with 2-3 years of hand on experience in a Dairy industry or • M. Sc. /M. Tech/ME in Food Engineering or Dairy Technology with 1-2 years of hand on experience in a Dairy industry.
4a	**Domain Certification**	Certified for Job Role: "Ice Cream Processing Technician" mapped to QP: "FIC/Q2004, v1.0". Minimum accepted score is 80% as per FICSI Guidelines
4b	**Platform Certification**	Recommended that the Trainer is certified for the Job Role: "Trainer", mapped to the Qualification Pack: "MEP/Q0102". Minimum accepted SCORE IS 80 % as per FICSI guidelines.
5	**Experience**	• Diploma in Dairy Technology with 4 years of hand on experience in a Dairy industry or • B.Sc./B. Tech/BE in Dairy Technology or Food Engineering with 2-3 years of hand on experience in a Dairy industry or • M. Sc./M. Tech/ME in Food Engineering or Dairy Technology with 1-2 years of hand on experience in a Dairy industry.

Annexure: Assessment Criteria

Assessment Criteria	
Job Role	Ice Cream Processing Technician
Qualification Pack	FIC/Q2004, v1.0
Sector Skill Council	Food Processing

Sr. No.	Guidelines for Assessment
1	Criteria for assessment for each Qualification Pack will be created by the Sector Skill Council. Each Performance Criteria (PC) will be assigned marks proportional to its importance in NOS. SSC will also lay down proportion of marks for Theory and Skills Practical for each PC.
2	The assessment for the theory part will be based on knowledge bank of questions created by the SSC.
3	Individual assessment agencies will create unique question papers for theory part for each candidate at each examination/training centre(as per assessment criteria below)
4	Individual assessment agencies will create unique evaluations for skill practical for every student at each examination/training canter based on this criteria
5	To pass the Qualification Pack, every trainee should score a minimum of 70% (overall) in every QP
6	In case of successfully passing only certain number of NOS's, the trainee is eligible to take subsequent assessment on the balance NOS's to pass the Qualification Pack

Assessable Outcome	Assessment Criteria	Total Mark (600)	Out Of	Marks Allocation	
				Theory	Skills Practical
1. FIC/N2013: (Prepare and maintain work area and process machineries for production of ice cream)	PC1. Clean and maintain the cleanliness of the work area using approved sanitizers and keep it free from dust, waste, flies and pests	100	25	10	15
	PC2. Ensure that the work area is safe and hygienic for food processing		10	3	7
	PC3. Dispose waste materials as per organization standards and industry requirements		15	5	10
	PC4. Check the working and performance of all machineries and equipment used for the process like, homogenizer, pasteurizer, heat exchanger, packaging machines, etc.		15	5	10
	PC5. Clean the machineries and tools used with recommended sanitizers following the organization specifications and organization standards		15	5	10
	PC6. Place the necessary tools required for process		5	2	3
	PC7. Attend to the minor repairs/ faults of all machines, if required		7.5	2.5	5

	PC8. Select and set the machines and tools required		7.5	2.5	5
	Total		**100**	**35**	**65**
2. FIC/N2014: (Prepare for production of ice cream)	PC1. Read and understand the production order from the supervisor	**100**	10	4	6
	PC2. Check the availability of raw materials, packaging materials, equipment and manpower		5	2	3
	PC3. Plan Production Sequence by • Selecting products that does not impact the quality of the other • Avoiding CIP after each product • Using the same equipment and machinery for various products • Planning maximum capacity utilization of machineries • Considering the process time for each product • Planning efficient utilization of resources/manpower • Prioritizing urgent orders		15	5	10
	PC3 Calculate the batch size based on the production order and machine capacity		5	2	3
	PC5. Calculate the raw material requirement (considering the process loss) to produce the required quantity of finished product(s)		5	2	3
	PC6 Calculate the raw materials (including ingredients), packaging materials and manpower requirement for the completing the order		5	2	3
	PC7. Read and understand the production order from the supervisor		7	2	5
	PC8. Ensure working and performance of all machineries required for process		7	2	5
	PC9. Report supervisor on any malfunctions of machine		3	1	2
	PC10 Calculate the process time for effective utilization of machineries and manpower		3	1	2
	PC11 Allot responsibilities/ work to the assistants and helpers		5	1.5	3.5
	PC12 Refer process chart/ product flow chart/formulation chart for product(s) produced		2	0.5	1.5
	PC13 Weigh the raw materials and ingredients required for the batch		2	0.5	1.5
	PC14 Check the conformance of raw material by verifying the quality		5	2	3

