



QUALIFICATION FILE

Multi Skill Technician – Consumer Durables

OEM Qualification Name: Multi Skill Technician – Consumer Durables

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:

Electronics Sector Skills Council of India (ESSCI)

155, 2nd Floor, ESC House

Okhla Industrial Area - Phase 3,

New Delhi – 110020

Tel: 011 – 8447738501

Multi Skill Technician - Consumer Durables

OEM Qualification Name: Multi Skill Technician - Consumer Durables

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Section 1: Basic Details

1.	Qualification Name	Multi Skill Technician – Consumer Durables													
2.	Sector/s	Electronics													
3.	Type of Qualification: <input checked="" type="checkbox"/> New <input type="checkbox"/> Revised <input type="checkbox"/> Has Electives/Options <input checked="" type="checkbox"/> OEM	NQR Code & version of existing/previous qualification: <i>(change to previous, once approved)</i>	Qualification Name of existing/previous version: Multi Skill Technician – Consumer Durables/ V.1												
4.	a. OEM Name b. Qualification Name <i>(Wherever applicable)</i>	a- Multi Skill Technician – Consumer Durables b- Multi Skill Technician - Consumer Durables													
5.	National Qualification Register (NQR) Code & Version <i>(Will be issued after NSQC approval)</i>	QG-04-EH-04690-2025-V2-ESSC	1. NCrF/NSQF Level: 4												
6.	Award (Certificate/Diploma/Advance Diploma/ Any Other <i>(Wherever applicable specify multiple entry/exits also & provide details in annexure)</i>	Certificate													
7.	Brief Description of the Qualification	The individual in this multi-skill consumer durable role is responsible for installing, diagnosing, troubleshooting, and repairing a range of household appliances such as refrigerators, televisions, washing machines, water purifiers, and microwave ovens. They also coordinate with the Service Manager or Lead Mechanic to update on repair status and prioritize service tasks.													
8.	Eligibility Criteria for Entry for Student/Trainee/Learner/Employee	a. Entry Qualification & Relevant Experience: <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 5%;">S. No.</th> <th style="width: 70%;">Academic/Skill Qualification (with Specialization - if applicable)</th> <th style="width: 25%;">Required Experience (with Specialization - if applicable)</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>12th grade or equivalent</td> <td>No Experience required</td> </tr> <tr> <td>2</td> <td>10th grade or equivalent</td> <td>3 Years' Experience required</td> </tr> <tr> <td>3</td> <td>Certificate-NSQF (Level 3 in relevant domain)</td> <td>3 Years relevant experience</td> </tr> </tbody> </table> <p># Relevant Experience in Consumer Electronics & IT Hardware</p>		S. No.	Academic/Skill Qualification (with Specialization - if applicable)	Required Experience (with Specialization - if applicable)	1	12 th grade or equivalent	No Experience required	2	10 th grade or equivalent	3 Years' Experience required	3	Certificate-NSQF (Level 3 in relevant domain)	3 Years relevant experience
S. No.	Academic/Skill Qualification (with Specialization - if applicable)	Required Experience (with Specialization - if applicable)													
1	12 th grade or equivalent	No Experience required													
2	10 th grade or equivalent	3 Years' Experience required													
3	Certificate-NSQF (Level 3 in relevant domain)	3 Years relevant experience													
10.	Credits Assigned to this Qualification, Subject to Assessment <i>(as per National Credit Framework (NCrF))</i>	22 (with one elective); 42 (with both electives)	11. Common Cost Norm Category (I/II/III) <i>(wherever applicable): I</i>												
12.	Any Licensing requirements for Undertaking Training on This Qualification <i>(wherever applicable)</i>	NA													

13.	Training Duration by Modes of Training Delivery <i>(Specify Total Duration as per selected training delivery modes and as per requirement of the qualification)</i>	<input type="checkbox"/> Offline <input type="checkbox"/> Online <input checked="" type="checkbox"/> Blended With Both Electives																	
		<table border="1"> <thead> <tr> <th>Training Delivery Modes</th> <th>Theory (Hours)</th> <th>Practical (Hours)</th> <th>OJT Mandatory (Hours)</th> <th>OJT Recommended (Hours)</th> <th>Total (Hours)</th> </tr> </thead> <tbody> <tr> <td>Classroom (offline)</td> <td>00:00</td> <td>630:00</td> <td>300:00</td> <td>00:00</td> <td rowspan="2">1260:00</td> </tr> <tr> <td>Online</td> <td>330:00</td> <td>00:00</td> <td>00:00</td> <td>00:00</td> </tr> </tbody> </table>	Training Delivery Modes	Theory (Hours)	Practical (Hours)	OJT Mandatory (Hours)	OJT Recommended (Hours)	Total (Hours)	Classroom (offline)	00:00	630:00	300:00	00:00	1260:00	Online	330:00	00:00	00:00	00:00
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Online	180:00	00:00	00:00	00:00															
		<i>(Refer Blended Learning Annexure for details)</i>																	
14.	Aligned to NCO/ISCO Code/s <i>(if no code is available mention the same)</i>	NCO-2015/7421.0701																	
15.	Progression path after attaining the qualification <i>(Please show Professional and Academic progression)</i>	Senior Technician – Consumer Durables																	
16.	Other Indian languages in which the Qualification & Model Curriculum are being submitted	Hindi																	
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 type="checkbox"/> Yes <input checked="" 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	Name: Saleem Ahmed Email: ceo@essc-india.org Website: https://www.essc-india.org/ Contact No.: 011 – 8447738501																	

	(In case of CS or MS, provide details of both Lead AB & Supporting ABs)		
23.	Final Approval Date by NSQC: 16.12.2025	24. Validity Duration: 3 Years	25. Next Review Date: 18.11.2028

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	Employability Skills (60 hours)	DGT/VSQ/N0102 & V1.0	Non-core	4	2	24	36	0	0	60	20	30	0	0	50	25
Duration (in Hours) / Total Marks					2	24	36	0	0	60	20	30	0	0	50	25

Elective NOS/s: (Select atleast any 1)

Elective 1: Installation and service (Refrigerator, Washing machine, Dishwasher, Air conditioner & Gas Charging)

Elective 2: Installations and Repair (TV, Microwave, Water purifier, Basics Refrigerator& washing machine, OLED & Monitor)

Elective 1: Installation and service (Refrigerator, Washing machine, Dishwasher, Air conditioner & Gas Charging)

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	Gas Charging in the refrigerator and AC	ELE/N3161 & V2.0	Core	4	3	30	30	30	0	90	40	60	0	0	100	15
2	Installation and repair of Air Conditioner	ELE/N3162 & V2.0	Core	4	5	30	90	30	0	150	40	60	0	0	100	15

3	Installation and repair of Dish Washer	ELE/N3163 & V2.0	Core	4	4	30	60	30	0	120	40	60	0	0	100	15	
4	Installation and repair of Refrigerator (DIOS)	ELE/N3169 & V2.0	Core	4	4	30	60	30	0	120	40	60	0	0	100	15	
5	Installation and repair of Washing machine	ELE/N3170 & V2.0	Core	4	4	30	60	30	0	120	40	60	0	0	100	15	
Duration (in Hours) / Total Marks						20	150	300	150	0	600	200	300	0	0	500	75

Elective 2: Installations and Repair (TV, Microwave, Water purifier, Basics Refrigerator& washing machine, OLED & Monitor)

