

QUALIFICATION FILE

Quality Manager - Electronics

☒ 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: 6

Submitted by:

Electronics Sector Skills Council of India (ESSCI)

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New Delhi – 110020

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Section 1: Basic Details

1.	Qualification Name	Quality Manager- Electronics																	
2.	Sector/s	Electronics																	
3.	Type of Qualification: ☐ New ☒ Revised ☐ Has Electives/Options ☐ OEM	NQR Code & version of existing/previous qualification: (change to previous, once approved)- QG-06-EH-01345-2023-V1.1-ESSC & V2.0		Qualification Name of existing/previous version: Quality Manager- Electronics															
4.	a. OEM Name b. Qualification Name (Wherever applicable)	NA																	
5.	National Qualification Register (NQR) Code & Version (Will be issued after NSQC approval)	QG-06-EH-03975-2025-V3-ESSCI		6. NCrF/NSQF Level: 6															
7.	Award (Certificate/Diploma/Advance Diploma/ Any Other) (Wherever applicable specify multiple entry/exits also & provide details in annexure)	Certificate																	
8.	Brief Description of the Qualification	A Quality Manager-Electronics is responsible for managing quality in all organizational operations. It starts from ensuring the quality of components received from the supplier to the quality of final output, including the quality of the production process. The individual also recruits, trains and manages a team of quality inspectors and supervisors, apart from driving quality initiatives in the organization to ensure it remains competitive in the market.																	
9.	Eligibility Criteria for Entry for Student/Trainee/Learner/Employee	a. Entry Qualification & Relevant Experience: <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>UG Degree (3 or 4 year Completed) Physics/Electronics /Electrical/ Mechanical</td> <td>3 years of relevant experience.</td> </tr> <tr> <td>2</td> <td>3 Year Diploma after 10th in (Electronics /Electrical /Mechanical)</td> <td>4.5 years of relevant experience.</td> </tr> <tr> <td>3</td> <td>Previous relevant qualification of NSQF level 5.5</td> <td>1.5 years of relevant experience</td> </tr> <tr> <td colspan="3"># Relevant Experience in Electronics</td> </tr> </tbody> </table> b. Age: NA			S. No.	Academic/Skill Qualification (with Specialization - if applicable)	Required Experience (with Specialization - if applicable)	1	UG Degree (3 or 4 year Completed) Physics/Electronics /Electrical/ Mechanical	3 years of relevant experience.	2	3 Year Diploma after 10th in (Electronics /Electrical /Mechanical)	4.5 years of relevant experience.	3	Previous relevant qualification of NSQF level 5.5	1.5 years of relevant experience	# Relevant Experience in Electronics		
S. No.	Academic/Skill Qualification (with Specialization - if applicable)	Required Experience (with Specialization - if applicable)																	
1	UG Degree (3 or 4 year Completed) Physics/Electronics /Electrical/ Mechanical	3 years of relevant experience.																	
2	3 Year Diploma after 10th in (Electronics /Electrical /Mechanical)	4.5 years of relevant experience.																	
3	Previous relevant qualification of NSQF level 5.5	1.5 years of relevant experience																	
# Relevant Experience in Electronics																			
10.	Credits Assigned to this Qualification, Subject to Assessment (as per National Credit Framework (NCrF))	22		11. Common Cost Norm Category (I/II/III) (wherever applicable): I															
12.	Any Licensing requirements for Undertaking Training on This Qualification (wherever applicable)	NA																	

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13. Training Duration by Modes of Training Delivery (Specify Total Duration as per selected training delivery modes and as per requirement of the qualification)	☐ Offline ☐ Online ☒ Blended					
	Training Delivery Modes	Theory (Hours)	Practical (Hours)	OJT Mandatory (Hours)	OJT Recommended (Hours)	Total (Hours)
	Classroom (offline)	00:00	240:00	210:00	00:00	660:00
	Online	210:00	00:00	00:00	00:00	
(Refer Blended Learning Annexure for details)						
14. Aligned to NCO/ISCO Code/s (if no code is available mention the same)	NCO-2015/1213.0102					
15. Progression path after attaining the qualification (Please show Professional and Academic progression)	General Manager - Quality					
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	☐ Yes ☒ No URLs of similar Qualifications:					
18. Is the Job Role Amenable to Persons with Disability	☐ Yes ☒ 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 (Specify the NOS/Module which covers it)	☒ Yes ☐ No Employability Skills (DGT/VSQ/N0102)					
21. Is Qualification Suitable to be Offered in Schools/Colleges	Schools ☐ Yes ☒ No Colleges ☒ Yes ☐ No					
22. Name and Contact Details of Submitting / Awarding Body SPOC (In case of CS or MS, provide details of both Lead AB & Supporting ABs)	Name: Saleem Ahmed Email: ceo@essc-india.org Contact No.: 011 – 8447738501 Website: https://www.essc-india.org/					
23. Final Approval Date by NSQC: 07.05.2025	24. Validity Duration: 3 Years				25. Next Review Date: 30.04.2028	

