



Model Curriculum

QP Name: Butter and Ghee Processing Operator

QP Code: FIC/Q2003

QP Version: 3.0

NSQF Level: 3

Model Curriculum Version: 3.0

Food Industry Capacity and Skill Initiative
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Training Parameters

Sector	Food Processing
Sub-Sector	Dairy Products
Occupation	Processing- Dairy Products
Country	India
NSQF Level	3
Aligned to NCO/ISCO/ISIC Code	NCO-2015/7513.0300
Minimum Educational Qualification and Experience	1. Grade 8 pass and pursuing continuous schooling in regular school with vocational subject OR 2. 8th grade pass with 1-year of relevant experience OR 3. 5th grade pass with 4 years of relevant experience OR 4. Ability to read and write with 5 years relevant experience OR 5. Previous relevant qualification of NSQF Level 2 with 1 years of relevant experience OR 6. Previous relevant qualification of NSQF Level 2.5 with 6 months of relevant experience
Pre-Requisite License or Training	1. Food standards and regulations 2. Operating different types of dairy processing equipment 3. Packaging technology 4. GMP 5. HACCP 6. QMS 7. Computer basics and ERP system followed by the organization 8. Training in Food Safety Standards and Regulations (as per FSSAI) (Mandatory)

Minimum Job Entry Age	18 years
Last Reviewed On	29-07-2021
Next Review Date	28-07-2024
NSQC Approval Date	29-07-2021
QP Version	3.0
Model Curriculum Creation Date	04-05-2021
Model Curriculum Valid Up to Date	28-07-2024
Model Curriculum Version	3.0
Minimum Duration of the Course	300 Hours
Maximum Duration of the Course	300 Hours

Program Overview

This section summarizes the end objectives of the program along with its duration.

Training Outcomes

At the end of the program, the participants will be able to:

- Maintain work area and process machineries for butter and ghee production
- Prepare for production of butter and ghee
- Produce butter and ghee
- Document and maintain records related to butter and ghee production
- Apply food safety, hygiene and sanitation while processing food products

Compulsory Modules

The table lists the modules and their duration corresponding to the Compulsory NOS of the QP.

NOS and Module Details	Theory Duration	Practical Duration	On-the-Job Training Duration (Mandatory)	On-the-Job Training Duration (Recommended)	Total Duration
FIC/N2009: Prepare and maintain work area and process machineries for butter and ghee production NOS Version 1.0 NSQF Level: 4	25:00 Hours	35:00 Hours	00:00Hours	00:00Hours	60:00 Hours
Module 1: Introduction To the training program	04:00Hours	00:00 Hours	00:00Hours	00:00Hours	04:00 Hours
Module 2: Prepare and maintain work area and process machineries	21:00Hours	35:00 Hours	00:00Hours	00:00Hours	56:00 Hours
FIC/N2010: Prepare for	27:00 Hours	63:00 Hours	00:00Hours	00:00Hours	90:00 Hours

production of butter and ghee NOS Version No.: 1.0 NSQF Level: 4					
Module 3: Preparation for production of butter	15:00 Hours	32:00 Hours	00:00Hours	00:00Hours	47:00 Hours
Module 4: Preparation for production of ghee	12:00 Hours	31:00 Hours	00:00Hours	00:00Hours	43:00 Hours
FIC/N2011: - Produce butter and ghee NOS Version No.: 1.0 NSQF Level: 4	18:00 Hours	42:00 Hours	00:00Hours	00:00Hours	60:00 Hours
Module 5: Production of Butter	10:00 Hours	22:00 Hours	00:00Hours	00:00Hours	32:00 Hours
Module 6: Production of Ghee	08:00 Hours	20:00 Hours	00:00Hours	00:00Hours	28:00 Hours
FIC/N2012: Complete documentation and record keeping related to butter and ghee production NOS Version No.: 1.0 NSQF Level: 4	10:00 Hours	20:00 Hours	00:00Hours	00:00Hours	30:00 Hours
Module 7: Complete documentation and Record keeping	10:00Hours	20:00 Hours	00:00Hours	00:00Hours	30:00 Hours
FIC/N9001 Ensure Food safety, hygiene and sanitation for processing food products NOS Version No.: 1.0 NSQF Level: 4	10:00 Hours	20:00 Hours	00:00Hours	00:00Hours	30:00 Hours
Module 8: Ensuring food safety, personal hygiene and workplace sanitation	10:00 Hours	20:00 Hours	00:00Hours	00:00Hours	30:00 Hours