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					Weightage (%) (if applicable)		
						Th.	Pr.	OJT-Man.	OJT-Rec.	Total	Th.	Pr.	Proj.	Viva	Total			
1	Installation and repair of OLED TV/ Monitor	ELE/N3164 & V2.0	Core	4	3	30	30	30	0	90	40	60	0	0	100	15		
2	Installation and repair of basic refrigerator and washing machine	ELE/N3165 & V2.0	Core	4	5	30	90	30	0	150	40	60	0	0	100	15		
3	Installation and repair of Water Purifier	ELE/N3166 & V2.0	Core	4	4	30	60	30	0	120	40	60	0	0	100	15		
4	Installation and repair of Microwave	ELE/N3167 & V2.0	Core	4	4	30	60	30	0	120	40	60	0	0	100	15		
5	Installation and repair of Television	ELE/N3168 & V2.0	Core	4	4	30	60	30	0	120	40	60	0	0	100	15		
Duration (in Hours) / Total Marks						20	20	150	300	150	0	600	200	300	0	0	500	75

Optional NOS/s:

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
1.															
2.															
Duration (in Hours) / Total Marks															

Assessment - Minimum Qualifying Percentage

Please specify any one of the following:

Minimum Pass Percentage – Aggregate at NOS 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: _____ (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)	Diploma/ITI (Electronics) with 3-year industrial in Consumer durables assembly and repair and 1-year training experience in the Electronics Or Certified in relevant CITS Trade
2.	Master Trainer’s Qualification and experience in the relevant sector (in years) (as per NCVET guidelines)	BE/ B.Tech (Electronics) with 3-years industrial in- Consumer durables assembly and repair and 1-year training experience in the Electronics Or Diploma/ITI (Electronics) with 3-years industrial in- Consumer durables assembly and repair and 2-year training experience in the Electronics Or Certified in relevant CITS Trade
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	NA

Section 4: Assessment Related

1.	Assessor's Qualification and experience in relevant sector (in years) (as per NCVET guidelines)	BE/ B. Tech (Electronics) with 3-years industrial in Consumer durables assembly and repair and 1-year training experience in the Electronics Or Diploma/ITI (Electronics) with 3-years industrial in Consumer durables assembly and repair and 2-year training experience in the Electronics Or Certified in relevant CITS Trade
2.	Proctor's Qualification and experience in relevant sector (in years) (as per NCVET guidelines)	BE/ B. Tech (Electronics) with 3-years industrial in Consumer durables assembly and repair and 2-year training experience in the Electronics Or Diploma/ITI (Electronics) with 4-years industrial in- Consumer durables assembly and repair and 2-year training experience in the Electronics Or Certified in relevant CITS Trade
3.	Lead Assessor's/Proctor's Qualification and experience in relevant sector (in years) (as per NCVET guidelines)	BE/ B. Tech (Electronics) with 3-years industrial in Consumer durables assembly and repair and 2-year training experience in the Electronics Or Diploma/ITI (Electronics) with 4-years industrial in- Consumer durables assembly and repair and 2-year training experience in the Electronics Or Certified in relevant CITS Trade
4.	Assessment Mode (Specify the assessment mode)	Blended
5.	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): Yes
2.	Latest Market Research Reports or any other source (not older than 2 years) (Yes/No): Yes
3.	Government /Industry initiatives/ requirement (Yes/No): Yes
4.	Number of Industry validation provided: 1

5.	Estimated nos. of persons to be trained and employed: 1000
6.	Evidence of Concurrence/Consultation with Line Ministry/State Departments: In progress If "No", why:

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 (Mandatory)	Attached
2.	Annexure: List of tools and equipment relevant for qualification (Mandatory, except in case of online course)	Attached
3.	Annexure: Detailed Assessment Criteria (Mandatory)	Attached
4.	Annexure: Assessment Strategy (Mandatory)	Attached
5.	Annexure: Blended Learning (Mandatory, in case selected Mode of delivery is "Blended Learning")	Filled
6.	Annexure: Multiple Entry-Exit Details (Mandatory, in case qualification has multiple Entry-Exit)	Filled
7.	Annexure: Acronym and Glossary (Optional)	Attached
8.	Supporting Document: Model Curriculum (Mandatory – Public view)	Attached
9.	Supporting Document: Career Progression (Mandatory - Public view)	Attached
10.	Supporting Document: Occupational Map (Mandatory)	Attached
11.	Supporting Document: Assessment SOP (Mandatory)	
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 Theoretical Knowledge/Process	<p>Demands a wide range of specialized technical skill, clarity of knowledge and practice in broad range of activity involving standard and non-standard practices.</p> <ul style="list-style-type: none"> Perform the installation processes. Perform installation and servicing of consumer durables. 	A Multi Skill Technician – Consumer Durables is responsible for installing and repairing of consumer durables like AC, refrigerator, washing machine etc.	4

	<ul style="list-style-type: none"> Follow all guidelines and instructions. Adhere to industry work practices to achieve productivity and quality standards. Check the working of the consumer durables 		
Professional and Technical Skills/ Expertise/ Professional Knowledge	<p>Factual and theoretical knowledge in broad contexts within a field of work or study.</p> <ul style="list-style-type: none"> Knowledge of installation requirements, installation process, working of various consumer durables. Know the instructions and guidelines to achieve productivity and quality standards 	<p>A Multi Skill Technician – Consumer Durables should know the installation process, their working and the guidelines to achieve productivity and quality standards. Also, able to test functioning of consumer durables.</p> <p>Hence Level 4</p>	4
Employment Readiness & Entrepreneurship Skills & Mind-set/Professional Skill	<p>A range of cognitive and practical skills required to generate solutions to specific problems in a field of work or study.</p> <ul style="list-style-type: none"> Communicate with customer, team and supervisor to understand the work requirement Identify the faults in equipment Complete the documentation of installation and service records 	<p>A Multi Skill Technician – Consumer Durables should be able to use basic and advanced diagnostic tools in correct way to install and test the working of consumer durables. He/she works after getting work requirements from supervisor or other team members.</p> <p>Hence Level 4</p>	4
Broad Learning Outcomes/Core Skill	<p>Reasonably good in:</p> <ul style="list-style-type: none"> Installation procedures Working and testing of various electrical equipment Guidelines and instructions for installation 	<p>A Multi Skill Technician – Consumer Durables needs to know the installation procedures, working of various consumer durables and testing the same. The technician should keep the workplace clean and managed.</p> <p>Hence Level 4</p>	4
Responsibility	<p>Responsibility of completing the work assigned and reporting the same as per standards.</p> <ul style="list-style-type: none"> Understand the job role and follow the organizational policy Record and report about the work status Follow safety regulations at work place Work along with colleagues and supervisors 	<p>A Multi Skill Technician – Consumer Durables should record the issues and report about the same to supervisor and also update the status of the work as per organizations policy.</p> <p>Hence 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 (30)
1	ESD & PPE Kit	Includes wrist strap, anti-static mat, gloves, and apron	5 sets
2	Screwdriver Set (Combination / Multitech)	Both sides, assorted sizes (small & big)	5 sets
3	Line Tester	Standard 814 model or equivalent	5 nos
4	Open Spanner Set	6 mm to 22 mm, Taparia or equivalent	5 sets
5	Combination Plier	8" Taparia or equivalent	5 nos
6	Nose Plier	Long nose, insulated handle	5 nos
7	Cutting Plier / Wire Stripper	Insulated, with adjustable stop	5 nos
8	Adjustable Wrench	6"-10", insulated	3 nos
9	Hammer (Ball Peen & Plastic)	Medium weight	3 nos each
10	Brush	1" cleaning brush	5 nos
11	File (Flat & Half Round)	Medium cut	5 nos each
12	Soldering Iron with Stand	25W to 35W, temperature controlled (for PCB-level work in TV, RO, MW)	5 nos
13	Desoldering Pump / Wick	Manual suction type	5 nos
14	Digital Multimeter	Auto-ranging, 3½ digit display (for testing TV, MW, RO)	5 nos
15	Clamp Meter	AC/DC current up to 1000A (for Refrigerator & Washing Machine)	3 nos
16	LCR Meter	Portable, digital type (for component-level testing in TV/RO/MW)	2 nos
17	Signal Generator (Pattern Generator)	For testing display faults in TV (LED/LCD)	1 no
18	Digital Thermometer / Infrared Thermometer	-50°C to +300°C (for Refrigerator & Microwave)	2 nos
19	TDS Meter	Handheld, digital display (for Water Purifier)	1 nos
20	Pressure Gauge	For RO water pressure testing (Water Purifier)	1 nos
21	Vacuum Pump (Manual/Electric)	For refrigerant evacuation (Refrigerator)	1 no
22	Refrigerant Manifold Gauge Set/Bluetooth-Enabled Digital Manifold Gauge Set	R134a/R600a compatible (Refrigerator)	1 nos
23	Flaring and Swaging Tool Kit	For copper pipe installation (Refrigerator)	1 sets

