



QUALIFICATION FILE

Food Analyst

☒ Short Term Training (STT) ☐ Long Term Training (LTT) ☐ Apprenticeship

☒ Upskilling ☐ Dual/Flexi Qualification ☐ For ToT ☐ For ToA

☒ General ☐ Multi-skill (MS) ☐ Cross Sectoral (CS) ☐ Future Skills ☐ OEM

NCrF/NSQF Level: 4

Submitted By:

Food Industry Capacity and Skill Initiative (FICSI)

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Section 1: Basic Details

1.	Qualification Name	Food Analyst	
2.	Sector/s	Food Processing	
3.	Type of Qualification: <input checked="" type="checkbox"/> New <input type="checkbox"/> Revised <input type="checkbox"/> Has Electives/Options <input type="checkbox"/> OEM	NQR Code & version of existing/previous qualification: NA <i>(change to previous, once approved)</i>	Qualification Name of existing/previous version: NA
4.	a. OEM Name b. Qualification Name <i>(Wherever applicable)</i>	NA Food Analyst	
5.	National Qualification Register (NQR) Code & Version <i>(Will be issued after NSQC approval)</i>	2022/FI/FICSI/06456	6. NCrf/NSQF Level: 4
7.	Award (Certificate/Diploma/Advance Diploma/ Any Other) <i>(Wherever applicable specify multiple entry/exits also & provide details in annexure)</i>	Certificate	
8.	Brief Description of the Qualification	A food analyst is responsible for conducting qualitative and quantitative tests to determine the physical and chemical properties of food. They are also responsible for recording and compiling the test results, preparing charts and reports as well preparing and incubating plates with cultures. They define quality assurance targets and procedures and see to their maintenance and continued improvement by reviewing targets, protocols, supplies, processes, equipment, and technologies for quality standards.	
9.	Eligibility Criteria for Entry for Student/Trainee/Learner/Employee	a. Entry Qualification & Relevant Experience:	

		b. Age: 18 years																													
		<table border="1"> <thead> <tr> <th>S. No.</th><th>Academic/Skill Qualification (with Specialization - if applicable)</th><th>Required Experience (with Specialization - if applicable)</th></tr> </thead> <tbody> <tr> <td>1</td><td>12th grade pass</td><td></td></tr> <tr> <td>2</td><td>Completed 2nd year of 3-year diploma (after 10) and pursuing regular education</td><td></td></tr> <tr> <td>3</td><td>10th Class Pass + Continuous pursuing schooling</td><td></td></tr> <tr> <td>4</td><td>10th Class Pass with 2 year NTC or 1 year NTC and 1 year NAC .</td><td></td></tr> <tr> <td>5</td><td>10th Grade Pass</td><td>2 year relevant experience</td></tr> <tr> <td>6</td><td>Previous relevant Qualification of NSQF Level 3.5</td><td>1 year relevant experience</td></tr> <tr> <td>7</td><td>Previous relevant Qualification of NSQF Level 3.0</td><td>2 year relevant experience</td></tr> </tbody> </table>						S. No.	Academic/Skill Qualification (with Specialization - if applicable)	Required Experience (with Specialization - if applicable)	1	12th grade pass		2	Completed 2nd year of 3-year diploma (after 10) and pursuing regular education		3	10th Class Pass + Continuous pursuing schooling		4	10th Class Pass with 2 year NTC or 1 year NTC and 1 year NAC .		5	10th Grade Pass	2 year relevant experience	6	Previous relevant Qualification of NSQF Level 3.5	1 year relevant experience	7	Previous relevant Qualification of NSQF Level 3.0	2 year relevant experience
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7	Previous relevant Qualification of NSQF Level 3.0	2 year relevant experience																													
10.	Credits Assigned to this Qualification, Subject to Assessment (as per National Credit Framework (NCrF))	17	11. Common Cost Norm Category (I/II/III) (wherever applicable): I																												
12.	Any Licensing requirements for Undertaking Training on This Qualification (wherever applicable)	NA																													
13.	Training Duration by Modes of Training Delivery (Specify Total Duration as per selected training delivery modes and as per requirement of the qualification)	<input type="checkbox"/> Offline <input type="checkbox"/> Online <input checked="" type="checkbox"/> Blended																													
		Training Delivery Modes	Theory (Hours)	Practical (Hours)	OJT Mandatory (Hours)	OJT Recommended (Hours)	Total (Hours)																								
		Classroom (offline)	144	276	90		510:00																								
		Online																													
		(Refer Blended Learning Annexure for details)																													
14.	Aligned to NCO/ISCO Code/s (if no code is available mention the same)	NCO-2015/3116.0200																													
15.	Progression path after attaining the qualification (Please show Professional and Academic progression)	Technical Lead: Food Analysis																													
16.	Other Indian languages in which the Qualification & Model Curriculum are being submitted	NA																													