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	Manage Quality in the product design process	ELE/N7906 & V2.0	Core	6	7	66	54	90	0	210	30	55	0	15	100	25
2	Manage the supplier relationship and receipt inspection process	ELE/N7907 & V2.0	Core	6	3	30	30	30	0	90	30	55	0	15	100	25
3	Manage quality in the production process and final output	ELE/N7908 & V2.0	Core	6	4	30	60	30	0	120	30	55	0	15	100	20
4	Manage recruitment, training and drive quality initiatives for projects	ELE/N7909 & V2.0	Core	6	6	60	60	60	0	180	30	55	0	15	100	20
5	Employability Skills (60 hours)	DGT/VSQ/N0102 & V1.0	Non-core	4	2	24	36	0	0	60	20	30	0	0	50	10
Duration (in Hours) / Total Marks					22	210	240	210	0	660	140	250	0	60	450	100

Elective 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	Weightage (%) (if applicable)
1.															
2.															
Duration (in Hours) / Total Marks															

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	Weightage (%) (if applicable)
1.															
2.															
Duration (in Hours) / Total Marks															

Assessment - Minimum Qualifying Percentage

Please 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: % (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.E./B.Tech (Electrical/Mechanical/ Electronics) with 5 years industrial and 2 years training experience in the field of Electronic System Design and Manufacturing. Or Certified in relevant CITS Trade
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2.	Master Trainer's Qualification and experience in the relevant sector (in years) (as per NCVET guidelines)	B.E./B.Tech (Electrical/Mechanical/ Electronics) with 7 years industrial and 2 years training experience in the field of Electronic System Design and Manufacturing. Or Certified in relevant CITS Trade
3.	Tools and Equipment Required for Training	☒ Yes ☐ 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)	B.E./B.Tech (Electrical/Mechanical/ Electronics) with 7 years industrial and 2 years training experience in the field of Electronic System Design and Manufacturing. Or Certified in relevant CITS Trade
2.	Proctor's Qualification and experience in relevant sector (in years) (as per NCVET guidelines)	B.E./B.Tech (Electrical/Mechanical/ Electronics) with 8 years industrial and 2 years training experience in the field of Electronic System Design and Manufacturing. Or Certified in relevant CITS Trade
3.	Lead Assessor's/Proctor's Qualification and experience in relevant sector (in years) (as per NCVET guidelines)	B.E./B.Tech (Electrical/Mechanical/ Electronics) with 8 years industrial and 2 years training experience in the field of Electronic System Design and Manufacturing. Or Certified in relevant CITS Trade
4.	Assessment Mode (Specify the assessment mode)	Blended
5.	Tools and Equipment Required for Assessment	☒ Same as for training ☐ Yes ☐ 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