24	IoT-Based Electronic Leak Detector/(Refrigerant Leak	Electronic / Halide type (Refrigerator)	1 no
25	Insulation Tester (Megger)	500V / 1000V range (for Washing Machine, Refrigerator)	2 nos
26	Power Quality Analyzer	Portable, 3-phase compatible (for installation verification)	1 no
27	Digital Relay / Socket Tester	For live/neutral polarity and earthing test (for all appliances)	2 nos
28	Cordless Drill Machine with Bits	Variable speed, rechargeable (for wall-mount TV, RO, MW)	2 nos
29	Blower / Vacuum Cleaner (2-in-1)	500W or above (for cleaning Refrigerator, TV, MW)	2 nos
30	Heat Gun	1500W adjustable temperature (for shrink tube, TV repair)	2 nos
31	Wire Cutter & Crimping Tool	For terminal and connector crimping (used across all appliances)	5 nos
32	Cable Stripper	Adjustable for various wire sizes	3 nos
33	Digital Tachometer / RPM Meter	Non-contact type (for Washing Machine)	1 no
34	Spirit Level & Measuring Tape	For installation alignment (TV, RO, MW)	3 nos
35	PVC Tape, Insulation Tube, Cable Tie Pack	Assorted	10 packs
36	Test Lamp Assembly (AC/DC)	For quick voltage presence test (general use)	2 nos
37	Domestic Wiring Board Setup	With MCB, socket, switch, fuse	5 nos
38	Display TV (LED/OLED/QLED) type)	32–43 inch	1 nos
39	Refrigerator (Direct Cool / Frost-free/Inverter models/DIOS/Double or single door)	190–250 L	1 no
40	Washing Machine (Top & Front Load)	6–7 kg capacity	1 no
41	Microwave Oven (Convection Type)	20–25 L	1 no each
42	Water Purifier Unit (RO + UV)	Wall-mount, transparent type	1 no
43	Extension Board & Power Cord Set	16A heavy-duty, 3m length	1 no
44	First Aid Kit & Fire Extinguisher	Standard 2 kg CO ₂ type	5 nos
45	Laptop / PC for Diagnostics Software	Basic configuration (for smart appliances with IoT connectivity)	1 set each
46	Refrigerant Gas Cylinder (R-32 / R-290 / R-600a / R-134a etc.)	Standard	1 Each

47	IoT-Based HDMI/Signal Analyzer	Standard (smartphone for 4K/8K resolution compatibility)	
48	Digital Wall Mount Alignment Laser & Stud Finder Tool	Standard	
49	AC demo unit	split system	1 no

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	USHA International Limited	Surabhi Raj Ekka	Project Manager	Usha International Ltd., Plot No. 15, Institutional Area, Sector-32, Gurugram - 122001, Haryana	+91 8375956535	surabhi_ekka@usha.com	NA

Annexure: Training & Employment Details

Training and Employment Projections:

Year	Total Candidates		Women		People with Disability	
	Estimated Training # Total		Estimated Training # Women		Estimated Training # PwD	
2025-26	200		NA		NA	
2026-27	300		NA		NA	
2027-28	500		NA		NA	

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
Version 1	2022-23	0	0	0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Version 1	2023-24	13358	13221	13162	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Version 1	2024-25	27729	26914	26756	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

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:

- 1.
- 2.

Content availability for previous versions of qualifications:

Participant Handbook Facilitator Guide Digital Content Qualification Handbook Any Other:

Languages in which Content is available:

1. English,
2. Hindi

Annexure: Blended Learning

Blended Learning Estimated Ratio & Recommended Tools:

Refer NCVET “Guidelines for Blended Learning for Vocational Education, Training & Skilling” available on:

<https://ncvet.gov.in/sites/default/files/Guidelines%20for%20Blended%20Learning%20for%20Vocational%20Education,%20Training%20&%20Skilling.pdf>

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 	30:70
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 	30:70
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 	30:70
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 	30:70
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 	30:70
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 	30:70
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 	30:70

Annexure: Detailed Assessment Criteria

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

Module Name	Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
DGT/VSQ/N0102 - Employability Skills (60 hours)	Introduction to Employability Skills	1	1	-	-
	PC1. identify employability skills required for jobs in various industries				
	PC2. identify and explore learning and employability portals				
	Constitutional values – Citizenship	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				
		-	-	-	-
	Becoming a Professional in the 21st Century	2	4	-	-
	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 personal and professional life				
		-	-	-	-
	Basic English Skills	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					
	-	-	-	-	
Career Development & Goal Setting	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					
	-	-	-	-	
Communication Skills	2	2	-	-	
PC12. follow verbal and non-verbal communication etiquette and active listening techniques in various settings					
	-	-	-	-	

PC13. work collaboratively with others in a team	-	-	-	-
Diversity & Inclusion	1	2	-	-
PC14. communicate and behave appropriately with all genders and PwD	-	-	-	-
PC15. escalate any issues related to sexual harassment at workplace according to POSH Act	-	-	-	-
Financial and Legal Literacy	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	-	-	-	-
Essential Digital Skills	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	-	-	-	-
Entrepreneurship	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	-	-	-	-
Customer Service	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	-	-	-	-
Getting ready for apprenticeship & Jobs	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	-	-	-	-
NOS Total	20	30	-	-

Elective 1: Installation and service (Refrigerator, Washing machine, Dishwasher, Air conditioner & Gas Charging)

Module Name	Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
ELE/N3161: Gas Charging in the refrigerator and AC	Prepare for gas charging work	10	12		
	PC1.Intro - Understand the purpose and safety requirements of gas charging in refrigerators and air conditioners, and identify the correct refrigerant, tools, and procedure.	3	3		
	PC2. obtain the necessary information about the equipment i.e. refrigerator or AC and their model and type and details of the customer for gas charging work	2	3		
	PC3. collect the necessary tools and equipment required during work	2	3		
	PC4. select and arrange the appropriate type of gas cylinder and connecting hoses required for filling the equipment on the basis of type and model of equipment	3	3		
	Gas charging in air conditioner and refrigerator	22	36		
	PC5. Verify the refrigerant type (R-32, R-290, R-600a, R-134a, etc.) and ensure compatibility with the appliance and charging equipment as per latest environmental and safety standards.	3	5		