17.	Is similar Qualification(s) available on NQR-if yes, justification for this qualification	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No URLs of similar Qualifications:	
18.	Is the Job Role Amenable to Persons with Disability	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If “Yes”, specify applicable type of Disability:	
19.	How Participation of Women will be Encouraged	No gender sensitization	
20.	Are Greening/ Environment Sustainability Aspects Covered <i>(Specify the NOS/Module which covers it)</i>	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
21.	Is Qualification Suitable to be Offered in Schools/Colleges	Schools <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Colleges <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
22.	Name and Contact Details of Submitting / Awarding Body SPOC <i>(In case of CS or MS, provide details of both Lead AB & Supporting ABs)</i>	Name: Mr. Sunil K Marwah Email: ceo@ficsi.in Contact No.: 9711260230 Website: https://www.ficsi.in/	
23.	Final Approval Date by NSQC: 17/11/2022	24. Validity Duration: 3 Years	25. Next Review Date: 16/11/2025

Section 2: Module Summary

NOS/s of Qualifications

(In exceptional cases these could be described as components)

Mandatory NOS/s:

Specify the training duration and assessment criteria at NOS/ Module level. For further details refer curriculum document.

Th.-Theory Pr.-Practical OJT-On the Job Man.-Mandatory Training Rec.-Recommended Proj.-Project

S. No	NOS/Module Name	NOS/Module Code & Version (if applicable)	Core/ Non-Core	NCrF/NSQF Level	Credits as per NCrF	Training Duration (Hours)					Assessment Marks					
						Th.	Pr.	OJT-Man.	OJT-Rec.	Total	Th.	Pr.	Proj.	Viva	Total	Weightage (%) (if applicable)
1.	Ensure preparedness for testing process	FIC/N7621	Core	3	4	40	80		-	120	27	73	-	-	100	30
2.	Carry out chemical, physical, microbiological, and sensory testing of food	FIC/N7622	Core	4	3	30	60	90	-	180	25	75	-	-	100	20
3.	Carry out compilation and record observation	FIC/N7623	Non-core	3	3	30	60		-	90	34	66	-	-	100	15
4.	Implement health and safety practices at the workplace	FIC/N9901		3	1	10	20		-	30	30	70	-	-	100	10
5.	Employability Skills (60 hours)	DGT/VSQ/N0102	Non-core	2	2	24	36		-	60	20	30	-	-	50	5
Duration (in Hours) / Total Marks					13	134	256	90		480	136	314			-	-

Elective NOS/s:

Elective 1: Carry out analysis of packaging material used for food

S. No	NOS/Module Name	NOS/Module Code & Version (if applicable)	Core/ Non-Core	NCrF/NSQF Level	Credits as per NCrF	Training Duration (Hours)					Assessment Marks					
						Th.	Pr.	OJT-Man.	OJT-Rec.	Total	Th.	Pr.	Proj.	Viva	Total	Weightage (%) (if applicable)
1.	Carry out analysis of packaging material used for food	FIC/N7624	Core	4	1	10	20			30	29	71			100	20
Duration (in Hours) / Total Marks					1	10	20			30	29	71			100	20

Assessment - Minimum Qualifying PercentagePlease specify **any one** of the following:

Minimum Pass Percentage – Aggregate at qualification level: 70 % (Every Trainee should score specified minimum aggregate passing percentage at qualification level to successfully clear the assessment.)

Minimum Pass Percentage – NOS/Module-wise 70 % (Every Trainee should score specified minimum passing percentage in each mandatory and selected elective NOS/Module to successfully clear the assessment.)

Section 3: Training Related

1.	Trainer's Qualification and experience in the relevant sector (in years) (as per NCVET guidelines)	B.Sc or graduate/B.Tech/BE in Food technology or food engineering or Food Science or Dairy Science with 3 years industry and 1 year training experience in food processing industry Or M.Sc/M.Tech/ME in Food technology or food engineering or Food Science or Dairy Science with 2 years industry and 1 year training experience in food processing industry
2.	Master Trainer's Qualification and experience in the relevant sector (in years) (as per NCVET guidelines)	M.Sc/M.Tech/ME in Food technology or food engineering or Food Science or Dairy Science with 5 years industry and 2 years training experience in food processing industry
3.	Tools and Equipment Required for Training	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No (If "Yes", details to be provided in Annexure)
4.	In Case of Revised Qualification, Details of Any Upskilling Required for Trainer	

Section 4: Assessment Related

	Assessor's Qualification and experience in relevant sector (in years) (as per NCVET guidelines)	B.Sc or graduate/B.Tech/BE in Food technology or food engineering with 3 years of industry and 2 years of training experience in the food processing industry Or M.Sc/M.Tech/ME in Food technology or food engineering with 2 years of industry and 1 year of training experience in the food processing industry
	Proctor's Qualification and experience in relevant sector (in years) (as per NCVET guidelines)	NA
	Lead Assessor's/Proctor's Qualification and experience in relevant sector (in years) (as per NCVET guidelines)	B.Sc or graduate/B.Tech/BE in Food technology or food engineering with 8 years of industry and 2 years of training experience in the food processing industry Or M.Sc/M.Tech/ME in Food technology or food engineering with 7 years of industry and 1 year of training experience in the food processing industry
	Assessment Mode (Specify the assessment mode)	Blended (only theory)
	Tools and Equipment Required for Assessment	<input checked="" type="checkbox"/> Same as for training <input type="checkbox"/> Yes <input type="checkbox"/> No (details to be provided in Annexure-if it is different for Assessment)

Section 5: Evidence of the need for the Qualification

Provide Annexure/Supporting documents name.