DGT/VSQ/N0101 Employability Skills NOS Version No.: 1.0 NSQF Level: 2	12:00 Hours	18:00 Hours	00:00Hours	00:00Hours	30:00 Hours
Module 9 : Employability skills	12:00 Hours	18:00 Hours	00:00Hours	00:00Hours	30:00 Hours
Total Duration	102 Hours	198 Hours	00:00Hours	00:00Hours	300 Hours

Module Details

Module1: Introduction to the training program

Mapped to FIC/N2009, v1.0

Terminal Outcomes:

- Discuss the roles and opportunities available for butter & ghee processing technician
- Explain food processing and its sub-sectors
- Discuss the current market and future trends of food processing sector

Duration: 04:00	Duration: 00:00
Theory–Key Learning Outcomes	Practical–Key Learning Outcomes
<ul style="list-style-type: none"> • Introduce each other and build rapport with fellow participants and the trainer. • Explain food processing. • List the various sub-sectors of food processing industry • Discuss the future trends and career growth opportunities available to butter & ghee processing technician in the food processing industry. • Summarize the key roles and responsibilities of butter & ghee processing technician. • Discuss the organizational standards and norms 	
Classroom Aids:	
Computer, Projection Equipment, PowerPoint Presentation and software, Facilitator’s Guide, Participant’s Handbook.	
Tools, Equipment and Other Requirements	
Nil	

Module 2: Prepare and maintain work area and process machineries

Mapped to FIC/N2009, v1.0

Terminal Outcomes:

- Discuss the tasks to be performed to prepare for production of butter and ghee
- State the importance of maintaining tools and equipment effectively

Duration: 21:00	Duration: 35:00
Theory–Key Learning Outcomes	Practical–Key Learning Outcomes
<ul style="list-style-type: none"> • List the materials and equipment used in the cleaning and maintenance of the work area. • List the common detergents and sanitizers used in cleaning work area and machineries. • Describe the methods of cleaning and sanitization. • Describe CIP method of cleaning. • Describe SIP method of cleaning. • Explain the method of managing and disposing waste material. • Describe the functions to be carried out before starting production. • Explain the maintenance procedure to be followed for dairy processing machineries before starting production. • List the different types of maintenance procedures. 	<ul style="list-style-type: none"> • Demonstrate CIP method of cleaning • Demonstrate SIP method of cleaning • Demonstrate the process of preparing the work area for scheduled production • Demonstrate how to use tools safely • Demonstrate the process of lubricating machineries • Perform minor repairs and faults in process machineries • Prepare the machines and tools required for production • Exhibit that the work area is safe and hygienic for food processing • Clean process machineries using recommended cleaning agents and sanitizers
Classroom Aids:	
Computer, Projection Equipment, Power Point Presentation and software, Facilitator's Guide, Participant's Handbook	
Tools, Equipment and Other Requirements	
Motor(AC);DifferentSizeofStainlessSteel(SS)Pipes;DifferentSizeofAngles(SS);DifferentSizeof Joint (SS); Different Size of Valves (SS); Plates of Heat Exchanger (SS); Muslin Cloth; WeighingMachine;MilkStirrer;Nutbolts(differentSizes);Cane(Aluminum/SS);Thermometer;TestTu be (Glass); Test Tube Holder; Gas with Burner; Measurement Cane; Utensils to Heat the Milk;Joints/anglesOpener,Pasteurizer,Opener,Shredder,Blender,Feeder,Silos,Separators,Dryers,	

Evaporators, Clarifier, Mixer, Extruder, Texturizer, Scraped Surface Heat Exchanger, Odorometers, Churner, Balance tank, Plate Heat Exchanger, Concentrator, Separator, Homogenizer, Pasteurizer, Timer, Vacuum Chamber, Muslin Cloth; Milk Sampling Bottle; Milk Stirrer; Gas with Burner; Knives, Spatulas, Packing Wrap Rolls, Measuring Cup and Spoons, Utensils, Digital Hygrometer.