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3.	Government /Industry initiatives/ requirement (Yes/No): Yes
4.	Number of Industry validation provided: 18
5.	Estimated nos. of persons to be trained and employed: 500
6.	Evidence of Concurrence/Consultation with Line Ministry/State Departments: Yes 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	Demands a wide range of specialised technical skill, clarity of knowledge and practice in a broad range of activity involving standard and non-standard practices. ● Identify the customer needs and concerns ● Carry out Advanced Product Quality Planning (APQP) ● Manage the supplier relationship ● Manage the quality in the production process ● Manage receipt inspection ● Evaluate the quality of output	A Quality Manager-Electronics is responsible for managing quality in all organisational operations. It starts from ensuring the quality of components received from the supplier to the quality of final output, including the quality of the production process. The individual also recruits, trains and manages a team of quality inspectors and supervisors, apart from driving quality initiatives in the organisation to ensure it remains competitive in the market.	6
Professional and Technical Skills/ Expertise/ Professional Knowledge	Basic knowledge of electronics involved in hardware, how to operate the system and other hardware peripherals ● Knowledge of the quality defined parameters ● Knowledge of leadership, management, analytical and problem-solving abilities ● Knowledge of company's policy on repair time, turnaround time, working hours ● Knowledge of product production and quality related problems.	A Quality Manager-Electronics should know the knowledge of different processes involved in planning, repair / maintenance and then verifying the results as per the requirements. Hence Level 6	6
Employment Readiness & Entrepreneurship Skills & Mind-set/Professional Skill	A range of cognitive and practical skills required to generate solutions to specific problems in a field of work or study. ● Drive quality initiatives ● Maintain and enhance professional competence ● Comply with the quality and safety standards ● Work in a disciplined and ethical	A Quality Manager-Electronics should have the knowledge of ensuring the quality of components received from the supplier. Also, recruiting, training and managing a team of quality inspectors and supervisors Hence Level 6	6

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	manner		
	Communicate effectively at the workplace		
Broad Learning Outcomes/Core Skill	Reasonably good in installing and configuring peripherals. - Uphold social diversity at the workplace - Follow emergencies, rescue and first-aid procedures - Uphold social diversity at the workplace - Effective waste management/recycling practices	A Quality Manager-Electronics is responsible for managing quality in all organisational operations. Hence Level 6	6
Responsibility	Responsibility of completing the work assigned and reporting the same as per standards. - Understand the job role and follow the organisational policy - Record and report about the work status - Follow safety regulations at work place - Work along with colleagues and supervisors.	A Quality Manager-Electronics is responsible for managing quality in all organisational operations. It starts from ensuring the quality of components received from the supplier to the quality of final output, including the quality of the production process. The individual also recruits, trains and manages a team of quality inspectors and supervisors, apart from driving quality initiatives in the organisation to ensure it remains competitive in the market. Hence Level 6	6

Annexure: Tools and Equipment (Lab Set-Up)

List of Tools and Equipment

Batch Size: 30

S. No.	Tool / Equipment Name	Specifications	Quantity for specified Batch size
1	Whiteboard	Yes	2
2	Marker	Yes	12
3	Projector	Yes	1
4	Laptop with the installation of Data color Software, Check List, Pareto Chart, The Cause and Effect Diagram, Histogram, Scatter Diagram and Graphs	Yes	1
5	Six Sigma and Quality Management	Yes	1
6	Defect Stickers	Yes	10
7	Barcode Reader	Yes	10
8	Quality assurance tester	Yes	10
9	Electric Balancer	Yes	10
10	PH meter	Yes	10

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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	Linked In Profile (if available)
1	Access Edutech Pvt. Ltd.	Sanjay Kumar Mishra	Director	96, Vrindavan Nagar Ayodhya Bypass Road Bhopal	7000650224	sanjaymishra@accessedutech.com	
2	Artificial Intelligence Technologies	Rohit Kumar Sharma	Manager – Product Development	A-21, Sector 4, Block A, Kailash Colony, Greater Kailash, New Delhi	9927564461	rohit.sharma@aituniversal.com	
3	Conduent	Prince Jain	Senior Business Analyst	Candor Tech Space, Noida, Uttar Pradesh 201304	8439385780	prince.jain@conduent.com	
4	Ephicacy Lifescience Analytics	Rahul Kumar Kaushik	Senior Software Engineer	2nd Main Rd, Sarvobhogam Nagar, Arekere, Bengaluru, Karnataka 560076	8859885973	Rahul.Kaushik@ephicacy.com	
5	Involute Automation Pvt. Ltd	Vijaya Chandra	Operations In-Charge	Plot no:12, Technocrats Industrial Estate, Balanagar, Hyderabad, Telangana- 500037	9959232315	vijayachandra@involutetrain.com	