1.	Latest Skill Gap Study (not older than 2 years) (Yes/No): In process
2.	Latest Market Research Reports or any other source (not older than 2 years) (Yes/No):
3.	Government /Industry initiatives/ requirement (Yes/No): Yes
4.	Number of Industry validation provided: 30
5.	Estimated nos. of persons to be trained and employed:
6.	Evidence of Concurrence/Consultation with Line Ministry/State Departments: Yes

Section 6: Annexure & Supporting Documents Check List

Specify Annexure Name / Supporting document file name

1.	Annexure: NCrf/NSQF level justification based on NCrf level/NSQF descriptors <i>(Mandatory)</i>	<i>Attached</i>
2.	Annexure: List of tools and equipment relevant for qualification <i>(Mandatory, except in case of online course)</i>	<i>Attached</i>
3.	Annexure: Detailed Assessment Criteria <i>(Mandatory)</i>	<i>Attached</i>
4.	Annexure: Assessment Strategy <i>(Mandatory)</i>	<i>Attached</i>
5.	Annexure: Blended Learning <i>(Mandatory, in case selected Mode of delivery is "Blended Learning")</i>	<i>Filled</i>
6.	Annexure: Multiple Entry-Exit Details <i>(Mandatory, in case qualification has multiple Entry-Exit)</i>	<i>NA</i>
7.	Annexure: Acronym and Glossary <i>(Optional)</i>	
8.	Supporting Document: Model Curriculum <i>(Mandatory – Public view)</i>	<i>Attached</i>
9.	Supporting Document: Career Progression <i>(Mandatory - Public view)</i>	<i>Attached</i>
10.	Supporting Document: Occupational Map <i>(Mandatory)</i>	<i>Attached</i>
11.	Supporting Document: Assessment SOP <i>(Mandatory)</i>	<i>Attached</i>
12.	Any other document you wish to submit:	

Annexure: Evidence of Level

NCrf/NSQF Level Descriptors	Key requirements of the job role/ outcome of the qualification	How the job role/ outcomes relate to the NCrf/NSQF level descriptor	NCrf/NSQF Level
Professional Knowledge/Process Theoretical	<ul style="list-style-type: none"> process to set up the facility for testing and analysis of food samples procedure to inspect procured material and equipment for quality applicability and capacity of various equipment used for artisanal production vendor management process 	<p>The Food Analyst should have knowledge of the various processes and general concepts, in the food testing and analysis lab</p> <p>Refer to evidence provided in adjacent column. Hence it falls under Level 4.</p>	4

	<ul style="list-style-type: none"> • applicable FSSAI guidelines to be followed for the establishment of a testing facility • material and equipment requirements for food testing process • check the working and performance of all machineries and tools used for analysing the food samples • clean the machineries and tools used • with approved sanitizers following specifications and SOPs • dispose waste materials as per defined • SOPs and industry requirements • Factual knowledge of field of knowledge or study • food safety and hygiene standards followed • types of chemicals, materials and equipment required for cleaning and maintenance • room temperature should be specified below 20°C, for food physio chemical testing and for the test for soluble solids, room temperature should be controlled between 10-30°C • inspect the impact of microorganisms in the experimental environment on the detection process and ensure that the detection environment is clean • determine appropriate test method per sample standard • ensure type of pre-treatment method used for food samples • conduct wet digestion method to add • oxidizing strong acid to heat the organic matter, and release the inorganic component to be tested to form a non- volatile inorganic compound for analysis and determination • conduct dry ashing method by placing the sample in an open inert vessel and destroying the combustible (organic) portion of the sample by thermal decomposition using a muffle furnace. ashing temperatures: 450 to 550 °C 		
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	<ul style="list-style-type: none"> • make sure routine microbiological solutions cover the entire production process through to the QA/QC analysis of products ensuring compliance with regulatory standards • check equipment and containers commonly used to cultivate and maintain microorganisms must be sterilized before use, rooms of the laboratory are cleaned and disinfected, and hands carefully washed and sanitized • knowledge on food safety standards and Regulations (as per FSSAI) • handling of all types of machineries used in food testing and analysis • knowledge of Good Manufacturing Practices(GMP), Hazard Analysis Critical Control Points(HACCP) • different types of machineries used in food testing and analysis lab • maintenance of these machineries used in the lab 		
Professional and Technical Skills/ Expertise/ Professional Knowledge	<p>The individual on the job needs to have factual knowledge of:</p> <ul style="list-style-type: none"> • food safety and hygiene standards followed • types of chemicals, materials and equipment required for cleaning and maintenance • room temperature should be specified below 20°C, for food physio chemical testing and for the test for soluble solids, room temperature should be controlled between 10-30°C • inspect the impact of microorganisms in the experimental environment on the detection process and ensure that the detection environment is clean • determine appropriate test method per sample standard • ensure type of pre-treatment method used for food samples • conduct wet digestion method to add 	<p>The Food Analyst should possess practical skill, routine and repetitive tasks involved in the food testing and analysis lab, using appropriate tools while adhering to the standard operating procedure.</p> <p>Refer to evidence provided in adjacent column. Hence it falls under Level 4.</p>	4