	PC6. connect a pressure gauge to the gas inlet of AC and refrigerator and check the pressures against the ambient temperature, if gas pressure is below the manufacturer recommended gas pressure, then there is need to fill the gas	4	6		
	PC7. connect the gas cylinder hose to the gas inlet of AC and refrigerator and start filling the gas	3	5		
	PC8. check the pressure gauge at regular intervals and once the gas pressure reached to the recommended pressure, then stop the gas filling	3	5		
	PC9. connect the equipment pipes with the gas inlet and tighten it properly -	3	5		
	PC10. ensure that there is no leakage of gas at the gas inlet	3	5		
	PC11. start and check the cooling of equipment	3	5		
	Carryout post gas filling activities	8	12		
	PC12. clear up the waste and dispose as per company's norms	1	2		
	PC13. collect the payment if the unit is not in warranty and complete the documentation	3	4		
	PC14. fill the service report and take acknowledgment from the customer	3	4		
	PC15. document the work completed for future records	1	2		
	NOS Total	40	60		
ELE/N3162: Installation & Repair of Air Conditioner	Prepare for installation and repairing of air conditioner	8	8		
	PC1.Understand the basic principles, safety precautions, and latest industry practices for installation and repair of air conditioners, including inverter and eco-friendly refrigerant-based systems.	1			
	PC2. obtain the information and details of the customer for installation and repairing work	1			
	PC3. collect the necessary tools and equipment required for installation and repairing work	1	1		
	PC4. check the functionality of tools and equipment before use	1	2		
	PC5. use appropriate personal protective equipment (PPE) for specific tasks and work conditions, contaminant (concentration w.r.t air) requirements and severity of hazard while conforming to the Indian/International standards	1	1		
	PC6. follow standard safety procedures while handling tool, equipment, hazardous substances and while working in hazardous environments	1	1		
	PC7. remove the air conditioner packaging and check the product specifications with the billing invoice to identify type (window or split), make and capacity of air conditioner	1	1		

PC8. interact with the customer to understand where the air conditioner is to be installed, i.e., window, split etc.	1	1		
PC9. check that the location meets structural requirements such as distance from power supply, distance from windows/doors being opened frequently		1		
Install window air conditioner	8	13		
PC10. measure the space for installation to assure a good fit and air conditioner must be installed firmly into place to prevent vibration and noise	1	2		
PC11. install the circuit breaker switch (if not available) and fix all the parts and components of window AC properly as per the instructions in manufacturer manual and SOP	1	2		
PC12. install the drain pan over the corner of the cabinet and connect the drain hose to the outlet located on the bottom of the drain pan	1	2		
PC13. install the AC unit in the window as per the instructions in manufacturer manual and SOP	1	2		
PC14. ensure that the bottom of the cabinet is well supported, the top has minimum clearance and the air inlet louvers have clearance	1			
PC15. connect the power cord with the circuit breaker switch, start the AC and check the functioning of AC by using remote	1	2		
PC16. demonstrate the features and functioning of AC to the customer as per the instructions in manufacturer manual	1	2		
PC17. guide the customer on proper placement, day to day care activities and precautions while using the air conditioner	1	1		
Install split air conditioner	9	17		
PC18. educate the customer of any pre installations/masonry/electrical work to be carried out and requirement of concealed drainage and electric conduits	1	1		
PC19. make measurements at the location identified and drill holes ensuring no internal wiring damage takes place	1	2		
PC20. mount the indoor unit and ensure that the screws are fastened securely	1	2		
PC21. place the outdoor unit at a suitable location and attach it firmly to wall/floor	1	2		
PC22. connect the indoor and the outdoor units using the field copper pipe of appropriate size and interconnecting cables	1	2		
PC23. Verify inverter compatibility, refrigerant type (such as R-32 or R-290), and ensure proper use of digital tools and torque settings for leak-proof and efficient installation.		2		

PC24. align the air conditioner according to the instruction manual	1	1		
PC25. connect the power cord with the circuit breaker switch, start the AC and check the functioning of AC by using remote	1	1		
PC26. Check the air conditioning gas, detect any leakage using electronic leak detectors, and fill additional gas (if required) as per manufacturer’s manual.	1	2		
PC27. demonstrate to the customer about the features and utility of air conditioner	1	1		
PC28. guide the customer on proper placement, day to day care activities and precautions while using the air conditioner		1		
Carryout troubleshooting and repairing of the air conditioner	12	17		
PC29. enquire about the problems/unusual conditions noticed on the equipment from the customer	1	1		
PC30. check the air conditioner for any servicing requirements and clean the air conditioner filter, indoor and outdoor unit, drain hose etc. as per the SOP	1	2		
PC31. carry out troubleshooting to identify faults such as power supply failure, less cooling, gas leakage, compressor or inverter PCB failure, and faulty components in the AC	1	3		
PC32. refill the refrigerant gas if required by following instructions in manufacturer manual	1	1		
PC33. unplug the unit and carry out basic tests such as power supply inspection, volt ampere test and earth test power supply, compressor, condenser etc.	1	2		
PC34. separate and inspect every module of the unit if the fault is not identified through basic tests	1	1		
PC35. inspect major components and identify that the faulty component to be repaired or replaced	1	2		
PC36. dismantle the component for carrying out repair or replacement after is connecting it from power supply	1	1		
PC37. remove and replace the faulty module with a functional one, either on a second visit or as preidentified and collected from the service centre, if the problem is at the PCB level or components that cannot be replaced at site	1	2		
PC38. reassemble the module and air conditioner in complete and connect to power supply for checking the working		1		
PC39. check all the modules working as per specifications	1	1		
PC40. if the problem cannot be serviced onsite, then sent the unit to service center	1			
Carryout post installation and repairing activities	3	5		

	PC41. clear up the packaging material waste and dispose as per company's norms	1	1		
	PC42. collect the payment if the unit is not in warranty and complete the documentation	1	1		
	PC43. fill the installation or service report and take acknowledgment from the customer	1	2		
	PC44. document the work completed for future records		1		
	NOS Total	40	60		
ELE/N3163: Installation and Repair of Dish Washer	Prepare for installation and repairing of dish washer	4	3		
	PC1. Understand the basic working principle, installation requirements, safety considerations, and latest technical updates related to dish washers before carrying out installation or repair activities.	1	1		
	PC2. obtain the information and details of the customer for installation and repairing work	1			
	PC3. collect the necessary tools and equipment required for installation and repairing work	1	1		
	PC4. check the functionality of tools and equipment before use	1	1		
	Install dish washer	18	28		
	PC5. use appropriate personal protective equipment (PPE) for specific tasks and work conditions, contaminant (concentration w.r.t air) requirements and severity of hazard while conforming to the Indian/International standards	1	1		
	PC6. follow standard safety procedures while handling tool, equipment, hazardous substances and while working in hazardous environments		1		
	PC7. remove the dish washer packaging and check the product specifications with the billing invoice as per the instructions in manufacturer manual and SOP	2	1		
	PC8. check that all supporting accessories purchased are there in the pack	2			
	PC9. identify the location to fix the dish washer as close to the sink as possible for ease of connection to the water and drain pipes and as per the need of customer	1	2		
	PC10. check for the availability of power outlet, surface level, clearance with wall or cabinet etc needed for installing the dish washer as per the instructions in manufacturer manual and SOP	2	3		
	PC11. make cuts for hoses and electric cables in the shelf if required	1	3		
	PC12. place the dish washer properly at levelled surface and install moisture barrier, water supply hose, drain hose, other parts and accessories as per the instructions in manufacturer manual and SOP	3	5		
PC13. plug the power cord in the power outlet, start the dish washer and open the water supply valve	2	4			