Module 3: Preparation for production of butter

Mapped to FIC/N2010, v1.0

Terminal Outcomes:

- Discuss the various methods used for producing butter
- Demonstrate the standard practices followed for production planning

Duration: 15:00	Duration: 32:00
Theory–Key Learning Outcomes	Practical–Key Learning Outcomes
<ul style="list-style-type: none"> • Describe the process of planning. Production sequence to maximize capacity utilization of resources. • List the factors affecting operation efficiency during production of butter. • List the ingredients required for production of butter. • List the raw materials, packaging materials, manpower, equipment and machineries for the scheduled production. • Explain the methods for storing raw materials for later use. 	<ul style="list-style-type: none"> • Demonstrate the process of production planning. • Demonstrate how to calculate the process time for effective utilization of machineries • Demonstrate the method of preparing cream for butter manufacturing • Show how to plan batch size considering full capacity utilization of equipment • Show how to organise raw materials and equipment as per the production schedule • Demonstrate the calculation of raw material required for the desired quantity of finished products • Show how to add salt to butter • Demonstrate the method of producing butter by the continuous method • Show the method of grading butter

Classroom Aids:

Computer, Projection Equipment, PowerPoint Presentation and software, Facilitator's Guide, Participant's Handbook.

Tools, Equipment and Other Requirements

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); Muslin Cloth; Weighing Machine; Milk Stirrer; Nut bolts (different Sizes); Cane (Aluminum/SS); Thermometer; Test Tube(Glass); Test Tube Holder; Gas with Burner; Measurement Cane; Utensils to Heat the Milk; Joints/angles Opener, pasteurizer, Opener, Shredder, Blender, Feeder, Silos, Separators, Dryers, Evaporators, Clarifier, Mixer, Extruder, Texturizer, Scraped Surface Heat Exchanger, Odorometers, Churner, Balance tank, Plate Heat Exchanger, Concentrator, Separator, Homogenizer, Pasteurizer, Timer, Vacuum Chamber, Muslin Cloth; Milk Sampling Bottle; Milk Stirrer; Gas with Burner; Knives, Spatulas, Packing Wrap Rolls, Measuring Cup and Spoons, Utensils, Digital Hygrometer.

Module 4: Preparation for production of ghee

Mapped to FIC/N2010, v1.0

Terminal Outcomes:

- Discuss the methods used for preparing ghee
- Demonstrate the various method used during production

Duration: 12:00	Duration: 31:00
Theory–Key Learning Outcomes	Practical–Key Learning Outcomes
<ul style="list-style-type: none"> • Describe the process of planning. Production sequence to maximize capacity utilization of resources. • List the factors affecting operation efficiency during production of ghee. • List the ingredients required for production of ghee. • List the raw materials, packaging materials, manpower, equipment and machineries for the scheduled production. 	<ul style="list-style-type: none"> • Demonstrate the process of production planning. • Demonstrate how to calculate the process time for effective utilisation of machineries • Show how to plan batch size considering full capacity utilization of equipment • Show how to organise raw materials and equipment as per the production schedule • Demonstrate the method of granulating and cooling ghee. • Demonstrate the method of packaging and storing ghee.
Classroom Aids:	
Computer, Projection Equipment, PowerPoint Presentation and software, Facilitator's Guide, Participant's Handbook.	
Tools, Equipment and Other Requirements	
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); Muslin Cloth; Weighing Machine; Milk Stirrer; Nut bolts (different Sizes); Cane (Aluminum/SS); Thermometer; Test Tube(Glass); Test Tube Holder; Gas with Burner; Measurement Cane; Utensils to Heat the Milk; Joints/angles Opener, pasteurizer, Opener, Shredder, Blender, Feeder, Silos, Separators, Dryers, Evaporators, Clarifier, Mixer, Extruder, Texturizer, Scraped Surface Heat Exchanger, Odorometers, Churner, Balance tank, Plate Heat Exchanger, Concentrator, Separator, Homogenizer, Pasteurizer, Timer, Vacuum Chamber, Muslin Cloth; Milk Sampling Bottle; Milk Stirrer; Gas with Burner; Knives, Spatulas, Packing Wrap Rolls, Measuring Cup and Spoons, Utensils, Digital Hygrometer.	

Module 5: Production of Butter

Mapped to FIC/N2011, v1.0

Terminal Outcomes:

- Demonstrate the process of producing butter

Duration: 10:00	Duration: 22:00
Theory–Key Learning Outcomes	Practical–Key Learning Outcomes
<ul style="list-style-type: none"> • Discuss the production process of butter. • Describe quality parameters analyzed in butter production • List the factors to consider during the packing of butter • List the materials used for packaging butter. • Describe post production cleaning methods and waste management procedures 	<ul style="list-style-type: none"> • Demonstrate the process of producing cream. • Demonstrate the process of producing butter. • Demonstrate the process of cleaning the work area and machineries after production.
Classroom Aids:	
Computer, Projection Equipment, Power Point Presentation and software, Facilitator’s Guide, Participant’s Handbook	
Tools, Equipment and Other Requirements	
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); Muslin Cloth; Weighing Machine; Milk Stirrer; Nut bolts (different Sizes); Cane (Aluminum/SS); Thermometer; Test Tube(Glass); Test Tube Holder; Gas with Burner; Measurement Cane; Utensils to Heat the Milk; Joints/angles Opener, pasteurizer, Opener, Shredder, Blender, Feeder, Silos, Separators, Dryers, Evaporators, Clarifier, Mixer, Extruder, Texturizer, Scraped Surface Heat Exchanger, Odorometers, Churner, Balance tank, Plate Heat Exchanger, Concentrator, Separator, Homogenizer, Pasteurizer, Timer, Vacuum Chamber, Muslin Cloth; Milk Sampling Bottle; Milk Stirrer; Gas with Burner; Knives, Spatulas, Packing Wrap Rolls, Measuring Cup and Spoons, Utensils, Digital Hygrometer.	

Module 6: Production of Ghee

Mapped to FIC/N2011, v1.0

Terminal Outcomes:

- Demonstrate the process of producing ghee

Duration: 08:00	Duration: 20:00
Theory–Key Learning Outcomes	Practical–Key Learning Outcomes
<ul style="list-style-type: none"> • Discuss the production process of ghee. • Describe quality parameters analyzed in ghee production • List the factors to consider during the packing of ghee • List the materials used for packaging ghee. • Describe post-production cleaning methods and waste management procedures 	<ul style="list-style-type: none"> • Demonstrate the process of producing ghee. • Demonstrate the process of cleaning the work area and machineries after production.
Classroom Aids:	
Computer, Projection Equipment, PowerPoint Presentation and software, Facilitator’s Guide, Participant’s Handbook.	
Tools, Equipment and Other Requirements	
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); Muslin Cloth; Weighing Machine; Milk Stirrer; Nut bolts (different Sizes); Cane (Aluminum/SS); Thermometer; Test Tube(Glass); Test Tube Holder; Gas with Burner; Measurement Cane; Utensils to Heat the Milk; Joints/angles Opener, pasteurizer, Opener, Shredder, Blender, Feeder, Silos, Separators, Dryers, Evaporators, Clarifier, Mixer, Extruder, Texturizer, Scraped Surface Heat Exchanger, Odorometers, Churner, Balance tank, Plate Heat Exchanger, Concentrator, Separator, Homogenizer, Pasteurizer, Timer, Vacuum Chamber, Muslin Cloth; Milk Sampling Bottle; Milk Stirrer; Gas with Burner; Knives, Spatulas, Packing Wrap Rolls, Measuring Cup and Spoons, Utensils, Digital Hygrometer.	

Module 7: Complete documentation and record keeping

Mapped to FIC/N2012, v1.0

Terminal Outcomes:

- Explain the methods of documenting and recording the complete details
- Demonstrate the process of documenting records effectively

Duration: 10:00	Duration: 20:00
Theory–Key Learning Outcomes	Practical–Key Learning Outcomes
<ul style="list-style-type: none"> • 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. 	<ul style="list-style-type: none"> • Demonstrate the process of documenting records of production plan, process parameters, and finished products. • Demonstrate the process of maintaining documents for raw materials, production schedule, process parameters and finished products. • Document daily records in the ERP system effectively.
Classroom Aids:	
Computer, Projection Equipment, PowerPoint Presentation and software, Facilitator’s Guide, Participant’s Handbook.	
Tools, Equipment and Other Requirements	
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); Muslin Cloth; Weighing Machine; Milk Stirrer; Nut bolts (different Sizes); Cane (Aluminum/SS); Thermometer; Test Tube (Glass); Test Tube Holder; Gas with Burner; Measurement Cane; Utensils to Heat the Milk; Joints/angles Opener, pasteurizer, Opener, Shredder, Blender, Feeder, Silos, Separators, Dryers, Evaporators, Clarifier, Mixer, Extruder, Texturizer, Scraped Surface Heat Exchanger, Odorometers, Churner, Balance tank, Plate Heat Exchanger, Concentrator, Separator, Homogenizer, Pasteurizer, Timer, Vacuum Chamber, Muslin Cloth; Milk Sampling Bottle; Milk Stirrer; Gas with Burner; Knives, Spatulas, Packing Wrap Rolls, Measuring Cup and Spoons, Utensils, Digital Hygrometer.	