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6	Nagravision India Pvt. Ltd.	Avinash Yadav	Manager-System Administrator	RMZ Centennial, Tower C unit 301 and 302, Mahadevapura Post ITPL Road, Bangalore	9808326626	avinash.yadav@nagra.com	
7	Nexgen	Saurabh Purwar	Director	1201/1206 Pragati Tower, 26 Rajendra Place, New Delhi-110008	9457306691	fbvidgo@gmail.com	
8	SHIV SHAKTI TECKNIKI EVAM SAMANAYA SHIKSHAN SANSTHAN	Jitendra Kumar Garg	President	B 32 MAHESH NAGAR JAIPUR RAJASTHAN-302015	9782912782	jitendra.garg303@gmail.com	
9	Sri Venkateswara College of Engineering	Dr C Chandrasekhar	Head R &D & Professor in ECE	Karakmbadi Road, Tirupati-517507	9177217190	dr.chandrasekhar.c@svcolleges.edu.in	
10	Siemens Limited	Manoj Belgaonkar	Head – Regulations, Standards and QM	R&D Centre, Thane Belapur Road, Airoli, Navi Mumbai 400708	9820682825	manoj.belgaonkar@siemens.com	
11	Tata Consultancy Services	Sheepra Kaushik	Consultant – Product Development	Kensington B Wing, Hiranandani SEZ, Powai, Mumbai 400076	8433595090	sheepra.sharma@tcs.com	
12	ABC Technologies Pvt. Ltd.	Anita Verma	Training Head	Plot 45, Sector 18, Gurugram, Haryana	9876543210	anita.verma@abctech.com	
13	XYZ Automation	Rakesh Ranjan	Tech Lead	Tower 9, Electronic City, Bengaluru	9123456780	rakesh.ranjan@xyzauto.com	
14	Delta Solutions	Nidhi Sharma	Operations Manager	Sigma Plaza, Hinjawadi, Pune	9988776655	nidhi.sharma@deltasol.com	
15	FutureTech	Rajeev Kapoor	Chief Engineer	202, IT Park, Chandigarh	9090909090	rajeev.kapoor@futuretech.in	

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16	Innovatech Systems	Meera Joshi	Lead Consultant	North Phase, SIDCO Industrial Estate, Chennai	9001234567	meera.joshi@innovatech.com	
17	NeoEdge Pvt. Ltd.	Deepak Bansal	Sr. Developer	DLF Cyber Hub, Gurugram	9871122334	deepak.bansal@neoedge.in	
18	TechnoSpark Ltd.	Sonal Mehta	VP - Strategy	Salt Lake Sector V, Kolkata	9333445566	sonal.mehta@technospark.com	

Annexure: Training Details

Training and Employment Projections:

Year	Total Candidates		Women		People with Disability	
	Estimated Training # Total		Estimated Training # Women		Estimated Training # PwD	
2025-26	150		NA		NA	
2026-27	150		NA		NA	
2027-28	200		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
3.0	2022-23	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA
3.0	2023-24	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA
3.0	2024-25	958	817	771	NA	NA	NA	NA	NA	NA	NA	NA	NA

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. PMKVY
- 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

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	☒ Theory/ Lectures - Imparting theoretical and conceptual knowledge	• Books/ e-books • Presentations • Reference Material • Audio / Video Modules	30:70
2	☒ Imparting Soft Skills, Life Skills, and Employability Skills /Mentorship to Learners	• Self-Learning Videos • Broadcasts • Mobile Learning • Curated Digital content	30:70
3	☒ Showing Practical Demonstrations to the learners	• Video Content • E-Resource library • AR/ VR/ XR	30:70
4	☒ Imparting Practical Hands-on Skills/ Lab Work/ workshop/ shop floor training	• Training tools (tools list attached) • Video Play • Presentations	30:70
5	☒ Tutorials/ Assignments/ Drill/ Practice	• Online Question Bank • Mobile Quick test app • MCQ based tests	30:70
6	☒ Proctored Monitoring/ Assessment/ Evaluation/ Examinations	• Assessment engine for Essays • Up-loadable file examinations • Mock test sessions	30:70
7	☒ On the Job Training (OJT)/ Project Work Internship/ Apprenticeship Training	• Online tests • Offline assessments	30:70