PC14. operate and check that there are no leaks and the machine is in a safe and stable condition	1	3		
PC15. demonstrate the features, functioning and use of control panel of dish washer to the customer as per the instructions in manufacturer manual and SOP	2	4		
PC16. guide the customer about day-to-day care activities and precautions while using the dish washer as mentioned in product manual	1	1		
Carryout troubleshooting and repairing of the dish washer	15	24		
PC17. enquire about the problems/unusual conditions noticed on the equipment from the customer	1	1		
PC18. check the dish washer for any servicing requirements and clean the dish washer, filter, drain and water hose etc. as per the SOP	1	3		
PC19. diagnose the fault in the unit as per customer interaction and initial inspection	2	3		
PC20. unplug the unit, carry out basic tests as per the instructions in manufacturer manual and SOP	2	3		
PC21. inspect major components and power supply to reach to the faulty component to be repaired or replaced	1	3		
PC22. dismantle the component for carrying out repair or replacement as per the instructions in manufacturer manual and SOP	1	2		
PC23. remove the faulty component and replace it onsite if possible or send the report to service center for replacement	2	2		
PC24. replace the component in second visit to the site	1	2		
PC25. reassemble the unit post maintenance and do the trial run	1	1		
PC26. demonstrate and confirm functionality of the dish washer with the customer	1	1		
PC27. if the problem cannot be serviced onsite, report and then sent the unit to service center	1	1		
PC28. Stay updated with the latest models, diagnostic tools, refrigerants, and IoT-enabled appliance repair techniques as per current industry practices.	1	2		
Carryout post installation and repairing activities	3	5		
PC29. clear up the packaging material waste and dispose as per company's norms	1	1		
PC30. collect the payment if the unit is not in warranty and complete the documentation	1	1		
PC31. fill the installation or service report and take acknowledgment from the customer	1	2		
PC32. document the work completed for future records		1		
NOS Total	40	60		

ELE/N3169: Installation and repair of Refrigerator (DIOS)	Prepare for installation and repairing of refrigerator (DIOS)	4	3		
	PC1. Understand the working principle, installation requirements, safety precautions, and latest technical updates related to inverter technology, smart connectivity, and energy-efficient refrigerators before carrying out installation or repair work.	1			
	PC2. obtain the information and details of the customer for installation and repairing work	1			
	PC3. Collect the necessary tools, testing instruments, and diagnostic devices such as digital multimeter, vacuum gauge, leak detector, and refrigerant recovery machine required for installation and repairing work.	1	1		
	PC4. check the functionality of tools and equipment before use	1	2		
	Install refrigerator (DIOS)	18	26		
	PC5. use appropriate personal protective equipment (PPE) for specific tasks and work conditions, contaminant (concentration w.r.t air) requirements and severity of hazard while conforming to the Indian/International standards	1	1		
	PC6. follow standard safety procedures while handling tool, equipment, hazardous substances and while working in hazardous environments	1	1		
	PC7. remove the refrigerator (DIOS) packaging and check the product specifications such as smart model type, compressor technology, energy rating, and IoT compatibility with the invoice.		1		
	PC8. check that all supporting accessories purchased are there in the pack	1			
	PC9. identify the space to place the refrigerator considering Wi-Fi signal range, ventilation, and energy efficiency as per customer needs.	1	1		
	PC10. check for the availability of power point, surface level, distance from wall etc. needed for placing the refrigerator (DIOS) as per the instructions in manufacturer manual and SOP	2	3		
	PC11. place the appliance on a firm and level floor and fix all the accessories and parts i.e. shelves, baskets etc. as per the instructions in manufacturer manual and SOP	2	4		
	PC12. be careful not to expose the rear of the appliance and not to place the appliance in a damp and dusty place when installing	1			
	PC13. connect the refrigerator to the power point using a surge protector or voltage stabilizer if required , and set temperature parameters as per the instructions in manufacturer manual and SOP	1	2		
PC14. demonstrate and explain the various functions and features of refrigerator (DIOS) on various temperature settings and use of control panel to the customer	2	4			

PC15. ensure that the outlet socket is properly grounded, and that the earth pin on the power cord is not damaged or removed from the power plug	1	1		
PC16. install the smart feature application of refrigerator (DIOS) in customer's smartphone and connect the refrigerator with customer's smartphone	2	3		
PC17. demonstrate how to operate and monitor and control temperature or modes remotely using the application and voice assistant integration	2	4		
PC18. guide the customer on day-to-day care activities and precautions while using the refrigerator (DIOS) as mentioned in product manual	1	1		
Carryout troubleshooting and repairing of the refrigerator (DIOS)	15	26		
PC19. enquire about the problems/unusual conditions noticed on the equipment from the customer	1	1		
PC20. use the smart feature app installed in customer's smartphone to diagnose the issues in the refrigerator (DIOS) by following instructions in manufacturer manual	2	3		
PC21. refill the refrigerant gas if required by following instructions in manufacturer manual	1	2		
PC22. carry out troubleshooting activities to identify the faults and faulty component in the refrigerator (DIOS)	2	4		
PC23. unplug the unit, carry out basic tests such as power supply inspection, volt ampere test and earth test power supply, compressor, condenser etc. as per the instructions in manufacturer manual and SOP	2	4		
PC24. remove the faulty component for carrying out repair or replacement after disconnecting it from power supply	1	2		
PC25. repair the fault if possible or send the report to service center for replacement	2	3		
PC26. replace the component in second visit to the site	1	2		
PC27. reassemble the module and refrigerator in complete and connect it to power supply for checking the working	1	2		
PC28. check all the modules working as per specifications	1	2		
PC29. if the problem cannot be serviced onsite, then sent the unit to service center for repairing	1	1		
Carryout post installation and repairing activities	3	5		
PC30. Clear packaging and waste materials responsibly, ensuring segregation and disposal as per E-waste management norms.	1	1		
PC31. collect the payments if the unit is not in warranty and complete the documentation	1	1		

	PC32. fill the installation or service report and take acknowledgment from the customer	1	2		
	PC33. document the work completed for future records		1		
	NOS Total	40	60		
ELE/N3170: Installation and repair of washing machine	Prepare for installation and repairing of washing machine	4	3		
	PC1. obtain the information and details of the customer for installation and repairing work	1			
	PC2. collect the necessary tools and equipment required for installation and repairing work	2	1		
	PC3. check the functionality of tools and equipment before use	1	2		
	Install washing machine	17	25		
	PC4. use appropriate personal protective equipment (PPE) for specific tasks and work conditions, contaminant (concentration w.r.t air) requirements and severity of hazard while conforming to the Indian/International standards	1	1		
	PC5. follow standard safety procedures while handling tool, equipment, hazardous substances and while working in hazardous environments		1		
	PC6. remove the washing machine packaging in which it was shipped to customer and check the product specifications with the billing invoice to identify type (top load or front load, semi-automatic or fully automatic), make and capacity of washing machine	1	1		
	PC7. check that all supporting accessories purchased are there in the pack	2			
	PC8. identify the place to fix the washing machine as per the need of customer	1	1		
	PC9. check for the availability of power outlet, surface level, water supply etc. needed for installing the water purifier as per the instructions in manufacturer manual and SOP	1	2		
	PC10. place the washing machine properly at levelled surface and at appropriate distance from the water supply as per SOP	1	2		
	PC11. connect the water hose and rain pipe with the washing machine and water supply tap as per the instructions in manufacturer manual and SOP	1	2		
	PC12. ensure that the machine is placed against an exterior wall to the drain hose running along the inside wall	1			
	PC13. remove all transport pins inside the drum of the washing machine before starting the machine	1	2		
PC14. plug the power cord in the power outlet, start the washing machine and open the water supply valve	2	4			
PC15. operate and check that there are no leaks and the machine is in a safe and stable condition	2	4			