	<ul style="list-style-type: none"> oxidizing strong acid to heat the organic matter, and release the inorganic component to be tested to form a non- volatile inorganic compound for analysis and determination conduct dry ashing method by placing the sample in an open inert vessel and destroying the combustible (organic) portion of the sample by thermal decomposition using a muffle furnace. ashing temperatures: 450 to 550 °C make sure routine microbiological solutions cover the entire production process through to the QA/QC analysis of products ensuring compliance with regulatory standards check equipment and containers commonly used to cultivate and maintain microorganisms must be sterilized before use, rooms of the laboratory are cleaned and disinfected, and hands carefully washed and sanitized knowledge on food safety standards and Regulations (as per FSSAI) handling of all types of machineries used in food testing and analysis knowledge of Good Manufacturing Practices(GMP), Hazard Analysis Critical Control Points(HACCP) different types of machineries used in food testing and analysis lab maintenance of these machineries used in the lab 		
Employment Readiness & Entrepreneurship Skills & Mind-set/Professional Skill	<p>Recall and demonstrate practical skill to routine and repetitive applications:</p> <ul style="list-style-type: none"> set up and manage facilities for chemical, physical, microbiological, and sensory assessment of food and drink set up the facility as per the assessment schedule 	The Food Analyst should possess practical skill, routine and repetitive tasks involved in the food testing and analysis lab, using appropriate tools while adhering to the standard operating procedure.	4

	<ul style="list-style-type: none"> ensure labelling and grouping of required test samples in accordance with organizational procedures Arrange necessary resources required for the testing e.g., distilled water, chemicals, equipment. Practice disposal of discarded or left-over samples in accordance with organizational procedures from the testing facilities with work areas left clean and ready for use arrange for regular maintenance and service of all critical equipment Equipment: refrigerators, freezers where samples and certified reference samples are stored, ovens, incubators, water baths, centrifuges, pH meters, balances, analytical instruments such as chromatographs and spectrometers, etc. 	Refer to evidence provided in adjacent column. Hence it falls under Level 4.	
Broad Learning Outcomes/Core Skill	<ul style="list-style-type: none"> communicate effectively with others through written or oral, with clarity, skill to basic arithmetic and algebraic principles, basic understanding of organisation procedures and policies and the healthy working environment ensure periodic (daily/weekly/monthly/quarterly/half yearly/annual) maintenance of all machines and equipment following the sop or following suppliers' instructions/manuals <p>Basic mathematics and algebraic principles</p> <ul style="list-style-type: none"> various calculations performed, cost estimations, and their optimization techniques write information documents to internal departments/ internal teams features of online banking and how to transact using various online systems safely <p>Basic understanding of organisation procedures and policies and the healthy working environment.</p> <ul style="list-style-type: none"> organization standards, process standards and procedures followed in the organisation 	<p>The Food Analyst should be able to communicate effectively. Should have knowledge of simple arithmetic operations with basic understanding of organisation procedures and policies and the healthy working environment</p> <p>Refer to evidence provided in adjacent column. Hence it falls under Level 4.</p>	4

	<ul style="list-style-type: none"> • types of testing and analysis performed by the lab • code of business conduct • dress code to be followed • internal processes such as collecting samples, methods of testing, chemicals to be used for testing, apparatus used for testing, testing of the packaging material, disposal of waste etc • provision of wages, working hours as per organisation policy 		
Responsibility	<p>The individual on the job needs to :</p> <ul style="list-style-type: none"> • understand the procedures for setting up and managing facilities for chemical, physical, microbiological, and sensory assessment of food and drink • set up facilities following the assessment schedule and in accordance with organizational procedures for each assessment session • apply problem solving techniques to manage testing process, rectify any problems ongoing and record actions taken • transport test samples from preparation area to testing facility and store appropriately 	<p>The Food Analyst should have the responsibility for own work and learning.</p> <p>Refer to evidence provided in adjacent column. Hence it falls under Level 4.</p>	4

Annexure: Tools and Equipment (Lab Set-Up)

List of Tools and Equipment

Batch Size: 30

S. No.	Tool / Equipment Name	Specification	Quantity for specified Batch size
1	Safety gloves		30
2	Face mask		30
3	Safety shoes		30
4	Safety hat		30
5	Apron		30
6	Food samples,		
7	Sample standard operating procedure,.		
8	equipment		

Classroom Aids

The aids required to conduct sessions in the classroom are:

1. Whiteboard
2. Projector
3. Computer/Laptop
4. Chairs
5. Tables
6. Whiteboard marker

Annexure: Industry Validations Summary

Provide the summary information of all the industry validations in table. This is not required for OEM qualifications.

S. No	Organization Name	Representative Name	Designation	Contact Address	Contact Phone No	E-mail ID	LinkedIn Profile (if available)
1							
2							
3							
4							
5							
6							
7							

8							
9							
10							
11							
12							
13							
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28.							
29.							
30.							