	analysis report and assessing its physical parameters				
	PC15 Connect pipes between holding tanks and process equipment		5	2	3
	PC16 Assemble fittings, valves, bowls, impeller shaft, strainers and other parts to equipment to prepare for production		5	1	4
	PC17 Start machine and check the working condition and performance of the machine		5	2	3
	PC18 Make minor adjustments and repairs (if required)		5	2	3
	PC19 Keep the tools accessible to attend repairs/faults in case of breakdown		1	0.5	0.5
			100	**35**	**65**
3. FIC/N2015: (Produce ice cream)	PC1 Sterilize the processing equipments before process by opening valves or pumping recommended sterilizing solution and rinse water through pipes		2	0.5	1.5
	PC2. Check the quality of raw materials through physical parameters by verifying the quality report		2	1	1
	PC3. Set and control metering devices or open valves or start pump to allow measured quantity of liquid ingredient into the mixing tank following the sop		5	2	3
	PC4. Adjust valves to control the speed of agitators to mix liquid ingredients		3	1	2
	PC5. Weigh the dry ingredients like skim milk powder, sugar, emulsifiers, stabilizers, etc required for the batch and pre-blend, and add into the liquid ingredients in the mixing tank following the sop		6	2	4
	PC6. Control the speed of agitators and set timer to mix dry and wet ingredients to make ice-cream mix		2	0.5	1.5
	PC7. Pump ice-cream mixture into the pasteurization tank		1	0.5	0.5
	PC8. Turn valves to admit steam and control steam pressure by adjusting valves to heat ice-cream mixture in the pasteurization tank, set and control time and speed of the agitator in the pasteurization tank to stir the ice-cream mixture		5	2	3
	PC9. Open valves to transfer the pasteurized ice cream mix into the homogenizer, turn valves to admit steam and control pressure of the homogenizer to homogenize mixture at high pressure to break fat globules in mixture and obtain smooth texture		5	2	3

	PC10. Open valves to pass the homogenized mixture into heat exchangers for cooling		1	0.5	0.5
	PC11. Turn valves of the coolant pipes to pass coolant (like refrigerated water, glycol etc) to cool the homogenized mixture		3	1	2
	PC12.Transfer the cooled homogenized mixture into refrigerated storage tank for ageing to improve whipping qualities, body and texture of ice cream, control and maintain time and temperature of the refrigerated storage tank during ageing process		5	2	3
	PC13. Measure required quantity of flavour and colour in the flavour tank and start the pump to transfer flavour and colour into the aged mixture in the refrigerated storage tank		2	0.5	1.5
	PC14. Open valve and pass the flavoured homogenized mixture into the dynamic freezer, and turn valves of the coolant pipes of the dynamic freezer to pass refrigerant to cool the mixture to achieve required freezing temperature		2	0.5	1.5
	PC15 Adjust and control the speed of whipper blades in the freezer to whip ice-cream mixture to incorporate air and to convert liquid mixture to soft and smooth solid of soft serve ice-cream		2	0.5	1.5
	PC16 Check the quality of the ice cream through physical parameters like colour, appearance, flavour, texture, taste etc		2	1	1
	PC17 Measure coating ingredients (such as chocolate, fruit juice, color, water, flavor, sugar, acid, stabilizers etc) to prepare coating material for frozen ice-cream, start pump to transfer the coating ingredients into the enrobing tank, turn steam valves to heat contents in the enrobing tank to specified temperature to prepare ice-cream coating material		5	2	3
	PC18 Measure centre filling ingredients such as chocolate, fruits, nuts, color, flavor, sugar, stabilizers etc, and prepare centre filling material following sop, start pump or manually transfer centre filling material into the centre filling machine		5	2	3
	PC19. Set the ice-cream packaging machine for filling volume, start the packaging machine to fill soft serve ice-cream directly from the freezer into		3	1	2

	cone or other packaging materials like plastic/laminated paper containers				
	PC20. Position the filler of the centre filling machine, set the filling quantity , and start machine to inject the filling material into the centre of the ice-cream in cone/cup/containers (for centre filled ice-cream)		3	1	2
	PC21. Pack the primary packed ice-cream in cartons and transfer the cartons to hardening room for hardening ice-cream, and maintain the temperature of the hardening room following the sop (batch process)		3	1	2
	PC22. Transfer the hardened ice-cream into frozen storage area and maintain storage temperature		2	0.5	1.5
	PC23. Start the packaging machine to fill measured quantity of ice-cream in liquid form into the moulds, start machine to insert stick into the moulded ice-cream, maintain required temperature to harden ice-cream, start machine that pass hardened ice-cream over the enrobing tank and dip ice-cream in the coating material (for coated ice-creams)		5	2	3
	PC24.Insert forming fixtures in nozzles of ice cream feed lines that extrude specified shape of ice cream like bar, roll, swirl shape etc, load sticks to insert into ice-cream, and start machine that cut extruded ice-cream ribbon into measured portions		3	1	2
	PC25. Start machines that deposit ice-cream on conveyor belts moving through hardening tunnels or spiral freezers for hardening the ice-cream quickly to minimize ice crystal size and stabilize the foam (continuous process)		5	1	4
	PC26 Turn valves and set thermostat to circulate refrigerant and maintain specified temperature in hardening tunnel or spiral freezer		3	1	2
	PC27. Observe deposited ice-cream bars in hardening tunnels or spiral freezers, control and maintain speed of the conveyor and depositing machine, and temperature of the hardening tunnel or spiral freezer		2	0.5	1.5
	PC28 Adjust setting and start the packaging machine to wrap/pack the ice-cream in primary packaging material, pack the wrapped/ primary packed ice-cream in cartons		2	0.5	1.5