PC16. demonstrate the features, functioning and use of control panel of washing machine to the customer as per the instructions in manufacturer manual and SOP	2	4		
PC17. guide the customer about day-to-day care activities and precautions while using the washing machine as mentioned in product manual	1	1		
Carryout troubleshooting and repairing of the washing machine	16	27		
PC18. enquire about the problems/unusual conditions noticed on the equipment from the customer	1	1		
PC19. check the washing machine for any servicing requirements and clean the washing machine drum, filter, drain and water hose etc. as per the SOP	1	4		
PC20. diagnose the fault in the unit as per customer interaction and initial inspection	2	4		
PC21. identify the cycle(fill/wash and rinse/spin and drain) during which the problem occurs based on customer interaction	1	2		
PC22. ensure that the unit is unplugged before carrying out any tests	1			
PC23. inspect basic parts such as valve strainers, fill hose, drain line, pressure tube, water valves, pressure sensor	1	4		
PC24. carry out basic tests such as power supply inspection, volt ampere and continuity tests	1	2		
PC25. dismantle the washing machine and check for faults in the control/service panel, lid switch, water level control switch, timer, etc.	1	2		
PC26. follow the electrical circuit path and inspect each component in that sequence in order to identify any electrical faults in the unit	1	1		
PC27. ensure that all parts such as motors, transformer, pulley and belt system, motor starting switch, solenoid, clutch lining have been inspected	1			
PC28. send to factory for in depth diagnosis, if unable to identify problem at site	1	1		
PC29. rectify the problem in the water source, ensure that water supply is turned on and that there are no kinks in the hoses	1	1		
PC30. inspect the soap deposition inside the machine, clean the same and run the machine through a complete wash cycle	1	1		
PC31. select the right spares according to recorded complaints at the customer care	1	1		
PC32. reassemble the unit post maintenance and do the trial run	1	2		
PC33. demonstrate and confirm functionality of the washing machine with the customer		1		
Carryout post installation and repairing activities	3	5		
PC34. clear up the packaging material waste and dispose as per company's norms	1	1		

PC35. collect the payment if the unit is not in warranty and complete the documentation	1	1		
PC36. fill the installation or service report and take acknowledgment from the customer	1	2		
PC37. document the work completed for future records		1		
NOS TOTAL	40	60		

Elective 2: Installations and Repair (TV, Microwave, Water purifier, Basics Refrigerator& washing machine, OLED & Monitor)

ELE/N3164: Installation and repair of OLED/Monitor TV	Prepare for installation and repairing of OLED/monitor	4	3		
	PC1. Understand the working principle, installation requirements, safety precautions, and latest updates related to OLED, QLED, 4K/8K, and smart TV technologies, including IoT connectivity, before carrying out installation or repair work.	1	1		
	PC2. obtain the information and details of the customer for installation and repairing work	1			
	PC3. collect the necessary tools and equipment required for installation and repairing work	1	1		
	PC4. check the functionality of tools,testing instruments, and connectivity devices before use.	1	1		
	Install OLED TV/monitor	20	28		
	PC5. use appropriate personal protective equipment (PPE) for specific tasks and work conditions, contaminant (concentration w.r.t air) requirements and severity of hazard while conforming to the Indian/International standards	1	1		
	PC6. follow standard safety procedures while handling tool, equipment, hazardous substances and while working in hazardous environments		1		
	PC7. remove the OLED TV/monitor packaging and check the product specifications with the billing invoice as per the instructions in manufacturer manual and SOP	1	2		
	PC8. check that all supporting accessories purchased are there in the pack	2			
	PC9. identify the space to place the OLED TV/monitor considering ventilation, viewing distance, wall strength, and Wi-Fi signal strength as per customer requirements.	1	2		
	PC10. if customer wants to install the OLED TV/monitor on a table, place it on the table carefully and plug the power cord in power outlet	1	2		
PC11. if customer wants to install the OLED TV/monitor on a wall, then first fix the wall mounting bracket and its accessories on the wall as per the instructions in manufacturer manual and SOP	3	4			

PC12. remove the OLED TV/monitor stand, fix the OLED TV/monitor on wall mounting bracket properly and plug the power cord in power outlet as per the instructions in manufacturer manual and SOP	3	4		
PC13. connect the OLED TV to a wall antenna socket or a satellite dish, soundbar, or PC using HDMI 2.1 or optical cable as per the instructions in manufacturer manual and SOP	2	3		
PC14. turn on the OLED TV/monitor and adjust the MENU settings as per customer requirements and instructions in manufacturer manual	2	3		
PC15. connect the smart devices or home automation systems with OLED TV/monitor as per the customer requirements and instructions in manufacturer manual	1	2		
PC16. demonstrate the functions like AI picture enhancement, voice control, and smart app navigation of OLED TV/monitor to the customer	2	3		
PC17. guide the customer on proper placement, day to care and precautions while using the OLED TV/monitor	1	1		
Carryout troubleshooting and repairing of OLED TV/monitor	13	24		
PC18. enquire about the problems/unusual conditions noticed on the equipment from the customer	1	1		
PC19. conduct the physical and software inspection using built-in diagnostic tools or manufacturer’s service app to identify faults.	2	4		
PC20. unplug the unit, carry out basic tests such as power supply inspection, power supply setting, remote control functioning, etc. as per the instructions in manufacturer manual and SOP	2	4		
PC21. inspect major components including T-CON board, main PCB, power supply module, and display driver IC to locate faulty parts.	2	3		
PC22. dismantle the component for carrying out repair or replacement as per the instructions in manufacturer manual and SOP	1	2		
PC23. remove the faulty component and send the report to service center for replacement	1	2		
PC24. replace the component in second visit to the site	1	2		
PC25. reassemble the OLED TV/monitor restore all connections, and check picture calibration, network connectivity, and firmware version.	1	2		
PC26. check all the modules working as per specifications	1	2		
PC27. If onsite repair is not possible, prepare a digital job card and send the unit to the authorized service center.	1	2		
Carryout post installation and repairing activities	3	5		
PC28. clear up the packaging material waste and dispose as per company’s norms	1	1		

	PC29. collect the payment if the unit is not in warranty and complete the documentation	1	1		
	PC30. fill the installation or service report and take acknowledgment from the customer	1	2		
	PC31. document the work completed for future records		1		
	NOS Total	40	60		
ELE/N3165: Installation and Repair of Basic Refrigerator and Washing Machine	Prepare for installation and repairing work	5	5		
	PC1. understand the working principle, installation requirements, and latest updates related to basic and smart models of refrigerator and washing machine, including inverter, digital control, and energy-efficient systems before carrying out installation or repair work.	1	1		
	PC2. obtain the information and details of the customer for installation and repairing work	1			
	PC3. collect the necessary tools and equipment required for installation and repairing work	1	1		
	PC4. check the functionality of tools and equipment before use	1	1		
	PC5. use appropriate personal protective equipment (PPE) for specific tasks and work conditions, contaminant (concentration w.r.t air) requirements and severity of hazard while conforming to the Indian/International standards	1	1		
	PC6. follow standard safety procedures while handling tool, equipment, hazardous substances and while working in hazardous environments		1		
	Installation and servicing of refrigerator	17	24		
	PC7. remove the refrigerator packaging and check the product specifications with the billing invoice for colour, make and capacity	1	1		
	PC8. check that all supporting accessories purchased are there in the pack	1			
	PC9. identify the space to place the refrigerator as per the need of customer	1	2		
	PC10. check for the distance from wall, availability of power outlet, and platform height needed for placing the refrigerator	1	2		
	PC11. place the refrigerator and connect it to the power outlet	1	1		
	PC12. start the refrigerator, set temperature parameters, and demonstrate functions such as digital control, inverter mode, and energy-saving features to the customer	2	5		
	PC13. guide the customer on proper placement, day to day care activities and precautions while using the refrigerator	1	1		
PC14. enquire about the problems/unusual conditions noticed on the equipment from the customer	1	1			
PC15. check the refrigerator for any gas refill requirement and refill the gas as per SOP	1	1			