Annexure: Training & Employment Details

Training and Employment Projections:

Year	Total Candidates		Women		People with Disability	
	Estimated Training #	Estimated Employment Opportunities	Estimated Training #	Estimated Employment Opportunities	Estimated Training #	Estimated Employment Opportunities
2024	50	50				
2025	150-200	150-200				
2026	300	300				

Data to be provided year-wise for next 3 years

Training, Assessment, Certification, and Placement Data for previous versions of qualifications:

Qualification Version	Year	Total Candidates				Women				People with Disability			
		Trained	Assessed	Certified	Placed	Trained	Assessed	Certified	Placed	Trained	Assessed	Certified	Placed

Applicable for revised qualifications only, data to be provided year-wise for past 3 years.

List Schemes in which the previous version of Qualification was implemented:

PC1.

PC2.

Content availability for previous versions of qualifications:

☐ Participant Handbook ☐ Facilitator Guide ☐ Digital Content ☐ Qualification Handbook ☐ Any Other:

Languages in which Content is available:

Annexure: Blended Learning

Blended Learning Estimated Ratio & Recommended Tools:**Refer NCVET “Guidelines for Blended Learning for Vocational Education, Training & Skilling” available on:**

S. No.	Select the Components of the Qualification	List Recommended Tools – for all Selected Components	Offline : Online Ratio
1	<input checked="" type="checkbox"/> Theory/ Lectures - Imparting theoretical and conceptual knowledge	<ul style="list-style-type: none"> • Books/ e-books • Presentations • Reference Material • Audio / Video Modules 	40 : 60
2	<input checked="" type="checkbox"/> Imparting Soft Skills, Life Skills, and Employability Skills /Mentorship to Learners	<ul style="list-style-type: none"> • Self-Learning Videos • Broadcasts • Mobile Learning • Curated Digital content 	40 : 60
3	<input checked="" type="checkbox"/> Showing Practical Demonstrations to the learners	<ul style="list-style-type: none"> • Video Content • E-Resource library • AR/ VR/ XR 	40 : 60
4	<input checked="" type="checkbox"/> Imparting Practical Hands-on Skills/ Lab Work/ workshop/ shop floor training	<ul style="list-style-type: none"> • Training tools (tools list attached) • Video Play • Presentations 	40 : 60
5	<input checked="" type="checkbox"/> Tutorials/ Assignments/ Drill/ Practice	<ul style="list-style-type: none"> • Online Question Bank • Mobile Quick test app • MCQ based tests 	40 : 60
6	<input checked="" type="checkbox"/> Proctored Monitoring/ Assessment/ Evaluation/ Examinations	<ul style="list-style-type: none"> • Assessment engine for Essays • Up-loadable file examinations • Mock test sessions 	40 : 60
7	<input checked="" type="checkbox"/> On the Job Training (OJT)/ Project Work Internship/ Apprenticeship Training	<ul style="list-style-type: none"> • Online tests • Offline assessments 	40 : 60

Annexure: Detailed Assessment Criteria

Detailed assessment criteria for each NOS/Module are as follows:

NOS/Module Name	Assessment Criteria for Performance Criteria/Learning Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
FIC/N7621 – Ensure preparedness for testing process	<i>Organize lab and manage resources to carry out testing</i>	12	32	-	-
	PC1. set up and manage facilities for chemical, physical, microbiological, and sensory assessment of food and drink	1	3	-	-
	PC2. set up facilities following the assessment schedule and in accordance with organizational procedures for each assessment session	1	3	-	-
	PC3. arrange to remove all undesirable distractions from the testing facility Undesirable distractions – Eating or drinking in labs increases risks for contamination and attracting pests, using headphones to listen to music, storing food or beverages in the refrigerators where food samples are stored, etc.	1	2	-	-
	PC4. apply problem-solving techniques to manage testing process, rectify any problems ongoing, and record actions taken	1	3	-	-
	PC5. transport test samples from preparation area to testing facility and store appropriately	1	3	-	-
	PC6. ensure labeling and grouping of required test samples in accordance with organizational procedures	1	3	-	-
	PC7. undertake to present and layout all test samples correctly,	1	3	-	-
	PC8. ensuring samples are accessible to team and using organizational procedures	1	3	-	-
	PC9. arrange necessary resources required for the testing e.g., distilled water, chemicals, equipment, etc.	1	3	-	-
	PC10. ensure to provide all correct paperwork, prompt sheets, and feedback sheets to participants using organizational protocol	1	2	-	-
	PC11. ensure facilities are clear in accordance with operational instructions and organizational protocol	1	2	-	-
	PC12. collect results and data for further evaluation and forward them to the appropriate member of staff	1	2	-	-
	<i>Plan for testing process</i>	15	41		
	PC13. determine the features of the product to be tested in consultation with appropriate personnel	1	3		
	PC14. develop a hypothesis for each assessment in accordance with organisational protocol	1	3		