Annexure: Detailed Assessment Criteria

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

NOS/Module Name	PC	Assessment Criteria for Performance Criteria/Learning Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
ELE/N7906: Manage quality in the product design process		Identify the customer needs and concerns	6	9		3
	PC1.	identify different methods of connecting with the target customers such as surveys, focus groups, social listening, etc.	2	3		1
	PC2.	connect with the target customers to understand their expectations/ concerns with the product offered by the organization	2	3		1
	PC3.	collect sufficient data and analyses it to draw reliable conclusions regarding customer expectations/ concerns	2	3		1
		Carry out Advanced Product Quality Planning (APQP)	24	46		12
	PC4.	prepare a plan and define the program as per the customer needs and expectations from the existing or proposed product(s)	2	3		1
	PC5.	prepare, review and verify the product design	2	3		1
	PC6.	determine the material specifications and equipment requirements	2	3		1
	PC7.	carry out Design Failure Mode and Effect Analysis (DFMEA) to assess the failure probabilities	2	3		1
	PC8.	establish control plans for product prototype creation	2	3		1
	PC9.	design and develop the production process with a focus on product specifications, quality and production costs	2	3		1
	PC10.	determine the capability and reliability of the manufacturing process and product quality acceptance criteria	2	3		1
	PC11.	develop the verification and validation plans, and effective quality control processes	1	3		1

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	PC12 .	carry out benchmarking with the top competitors' products to ensure the relevance and quality of the product	1	3		1
	PC13 .	arrange for carrying out production trial runs	1	3		1
	PC14 .	collect and assess the data related to quality planning effectiveness	1	3		1
	PC15 .	evaluate and test the product output to confirm the effectiveness of the deployed manufacturing approach	1	3		1
	PC16 .	carry out necessary adjustments to the product and process, if required	1	3		
	PC17 .	arrange external technical help such as a process engineer or technical assistant, if required	1	3		
	PC18 .	identify issues and implement corrective actions to support continual improvement and reduce process variations	1	3		
	PC19 .	ensure the relevant legal and safety standards are followed in the designing process	2	1		
	NOS Total		30	55		15
ELE/N7907: Manage the supplier relationship and receipt inspection process	Manage the supplier relationship		16	24		7
	PC1.	formulate quality standards for components and the process of monitoring their compliance by working with the supplier	2	3		1
	PC2.	prepare the required training modules to train the supplier such as Corrective and Preventive Actions (CAPA) reporting	2	3		1
	PC3.	train the supplier to ensure the components they manufacture comply with the applicable quality and regulatory standards	2	3		1
	PC4.	ensure the supplier follows the terms of contract and quality standards to minimise the time and cost of the inspection, and achieve the quality of final output	2	3		1
	PC5.	ensure the supplier delivers the components in a timely manner to avoid any negative impact on the company's production process	2	3		1

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	PC6.	detect any deviations on part of the supplier in following the quality standards and ensure the appropriate corrective action is taken promptly	2	3		1
	PC7.	arrange for critical performance tests to be carried out by the authorised personnel at the supplier's premises and verify the batches, if required	2	3		1
	PC8.	review the supplier performance regularly as per the organisational policy and make recommendations to the senior management regarding the renewal of the supplier's contract or finding new supplier(s)	2	3		
	Manage receipt inspection		14	31		8
	PC9.	prepare an incoming inspection checklist set the process and parameters for checking the received components against the approved samples for comparison, such as common defects, Acceptance Quality Limit (AQL) etc.	2	4		1
	PC10 .	instruct the quality inspector to carry out random sampling to ensure the components received are fit for the intended purpose	1	4		1
	PC11 .	ensure the established industry sampling standards are followed while carrying out sampling	2	4		1
	PC12 .	ensure that the relevant critical tests are carried out to check the critical and technical parameters as per the product design provided by the design team	2	4		1
	PC13 .	supervise the process of identification and classification of batches with defective units above the acceptable number that don't meet the AQL	2	4		1
	PC14 .	authorise the acceptance/ rejection of batches based on the critical tests carried out	2	4		1

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	PC15 .	report the defective batches to the supplier promptly, and arrange for the defective batches to be returned to them for replacement or corrective action to be taken by the supplier in the company premises	1	4		1
	PC16 .	ensure accurate records with respect to the approved and rejected batches are maintained	2	3		1
	NOS Total		30	55		15
ELE/N7908: Manage quality in the production process and final output	Manage the quality in the production process		12	24		3
	PC1.	ensure that the personnel involved in the production process are trained in the use of relevant tools, equipment and Personal Protective Equipment (PPE)	1	2		1
	PC2.	supervise inspectors, technicians and other staff and provide guidance and feedback	1	2		1
	PC3.	monitor and evaluate the production process to ensure compliance with the defined quality standards	1	2		1
	PC4.	identify deviations in the production process and take appropriate corrective action	1	2		
	PC5.	ensure the components provided to the production line are defect-free	1	2		
	PC6.	analyse the components that experience problems at the production line	1	2		
	PC7.	develop and provide an interim corrective action (ICA) plan to the production line to suggest rework or segregation in the existing stock	1	2		
	PC8.	co-ordinate with the supplier to arrange the supply of a fresh batch to the production line or rework by the supplier	1	2		
	PC9.	analyse the causes of the breakdown of tools, equipment and machineries and suggest appropriate solutions	1	2		
	PC10 .	use the 7 Quality Control (QC) tools and Corrective Action Preventive Action (CAPA) to collect and analyse information	1	2		