PC16. carry out troubleshooting of refrigerator to identify faults such as gas leakage, cooling problem, compressor problem, power supply problem, or PCB fault and repair/replace faulty components as per SOP	2	4		
PC17. repair or replace the faulty component as per the requirement	2	3		
PC18. reassemble the refrigerator in complete, install and connect it to power supply for checking the working	1	2		
PC19. check all the modules working as per specifications	1	1		
PC20. If the problem cannot be serviced onsite, report and then sent the unit to service center	1			
Installation and servicing of washing machine	15	26		
PC21. remove the washing machine packaging and check the product specifications with the billing invoice for colour, make and capacity	1	1		
PC22. check that all supporting accessories purchased are there in the pack	2			
PC23. identify the space to place the washing machine as per the need of customer	1	1		
PC24. check for the distance from wall, availability of power outlet etc. needed for placing the washing machine	1	3		
PC25. place the washing machine and install the drain hose	2	3		
PC26. connect the washing machine and start it to demonstrate the functions, including digital control, smart connectivity, and wash program settings to the customer	2	4		
PC27. guide the customer on proper placement, day to day care activities and precautions while using the washing machine		1		
PC28. enquire about the problems/unusual conditions noticed on the equipment from the customer		1		
PC29. check the washing machine for any cleaning requirement and clean the water drum, drain etc.as per SOP	1	2		
PC30. carry out troubleshooting of washing machine to identify faults such as motor failure, PCB malfunction, water inlet sensor problem, or power supply fault and repair/replace components as per SOP	2	4		
PC31. repair or replace the component as per SOP	1	3		
PC32. reassemble the machine in complete, install and connect it to power supply for checking the working	1	2		
PC33. check all the modules working as per specifications		1		

	PC34. If the problem cannot be serviced onsite, report and then sent the unit to service center	1			
	Carryout post installation and repairing activities	3	5		
	PC35. clear up the packaging material waste and dispose as per company's norms	1	1		
	PC36. collect the payment if the unit is not in warranty and complete the documentation	1	1		
	PC37. fill the installation or service report and take acknowledgment from the customer	1	2		
	PC38. document the work completed for future records		1		
	NOS Total	40	60		
ELE/N3166: Installation and Repair of Water Purifier	Prepare for installation and repairing of water purifier	4	3		
	PC1. understand the working principle, installation requirements, and latest updates related to RO, UV, UF, alkaline, and smart IoT-based water purifiers before carrying out installation or repair work.	1	1		
	PC2. obtain the information and details of the customer for installation and repairing work	1			
	PC3. collect the necessary tools and equipment required for installation and repairing work	1	1		
	PC4. check the functionality of tools and equipment before use	1	1		
	Install water purifier	17	29		
	PC5. use appropriate personal protective equipment (PPE) for specific tasks and work conditions, contaminant (concentration w.r.t air) requirements and severity of hazard while conforming to the Indian/International standards	1	1		
	PC6. follow standard safety procedures while handling tool, equipment, hazardous substances and while working in hazardous environments		1		
	PC7. remove the water purifier packaging and check the product specifications with the billing invoice as per the instructions in manufacturer manual and SOP	1	1		
	PC8. check that all supporting accessories purchased are there in the pack	1			
	PC9. identify the place to fix the water purifier as per the need of customer	1	2		
	PC10. check for the availability of power outlet, surface level, water supply, and drainage required for installation as per the instructions in manufacturer manual and SOP	1	2		
	PC11. fix the wall mounting bracket and its accessories on the wall as per the instructions in manufacturer manual and SOP	1	3		
PC12. fix the water purifier properly on the mounting bracket as per the instructions in manufacturer manual and SOP	1	3			

PC13. connect the water hose and drain pipe with the water purifier and water supply tap as per the instructions in manufacturer manual and SOP	2	4		
PC14. plug the power cord in the power outlet, start the water purifier and open the water supply valve	2	4		
PC15. check the pipe and hose connection for water leaks	1	2		
PC16. fill the purifier tank and discharge some water for the first time 1 1 - -	1	1		
PC17. set the water purification and TDS control settings as per running water quality and manufacturer guidelines	2	2		
PC18. demonstrate the features, functioning, smart display/app connectivity, and use of control panel to the customer as per manufacturer instructions	1	2		
PC19. guide the customer about day-to-day care activities and precautions while using the water purifier as mentioned in product manual	1	1		
Carryout troubleshooting and repairing of water purifier	16	23		
PC20. enquire about the problems/unusual conditions noticed on the equipment from the customer	1	1		
PC21. check the water purifier for any servicing requirements and clean its filter, drain and water hose etc. as per the SOP	2	3		
PC22. conduct the physical inspection and check the water purifier for diagnosing the fault	2	4		
PC23. unplug the unit, carry out basic tests as per the instructions in manufacturer manual and SOP	2	3		
PC24. check the filter for any cleaning or replacement requirements -	1	1		
PC25. clean or change the filter as per the requirement	1	2		
PC26. inspect major components (pump, SMPS, solenoid valve, UV chamber, RO membrane, sensors) to identify faulty parts for repair or replacement	1	2		
PC27. dismantle the component for carrying out repair or replacement as per the instructions in manufacturer manual and SOP	1	2		
PC28. remove the faulty component and replace it onsite if possible or send the report to service center for replacement	1	2		
PC29. replace the component in second visit to the site	1	1		
PC30. install and connect it to power supply for checking the working	1	1		
PC31. check all the modules working as per specifications including water flow rate, TDS, and digital indicators	1	1		

	PC32. If the problem cannot be serviced onsite, report and then sent the unit to service center	1			
	Carryout post installation and repairing activities	3	5		
	PC33. clear up the packaging material waste and dispose as per company's norms	1	1		
	PC34. collect the payment if the unit is not in warranty and complete the documentation	1	1		
	PC35. fill the installation or service report and take acknowledgment from the customer	1	2		
	PC36. document the work completed for future records		1		
	NOS Total	40	60		
ELE/N3167: Installation and repair of Microwave	Prepare for installation and repairing of microwave	4	3		
	PC1 : Understand the working principle, installation requirements, and recent advancements in microwave technology such as inverter-based heating, convection modes, and smart digital control systems before carrying out installation or repair work.	1	1		
	PC2. obtain the information and details of the customer for installation and repairing work	1			
	PC3. collect the necessary tools and equipment required for installation and repairing work	1	1		
	PC4. check the functionality of tools and equipment before use	1	1		
	Install microwave	17	24		
	PC5. use appropriate personal protective equipment (PPE) for specific tasks and work conditions, contaminant (concentration w.r.t air) requirements and severity of hazard while conforming to the Indian/International standards	1	1		
	PC6. follow standard safety procedures while handling tool, equipment, hazardous substances and while working in hazardous environments		1		
	PC7. remove the microwave packaging and check the product specifications with the billing invoice as per the instructions in manufacturer manual and SOP	2	1		
	PC8. check that all supporting accessories purchased are there in the pack	2			
	PC9. identify the space to place the microwave as per the need of customer	1	2		
	PC10. check for the availability of power outlet surface level, ventilation space from wall and top etc. needed for placing the microwave as per the instructions in manufacturer manual and SOP	2	3		
PC11. place the microwave on a flat level surface properly and fix the rotating ring and glass tray inside the oven as per the instructions in manufacturer manual and SOP	3	6			