	PC29 Sample finished product and transfer to quality lab for analysis and conformance to standards		1	0.5	0.5
	PC30 Transfer the cartons to storage area and maintain storage temperature		1	0.5	0.5
	PC31 Report malfunction/discrepancies/concerns to department supervisor for immediate action		1	0.5	0.5
	PC32 Turn valves or pump recommended sterilizing solution and rinse water through pipes for cip(clean-in-place) of tanks and processing equipment following sop		4	1	3
	PC33 Clean the work area using recommended cleaning agents and sanitizers		2	0.5	1.5
	PC34 Attend minor repairs/faults of all machines (if any)		2	0.5	1.5
	PC35 Ensure periodic (daily/weekly/monthly/quarterly/half yearly/annual) maintenance of all machines and equipment following the sop or suppliers instructions/manuals		2	1	1
			100	**35**	**65**
4. FIC/N2016: Complete documentation and record keeping related to spice processing	PC1. Document and maintain records of raw material such as type of raw materials, supplier details, receiving date/ date of manufacture, expiry date, quality parameters for all raw materials, internal quality analysis report, storage condition etc, as per company standards	**100**	10	6	4
	PC2. Maintain record on observations (if any) related to raw materials		5	3	2
	PC3. Load the raw materials details inerp for future reference		5	3	2
	PC4. Verify the documents and track from finished product to raw materials, in case of quality concerns and during quality management system audits		5	3	2
	PC5. Document production details like the products handled, production sequence, equipments and machinery details, efficiency and capacity utilization of equipment etc		10	6	4
	PC6. Document process details like type or raw material used, process parameters like temperature, time, pressure etc (as applicable) for entire production in process chart or production log for all products produced		15	9	6

	PC7. Document batch size, production yield, and wastage of raw materials, energy utilization and final products produced		10	6	4
	PC8. Maintain record on observations (if any) or deviations related to production and process		5	3	2
	PC9. Load the production and process details in erp for future reference		5	3	2
	PC10. Verify documents and track from finished product to ingredients, in case of quality concerns and for quality management system audits		5	3	2
	PC11. Document and maintain records on the types of finished products produced		3	2	1
	PC12. Document the finished products details like, name of the product, batch number, time of packing, date of manufacture, date of expiry, other label details, primary and secondary and packaging materials for all finished products, storage conditions etc, as per organisation standards		7	4	3
	PC13 Maintain record on observations or deviations (if any) related to finished products		5	3	2
	PC14 Load the finished product details in erp for future reference		5	3	2
	PC15 Verify the documents and track from finished product to ingredients, in case of quality concerns and for quality management system audits		5	3	2
	Total		**100**	**60**	**40**
5. FIC/N9001: Food Safety, hygiene and sanitation for processing food products	PC1. Comply with food safety and hygiene procedures followed in the organization	**100**	5	2	3
	PC2. Ensure personal hygiene by use of gloves, masks, hair net, ear plugs, boots etc.		6	1	5
	PC3. Ensure hygienic production of food by inspecting raw materials, ingredients, finished products etc for compliance to physical, chemical and microbiological procedures		5	2	3
	PC4. Pack products in appropriate packaging material, label and store them in designated area free from pests, flies etc.		10	4	6
	PC5. Clean, maintain and monitor food processing equipments periodically, using it only for the specified purpose		5	2	3
	PC6. Use safety equipment such as fire extinguisher, eye wash unit, first aid kit when required		10	4	6

	PC7. Follow housekeeping practices by having designated area for machines/tools		5	2	3
	PC8. Follow industry standards like GMP, HACCP and product recall		10	4	6
	PC9. Attend training on hazard management to understand type of physical, chemical and microbiological hazards		5	1	4
	PC10. Identify, document and report problems such as rodents and pests to management		5	1	4
	PC11. Conduct workplace checklist audit before and after work to ensure safety and hygiene		5	1	4
	PC12. Document and maintain raw material, process, packaging material to maintain the effectiveness of quality system		4	1	3
	PC13. Determine the quality of food using criteria such as odor, color, taste and best before date and take immediate measures to prevent spoilage		5	2	3
	PC14. Store raw materials, finished products and allergens separately to prevent cross contamination		5	2	3
	PC15. Label raw materials and finished products and store them in different storage areas according to safe food practices		5	2	3
	PC 16. Follow stock rotation based on FEFO/FIFO		10	4	6
	Total		**100**	**35**	**65**
	Grand Total	**500**	**500**	**200**	**300**
	Percentage Weightage		**100**	**40%**	**60%**
	Minimum Pass% to qualify (aggregate):			**70%**	