Module 8: Ensuring food safety, personal hygiene and workplace sanitation

Mapped to FIC/N9001, v 1.0

Terminal Outcomes:

- Perform safety and sanitation related functions (for processing food products).
- Apply food safety practices (for processing food products).

Duration: 10:00	Duration: 20:00
Theory–Key Learning Outcomes	Practical–Key Learning Outcomes
<ul style="list-style-type: none"> • Discuss the importance of safety, hygiene and sanitation in the dairy processing. • Discuss the relevant HACCP principles to be followed in the dairy industry. • Describe GMP procedures as per FSSAI guidelines and GHP • Describe Hazards and its type 	<ul style="list-style-type: none"> • Apply the industry standards to maintain a safe and hygiene workplace. • Apply HACCP principles to eliminate food safety hazards in the process and products. • Apply safety practices in the work area.
Classroom Aids: Computer, Projection Equipment, PowerPoint Presentation and software, Facilitator’s Guide, Participant’s Handbook	
Tools, Equipment and Other Requirements 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); Muslin Cloth; Weighing Machine; Milk Stirrer; Nut bolts (different Sizes); Cane (Aluminum/SS); Thermometer; Test Tube(Glass); Test Tube Holder; Gas with Burner; Measurement Cane; Utensils to Heat the Milk; Joints/angles Opener, pasteurizer, Opener, Shredder, Blender, Feeder, Silos, Separators, Dryers, Evaporators, Clarifier, Mixer, Extruder, Texturizer, Scraped Surface Heat Exchanger, Odorometers, Churner, Balance tank, Plate Heat Exchanger, Concentrator, Separator, Homogenizer, Pasteurizer, Timer, Vacuum Chamber, Muslin Cloth; Milk Sampling Bottle; Milk Stirrer; Gas with Burner; Knives, Spatulas, Packing Wrap Rolls, Measuring Cup and Spoons, Utensils, Digital Hygrometer.	

Module 9: Employability Skills

Mapped to DGT/VSQ/N0101, v 1.0

Terminal Outcomes:

- Describe the traits of individual at workplace
- Demonstrate apply employability and entrepreneurship skills at workplace

Duration: 12:00	Duration: 18:00
Theory – Key Learning Outcomes	Practical – Key Learning Outcomes
<ul style="list-style-type: none"> • Discuss the importance of Employability Skills in meeting the job requirements. • Explain constitutional values, civic rights, duties, citizenship, responsibility towards society etc. that are required to be followed to become a responsible citizen. • Discuss 21st century skills. • Display positive attitude, self - motivation, problem solving, time management skills and continuous learning mindset in different situations. • Discuss the significance of reporting sexual harassment issues in time • Discuss the significance of using financial products and services safely and securely. • Explain the significance of approaching the concerned authorities in time for any exploitation as per legal rights and laws • Explain the importance of managing expenses, income, and savings. • Discuss the significance of using internet for browsing, accessing social media platforms, safely and securely • Discuss the need for identifying opportunities for potential business, 	<ul style="list-style-type: none"> • Show how to practice different environmentally sustainable practices • Use appropriate basic English sentences/phrases while speaking • Demonstrate how to communicate in a well - mannered way with others • Demonstrate working with others in a team • Show how to conduct oneself appropriately with all genders and PwD • Show how to operate digital devices and use the associated applications and features, safely and securely • Create a biodata • Use various sources to search and apply for jobs

<p>sources for arranging money and potential legal and financial challenges</p> <ul style="list-style-type: none"> • Differentiate between types of customers • Explain the significance of identifying customer needs and addressing them • Discuss the significance of maintaining hygiene and dressing appropriately • Discuss the significance of dressing up neatly and maintaining hygiene for an interview • Discuss how to search and register for apprenticeship opportunities 	
Classroom Aids:	
Computer, Projection Equipment, PowerPoint Presentation and software, Facilitator's Guide, Participant's Handbook	
Tools, Equipment and Other Requirements	
Computer/laptop.	

Annexure

Trainer Requirements

Trainer Prerequisites						
Minimum Educational Qualification	Specialization	Relevant Industry Experience		Training Experience		Remarks
		Years	Specialization	Years	Specialization	
Diploma	Dairy Technology/Food Tech/Food Engineering/Hotel Management	4	hand on experience in a Dairy industry		Training of butter and ghee processing operator	
B.Sc./B.Tech/BE	Dairy Technology/food science/home science/food technology or in related subjects	2	hand on experience in a Dairy industry		Training of butter and ghee processing operator	
M.Sc./M.Tech/ME	Dairy Technology/food science/home science/food technology or in related subjects	1	hand on experience in a Dairy industry		Training of butter and ghee processing operator	

Trainer Certification	
Domain Certification	Platform Certification
Certified for Job Role: "Butter and Ghee Processing Operator" mapped to QP: "FIC/Q2003, v3.0". Minimum accepted score is 80%.	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.