	PC12. plug the power cord in the power outlet and start the microwave	2	4		
	PC13. Demonstrate cooking functions, safety features, and smart modes such as sensor cooking, auto menu, and digital touch control to the customer as per manufacturer manual and SOP.	3	5		
	PC14. guide the customer about day-to-day care activities and precautions while using the microwave as mentioned in product manual	1	1		
	Carryout troubleshooting and repairing of microwave	16	28		
	PC15. enquire about the problems/unusual conditions noticed on the equipment from the customer	1	1		
	PC16. conduct the physical inspection and check the microwave for diagnosing the fault	2	5		
	PC17.unplug the unit, carry out basic tests as per the instructions in manufacturer manual and SOP	3	5		
	PC18. Inspect major components such as magnetron, PCB, inverter unit, thermal fuse, and sensors to identify faults as per manufacturer guidelines.	2	4		
	PC19. dismantle the component for carrying out repair or replacement as per the instructions in manufacturer manual and SOP	1	2		
	PC20. remove the faulty component and send the report to service center for replacement	1	2		
	PC21. replace the component in second visit to the site	2	3		
	PC22. install and connect it to power supply for checking the working	2	3		
	PC23. check all the modules working as per specifications	1	2		
	PC24. If the problem cannot be serviced onsite, report and then sent the unit to service center	1	1		
	Carryout post installation and repairing activities	3	5		
	PC25. clear up the packaging material waste and dispose as per company's norms	1	1		
	PC26. collect the payment if the unit is not in warranty and complete the documentation	1	1		
	PC27. fill the installation or service report and take acknowledgment from the customer	1	2		
	PC28. document the work completed for future records		1		
	NOS Total	40	60		
ELE/N3168: Installation and Repair of TV	Prepare for installation and repairing of TV	4	3		
	PC1 : understand the type, specifications, and connectivity features of the TV model (LED, LCD, or Smart TV) as per the manufacturer's manual before starting work	1	1		

PC2. obtain the information and details of the customer for installation and repairing work	1			
PC3. collect the necessary tools and equipment required for installation and repairing work	1	1		
PC4. check the functionality of tools and equipment before use	1	1		
Install TV	18	28		
PC5. use appropriate personal protective equipment (PPE) for specific tasks and work conditions, contaminant (concentration w.r.t air) requirements and severity of hazard while conforming to the Indian/International standards	1	1		
PC6. follow standard safety procedures while handling tool, equipment, hazardous substances and while working in hazardous environments		1		
PC7. remove the TV packaging and check the product specifications with the billing invoice as per the instructions in manufacturer manual and SOP	2	1		
PC8. check that all supporting accessories purchased are there in the pack	2			
PC9. identify the space to place the TV as per the need of customer	1	2		
PC10. if customer wants to install the TV on a table, place it on the table carefully and plug the power cord in power outlet	2	3		
PC11. if customer wants to install the TV on a wall, then first fix the wall mounting bracket and its accessories on the wall as per the instructions in manufacturer manual and SOP	1	3		
PC12. remove the TV stand, fix the TV on wall mounting bracket properly and plug the power cord in power outlet as per the instructions in manufacturer manual and SOP	3	5		
PC13. connect the TV to a wall antenna socket or a satellite dish socket as per the instructions in manufacturer manual and SOP	2	4		
PC14. Insert the batteries in the remote, turn on the TV, and adjust the MENU settings, including basic connectivity options (e.g., HDMI input, Wi-Fi setup for smart TVs), as per customer requirements and manufacturer manual.	1	3		
PC15. demonstrate the functions of TV such as use of USB, HDMI cable, wireless connectivity etc. to the customer	2	4		
PC16. guide the customer about day-to-day care and precautions while using the TV	1	1		
Carryout troubleshooting and repairing of TV	15	24		
PC17. enquire about the problems/unusual conditions noticed on the equipment from the customer	1	1		
PC18. conduct the physical inspection and check the TV for diagnosing the fault	2	4		

PC19. unplug the unit, carry out basic tests such as power supply inspection, power supply setting, remote control functioning, etc. as per the instructions in manufacturer manual and SOP	3	5		
PC20. Inspect major components and power supply using updated diagnostic tools such as digital multimeter, LCR meter, and signal tester to identify the faulty section or component to be repaired or replaced.	2	3		
PC21. dismantle the component for carrying out repair or replacement as per the instructions in manufacturer manual and SOP	1	2		
PC22. remove the faulty component and send the report to service center for replacement	1	2		
PC23. replace the component in second visit to the site	2	3		
PC24. reassemble the TV in complete, install and connect it to power supply for checking the working	1	2		
PC25. check all the modules working as per specifications	1	1		
PC26. If the problem cannot be serviced onsite, report and then sent the unit to service center	1	1		
Carryout post installation and repairing activities	3	5		
PC27. clear up the packaging material waste and dispose as per company's norms	1	1		
PC28. collect the payment if the unit is not in warranty and complete the documentation	1	1		
PC29. fill the installation or service report and take acknowledgment from the customer	1	2		
PC30. document the work completed for future records		1		
NOS Total	40	60		

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.

1. Assessment System Overview:
 - Batches assigned to the assessment agencies for conducting the assessment on SDMS/SIP or email
 - Assessment agencies send the assessment confirmation to VTP/TC looping SSC
 - Assessment agency deploys the ToA certified Assessor for executing the assessment
 - SSC monitors the assessment process & records
2. Testing Environment:
 - Confirm that the centre is available at the same address as mentioned on SDMS or SIP
 - Check the duration of the training.
 - Check the Assessment Start and End time to be as 10 a.m. and 5 p.m.
 - If the batch size is more than 30, then there should be 2 Assessors.
 - Check that the allotted time to the candidates to complete Theory & Practical Assessment is correct.
 - Check the mode of assessment—Online (TAB/Computer) or Offline (OMR/PP).
 - Confirm the number of TABs on the ground are correct to execute the Assessment smoothly.
 - Check the availability of the Lab Equipment for the particular Job Role.
3. Assessment Quality Assurance levels / Framework:
 - Question papers created by the Subject Matter Experts (SME)
 - Question papers created by the SME verified by the other subject Matter Experts
 - Questions are mapped with NOS and PC
 - Question papers are prepared considering that level 1 to 3 are for the unskilled & semi-skilled individuals, and level 4 and above are for the skilled, supervisor & higher management
 - Assessor must be ToA certified & trainer must be ToT Certified
 - Assessment agency must follow the assessment guidelines to conduct the assessment
4. Types of evidence or evidence-gathering protocol:
 - Time-stamped & geotagged reporting of the assessor from assessment location
 - Centre photographs with signboards and scheme specific branding
 - Biometric or manual attendance sheet (stamped by TP) of the trainees during the training period
 - Time-stamped & geotagged assessment (Theory + Viva + Practical) photographs & videos
5. Method of verification or validation:
 - Surprise visit to the assessment location
 - Random audit of the batch
 - Random audit of any candidate
6. Method for assessment documentation, archiving, and access

- Hard copies of the documents are stored
- Soft copies of the documents & photographs of the assessment are uploaded / accessed from Cloud Storage
- Soft copies of the documents & photographs of the assessment are stored in the Hard Drives

On the Job:

1. Each module (which covers the job profile of Multi Skill Technician – Consumer Durables) will be assessed separately.
2. The candidate must score 50% in each module to successfully complete the OJT.
3. Tools of Assessment that will be used for assessing whether the candidate is having desired skills and etiquette of dealing with customers, understanding needs & requirements, assessing the customer and perform Soft Skills effectively:
 - Videos of Trainees during OJT
 - Answer Sheets of Question Banks
 - Assessing the Log Book entries of Trainees at Employer location
 - Employer Performance Feedback.
4. Assessment of each Module will ensure that the candidate is able to:
 - Understand the theoretical concept of Technology
 - Understand practical aspect of Semiconductor and perform simulation techniques
 - Perform testing and maintenance of Multi Skill Technician – Consumer Durables Fundamentals
 - Work effectively at the workplace

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