	PC15. ensure the facility and layout is designed needed for each assessment	1	3		
	PC16. check that all equipment shall meet specifications relevant to method and shall be calibrated and/or verified against the specifications	1	3		
	PC17. ensure laboratory have documented procedures for handling, transport, storage, and use of measuring equipment to prevent contamination or deterioration	1	3		
	PC18. arrange for regular maintenance and service of all critical equipment	1	3		
	PC19. develop a methodology for assessing products on a case- by-case basis in accordance with organisational protocol	1	3		
	PC20. plan how panel members and products will be grouped in accordance with organisational protocol	1	3		
	PC21. schedule staff time and facilities for the tests to be carried out	1	2		
	PC22. address issues of validity and ethics for the chosen method for testing	1	3		
	PC23. communicate plans to relevant staff and amend plans in response to feedback and agree on solution	1	2		
	PC24. analyze results from the sensory assessment of products by legal and regulatory requirements, hygiene and environmental standards, and instructions only	1	3		
	PC25. collect and review responses from panel members in accordance with organisational protocol	1	2		
	PC26. determine an appropriate method for organising and breaking down responses	1	3		
	PC27. test hypothesis based on responses and make a recommendation for the organisation based on results	1	2		
	Total Marks	27	73	-	-
FIC/N7622 – Carry out chemical, physical, microbiological, and sensory testing of food	<i>Perform chemical and physical analysis</i>	9	27	-	-
	PC1. ensure the temperature requirement as per type of product and its specific analysis method	1	3		
	PC2. inspect and ensure the cleanliness of the workplace	1	3		
	PC3. assess the nutritional characteristics of different food by determining appropriate test method per sample Test method: chromatography, spectroscopy, ELISA, etc.	1	3		
	PC4. ensure type of pre-treatment method used for food samples	1	3		1
	PC5. collect samples for analysis	1	3		
	PC6. preserve collected and labelled samples of raw materials and other food products	1	3		-

PC7.	blend or mix ingredients to make reagents to carry out the analysis for the betterment of the blend	1	3		
PC8.	conduct wet digestion method to add oxidizing strong acid to form a non-volatile inorganic compound for analysis and determination Strong acid: nitric acid, perchloric acid, sulfuric acid, etc	1	3		
PC9.	ensure quality assurance measures are taken to ensure that the test results meet the specified quality requirements Measure: establishment of a quality assurance system, effective	1	3		
	<i>Carry out microbiological testing</i>	4	12		
PC10.	ensure the equipment and containers are sterilized before use, rooms of the laboratory are cleaned and disinfected, and hands are carefully washed and sanitized	1	3		
PC11.	analyze by growing microorganisms in an artificial environment under well-defined conditions (process is called cultivation) to get microbial culture	1	3		
PC12.	substantiate properties of single organism (all the cells in a population), a pure culture must be established, containing only one kind (species) of microorganism to be characterized	1	3		
PC13.	observe isolation effectively—the separation of a particular species in pure culture from the mixed populations that exist in nature	1	3		
	<i>Perform sensory and statistical analysis</i>	7	24		
PC14.	assess the various characteristics of food to evaluate both new products and established products	1	4		
PC15.	ensure products are tested scientifically and with as much objectivity as is possible	1	4		
PC16.	identify through triangle tests which sample is different in three coded samples (two of which are the same and one of which is different)	1	4		
PC17.	perform comparative judgment through paired comparison tests with a pair of coded samples	1	3		
PC18.	ensure ranking samples tests with regards to intensity of a particular attribute by testing at least three coded samples to assess the optimum amount of taste quality	1	3		
PC19.	assess changes in products over time to establish optimum shelf-life	1	3		
PC20.	assess appearance and odour	1	3		
	<i>Perform post testing activities</i>	5	12		
PC21.	ensure all equipment being used should be kept under permanent control of the laboratory and should be capable of in context of the test method	1	3		

	PC22. ensure all equipment is calibrated and sanitized either daily or at a periodically interval as the case may be depending upon the requirement	1	3		
	PC23. ascertain instruction manual, operation manual, and other details of the equipment	2	3		
	PC24. ensure room should be dust-free, air-conditioned with controlled humidity	1	3		
	Total Marks	25	75	-	-
FIC/N7623 – Carry out compilation and record observation	<i>Compile results and discussion</i>	24	48		
	record all basic information on the worksheet before analysis is initiated	3	6		
	ensure no entries should be erased or overwritten if an incorrect entry is made	3	6		
	ensure to draw a line through the incorrect entry; write above it the correct figure or word	3	6		
	assure data should not be discarded without explanation	3	6		
	make sure if method has not been published or is not covered by SOP it should be written in full on the worksheet or as an attachment to the worksheet	3	6		
	consolidate analysis incase more than one analyst is involved, and it must indicate which analyst performed which segment of the analysis	3	6		
	check analysis worksheet for accuracy, completeness, and compatibility with other documents by the supervisor or the designated representative	3	6		
	ensure calculations are clearly shown with the proper number of significant figures used	3	6		
	<i>Prepare certificate of analysis (COA)</i>	10	18		
	ensure COA conveys information from a material supplier to a material user about the identity, quality, and purity of that specific material	3	6		
	assure COA are collated for audit process	3	6		
	assess whether the COA contains supplier Information, materials identification, transportation data, evidence of conformance, signature data Supplier information: material supplier, including their name, address, and other contact information Materials Identification: lot numbers, product codes, and descriptions Transportation Data: customer name and address, original purchase order, or other details such as the item's destination Evidence of Conformance: specific characteristics, test results or other evidence in terms of industry standards, regulatory requirements, or customer-specific request Signature Data: signature indicating that the evidence presented was reviewed by a qualified and authorized product inspector	4	6		
	Total Marks	34	66	-	-