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Assessor Requirements

Assessor Prerequisites						
Minimum Educational Qualification	Specialization	Relevant Industry Experience		Training/Assessment Experience		Remarks
		Years	Specialization	Years	Specialization	
Diploma	Dairy Technology /Food Tech/Food Engineering/Hotel Management	5	hand on experience in a Dairy industry	1	Assessment of butter and ghee processing operator	
B.Sc./B.Tech/BE	Dairy Technology or Food Engineering	3	hand on experience in a Dairy industry	1	Assessment of butter and ghee processing operator	
M.Sc./M.Tech/ME	Dairy Technology or Food Engineering	2	hand on experience in a Dairy industry	1	Assessment of butter and ghee processing operator	

Assessor Certification	
Domain Certification	Platform Certification
Certified for Job Role: “Butter and Ghee Processing Operator” mapped to QP: “FIC/Q2003, v3.0”. Minimum accepted score is 80%.	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.

Assessment Strategy

This section includes the processes involved in identifying, gathering and interpreting information to evaluate the learner on the required competencies of the program.

Assessment will be based on the concept of Independent Assessors empanelled with Assessment Agencies, identified, selected, trained and certified on Assessment techniques. These assessors would be aligned to assess as per the laid down criteria.

Assessment Agency would conduct assessment only at the training centres of Training Partner or designated testing centers authorized by FICSI.

Ideally, the assessment will be a continuous process comprising of three distinct steps:

A. Mid- term assessment

B. Term / Final Assessment

Each National Occupational Standard (NOS) in the respective QPs will be assigned weightage. Therein each Performance Criteria in the NOS will be assigned marks for theory and / or practical based on relative importance and criticality of function.

This will facilitate preparation of question bank / paper sets for each of the QPs. Each of these papers sets / question bank so created by the Assessment Agency will be validated by the industry subject matter experts through FICSI, especially with regard to the practical test and the defined tolerances, finish, accuracy etc.

The following tools are proposed to be used for final assessment:

- i. Written Test: This will comprise of (i) True / False Statements (ii) Multiple Choice Questions (iii) Matching Type Questions. Online system for this will be preferred.
- ii. Practical Test: This will comprise a test job to be prepared as per project briefing following appropriate working steps, using necessary tools, equipment and instruments. Through observation it will be possible to ascertain candidate's aptitude, attention to details, quality consciousness etc. The end product will be measured against the pre-decided MCQ filled by the Assessor to gauge the level of his skill achievements.
- iii. Structured Interview: This tool will be used to assess the conceptual understanding and the behavioural aspects as regards the job role and the specific task at hand.

Glossary

Term	Description
Declarative Knowledge	Declarative knowledge refers to facts, concepts and principles that need to be known and/or understood in order to accomplish a task or to solve a problem.
Key Learning Outcome	Key learning outcome is the statement of what a learner needs to know, understand and be able to do in order to achieve the terminal outcomes. A set of key learning outcomes will make up the training outcomes. Training outcome is specified in terms of knowledge, understanding (theory) and skills (practical application).
OJT (M)	On-the-job training (Mandatory); trainees are mandated to complete specified hours of training on site
OJT (R)	On-the-job training (Recommended); trainees are recommended the specified hours of training on site
Procedural Knowledge	Procedural knowledge addresses how to do something, or how to perform a task. It is the ability to work, or produce a tangible work output by applying cognitive, affective or psychomotor skills.
Training Outcome	Training outcome is a statement of what a learner will know, understand and be able to do upon the completion of the training .
Terminal Outcome	Terminal outcome is a statement of what a learner will know, understand and be able to do upon the completion of a module . A set of terminal outcomes help to achieve the training outcome.

Acronyms and Abbreviations

Term	Description
QP	Qualification Pack
NSQF	National Skills Qualification Framework
NSQC	National Skills Qualification Committee
NOS	National Occupational Standards
FIFO	First In First Out
FEFO	First Expire First Out
GMP	Good Manufacturing Practices
GHP	Good Hygiene Practices
CPR	Cardiopulmonary Resuscitation