FIC/N9901: Implement health and safety practices at the workplace	<i>Ensure food safety and personal hygiene</i>	7	20		
	PC1. follow relevant practices to avoid cross contamination at all stages of food processing operations	1	5		
	PC2. follow organisational procedures for handling items that may cause allergic reactions	2	5		
	PC3. follow Good Manufacturing Practices (GMP) at the workplace	2	5		
	PC4. follow Good Hygiene Practices (GHP) at the workplace appropriately	2	5		
	<i>Follow safety measures to avoid accidents</i>	11	25		
	PC5. use protective clothing/equipment for specific tasks and work conditions	1	4		
	PC6. identify job-site hazardous work and possible causes of risk or accident at the workplace	2	4		
	PC7. deal with hazards safely and appropriately to ensure safety of self and others as per organisational protocol	2	4		
	PC8. use various types of fire extinguishers effectively	2	4		
	PC9. respond promptly and appropriately to an accident situation or medical emergency	2	4		
	PC10. provide cardio-pulmonary resuscitation (CPR) as per the requirement (e.g., cardiac arrest)	2	5		
	<i>Follow emergency procedures</i>	6	12		
	PC11. follow workplace emergency and evacuation procedures	2	4		
	PC12. use safe methods to free a person from electrocution	2	4		
	PC13. administer appropriate first aid to victims in case of cuts, bleeding, burns, choking, electric shock, poisoning etc.	2	4		
	<i>Manage infection control</i>	6	13		
	PC14. use appropriate disinfectants to disinfect the work area and equipment as per organisational protocol	2	5		
	PC15. ensure personal hygiene by washing hands regularly using alcohol based sanitisers and wearing personal protective equipment (PPE)	2	4		
	PC16. report illness of self and others to the supervisor or concerned authority	2	4		
Total Marks		30	70	-	-
DGT/VSQ/N0102 - Employability Skills (60 hours)	<i>Introduction to Employability Skills</i>	1	1	-	-
	PC1. understand the significance of employability skills in meeting the job requirements	-	-	-	-
	PC2. identify and explore learning and employability portals				
	<i>Constitutional values – Citizenship</i>	1	1	-	-

PC3. recognize the significance of constitutional values, including civic rights and duties, citizenship, responsibility towards society etc. and personal values and ethics such as honesty, integrity, caring and respecting others, etc.	-	-	-	-
PC4. follow environmentally sustainable practices				
<i>Becoming a Professional in the 21st Century</i>	1	3	-	-
PC5. recognize the significance of 21st Century Skills for employment	-	-	-	-
PC6. practice the 21st Century Skills such as Self- Awareness, Behaviour Skills, time management, critical and adaptive thinking, problem-solving, creative thinking, social and cultural awareness, emotional awareness, learning to learn for continuous learning etc. in				
<i>Basic English Skills</i>	2	3	-	-
PC7. use basic English for everyday conversation in different contexts, in person and over the telephone	-	-	-	-
PC8. read and understand routine information, notes, instructions, mails, letters etc. written in English				
PC9. write short messages, notes, letters, e- mails etc. in English				
<i>Career Development & Goal Setting</i>	1	2		
PC10. understand the difference between job and career				
PC11. prepare a career development plan with short- and long-term goals, based on aptitude				
<i>Communication Skills</i>	2	2	-	-
PC12. follow good manners while communicating with others	-	-	-	-
PC13. work with others in a team	-	-	-	-
<i>Diversity & Inclusion</i>	1	1	-	-
PC14. communicate and behave appropriately with all genders and PwD	-	-	-	-
PC15. escalate any issues related to sexual harassment	-	-	-	-
<i>Financial and Legal Literacy</i>	2	3	-	-
PC16. select financial institutions, products and services as per requirement	-	-	-	-
PC17. carry out offline and online financial transactions, safely and securely	-	-	-	-
PC18. identify common components of salary and compute income, expenses, taxes, investments etc	-	-	-	-
PC19. identify relevant rights and laws and use legal aids to fight against legal exploitation				
<i>Essential Digital Skills</i>	3	4	-	-
PC20. operate digital devices and carry out basic internet operations securely and safely	-	-	-	-

	PC21. use e- mail and social media platforms and virtual collaboration tools to work effectively	-	-	-	-
	PC22. use basic features of word processor, spreadsheets, and presentations				
	<i>Entrepreneurship</i>	2	3	-	-
	PC23. identify different types of Entrepreneurship and Enterprises and assess opportunities for potential business through	-	-	-	-
	Research	-	-	-	-
	PC24. develop a business plan and a work model, considering the 4Ps of Marketing Product, Price, Place and Promotion				
	PC25. identify sources of funding, anticipate, and mitigate any financial/ legal hurdles for the potential business opportunity				
	<i>Customer Service</i>	1	2	-	-
	PC26. identify different types of customers	-	-	-	-
	PC27. identify and respond to customer requests and needs in a professional manner.	-	-	-	-
	PC28. follow appropriate hygiene and grooming standards	-	-	-	-
	<i>Getting ready for apprenticeship & Jobs</i>	2	3	-	-
	PC29. create a professional Curriculum vitae (Résumé)	-	-	-	-
	PC30. search for suitable jobs using reliable offline and online sources such as Employment exchange, recruitment agencies, newspapers etc. and job portals, respectively	-	-	-	-
	PC31. apply to identified job openings using offline	-	-	-	-
	/online methods as per requirement				
	PC32. answer questions politely, with clarity and confidence, during recruitment and selection				
	PC33. identify apprenticeship opportunities and register for it as per guidelines and requirements				
	Total Marks	20	30	-	-
FIC/N7624 - Carry out analysis of packaging material used for food	<i>Organize packaging material for testing</i>	8	22		
	PC1. compare current supply of material with the quality of that offered for the first time, also regular checking of uniformity in new supplies of packaging materials	1	3		
	PC2. check quality during production of packaging materials	1	3		
	PC3. evaluate suitability of packaging material for a certain specific purpose Purpose: protection against mechanical or climatic hazards	1	3		
	PC4. evaluate packaging material in standard atmospheric conditions	1	3		
	PC5. ensure samples reach equilibrium before evaluation which normally takes 24 hours	1	3		

PC6. ensure that climate has had its effect on the specimen by checking moisture content of test specimen	1	3		
PC7. ensure laboratories maintains standard atmospheric conditions and no test is considered official if conducted under any other conditions	2	4		
<i>Perform testing procedure</i>	14	28		
PC8. ensure physical properties are checked in accordance with a particular basis weight or bulk in Grammage or GSM paper test method	2	4		
Physical properties: bursting strength, thickness	2	4		
PC9. check samples are cut by selecting the suitable template considering the type of the sample	2	4		
PC10. check thickness properties for routine control Thickness Properties: tensile 3 strength, sealability, and seal strength, moisture, gas, and light barrier properties	2	4		
PC11. determine bursting strength of paper and paperboard to assess both strength and toughness of the material	2	4		
PC12. measure energy absorbed by the test sample in propagating a tear that has already been initiated by cutting a small nick in the test piece in tear strength test	2	4		
PC13. measure amount of water absorbed by the sample during penetration from one side to another in Water Penetration-cobb test	2	4		
PC14. protect hygroscopic food from oxygenated water vapour pick in water vapour permeability test	2	4		
<i>Prepare Analysis Report</i>	7	21		
PC15. ensure records form a continuity of documentation to produce a clear, accurate, and in-disputable history of the test material with all aspects of documentation in agreement	1	3		
PC16. report test results with a focus on findings and recommendations	1	3		
PC17. include relevant information from the test plan and outline the methodologies used	1	3		
PC18. update all sample registers worksheets, reports, and associated documents which must be retained for a period, which is determined by the management	1	3		
PC19. make sure storage of such material should follow the normal rules of archiving Archiving parameters: indexation, traceability, security, appropriate levels of protection against fraud and tampering, from fire, flood, etc	1	3		
PC20. assure backup copies must be held of any records stored as an electronic signal on magnetic media and renewed at appropriate	1	3		

	intervals.				
	PC21. ensure dates and signatures of individuals who withdraw and return documents in storage must be recorded	1	3		
	Total Marks	29	71		

Annexure: Assessment Strategy

This section includes the processes involved in identifying, gathering, and interpreting information to evaluate the Candidate on the required competencies of the program. *Mention the detailed assessment strategy in the provided template.*

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. Assessment will be based on the concept of Independent Assessors empanelled with Assessment

On the Job:

1. Each module will be assessed separately.
2. To complete the OJT, The candidate must score 70% in each module.
3. Tools of Assessment that will be used for assessing whether the candidate has desired skills and etiquette of dealing with customers, understanding needs & requirements, assessing the customer and performing Soft Skills effectively:
 - a. Videos of Trainees during OJT
4. Assessment of each Module will ensure that the candidate can:
 - a. Effective engagement with the customers
 - b. Understand the working of various tools and equipment

Annexure: Acronym and Glossary

Acronym

Acronym	Description
AA	Assessment Agency
AB	Awarding Body
ISCO	International Standard Classification of Occupations
NCO	National Classification of Occupations
NCrF	National Credit Framework
NOS	National Occupational Standard(s)
NQR	National Qualification Register
NSQF	National Skills Qualifications Framework
OJT	On the Job Training

Glossary

Term	Description
National Occupational Standards (NOS)	NOS define the measurable performance outcomes required from an individual engaged in a particular task. They list down what an individual performing that task should know and also do.
Qualification	A formal outcome of an assessment and validation process which is obtained when a competent body determines that an individual has achieved learning outcomes to given standards
Qualification File	A Qualification File is a template designed to capture necessary information of a Qualification from the perspective of NSQF compliance. The Qualification File will be normally submitted by the awarding body for the qualification.
Sector	A grouping of professional activities on the basis of their main economic function, product, service or technology.
Long Term Training	Long-term skilling means any vocational training program undertaken for a year and above. https://ncvet.gov.in/sites/default/files/NCVET.pdf