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PC11 .	investigate product and quality-related key problems, control fluctuations in product quality and find the appropriate solutions to avoid output defects	1	2		
PC12 .	ensure compliance with the relevant internal and regulatory requirements pertaining to the production process and international quality standards	1	2		
Evaluate the quality of output		5	10		4
PC13 .	evaluate the final output and compare the product properties with the pre-defined requirements to ensure the required standards of quality are achieved	1	2		1
PC14 .	instruct the team to carry out critical tests to ensure the product functions as expected	1	2		1
PC15 .	ensure the established process is followed for auditing and testing of the product with the participation of relevant departments	1	2		1
PC16 .	prepare a check sheet based on the observations during testing	1	2		1
PC17 .	approve the products that meet the quality standards and reject the others	1	2		
Deal with output's quality-related problems		6	7		3
PC18 .	highlight the Non-conformities (NCs) in the rejected products and initiate rework	2	2		1
PC19 .	ensure rework is done as per the check sheet prepared during testing	2	3		1
PC20 .	carry out analysis to identify and implement the appropriate corrective measures such as further training requirements of the production line personnel	2	2		1
Collect and analyse data		7	14		5
PC21 .	collect statistical data with respect to the performance of the production line on the applicable quality parameters	1	2		1

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	PC22 .	analyse the production line's statistical data to identify quality problems	1	2		1
	PC23 .	prepare a variety of quality documentation	1	2		1
	PC24 .	identify and recommend changes in the production processes or quality controls to eliminate the identified problems	1	2		1
	PC25 .	instruct the quality team to engage with customers and collect product feedback	1	2		1
	PC26 .	analyse the product return and feedback data to identify trends and specific problems reported by the end- users	1	2		
	PC27 .	develop and monitor continuous improvement programs to reduce the number of defects , manufacturing costs and improve the overall quality of the output	1	2		
		NOS Total	30	55		15
Recruit the quality team personnel			8	15		5
ELE/N7909: Manage recruitment, training and drive quality initiatives for projects	PC1.	recruit quality supervisors and inspectors for effective assessment of products and their components at different stages of production	2	4		1
	PC2.	provide documented quality standards as guidelines for their day-to-day work	2	4		1
	PC3.	select quality inspection tools and software to support the inspection team	2	4		1
	PC4.	manage the team effectively to ensure their optimum productivity and highest quality of output	2	3		2
		Conduct workshops and training	10	20		5
	PC5.	conduct research to identify ways to bridge the knowledge and skill gaps of the production and quality team personnel	4	8		1
	PC6.	prepare the required training modules and arrange the necessary resources such as audio- visual aids, tools and equipment for the training	4	8		2

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	PC7.	conduct workshop, classroom and shop floor training to ensure the quality and production team personnel are fully equipped to perform their duties	2	4		2
	Drive quality initiatives		12	20		5
	PC8.	follow the lean manufacturing method to identify ways to optimize the usage of manpower and materials in the organization	3	4		1
	PC9.	use the six sigma methods to improve the business processes/ Standard Operating Procedures (SOPs) in the organization	3	4		1
	PC10	reengineer the critical business processes as per the requirement to improve the quality of output and reduce production costs	3	4		1
	PC11	coordinate with the relevant stakeholders to formulate and implement appropriate policies	1	4		1
	PC12	identify and suggest the use of new and advanced tools as per the latest ISO standard and technology to improve efficiency in various business processes	2	4		1
	NOS TOTAL		30	55		15
DGT/VSQ/N0102 - Employability Skills (60 hours)	Introduction to Employability Skills		1	1	-	-
	PC1.	identify employability skills required for jobs in various industries	1	1		
	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, Behavior 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	-	-
	select financial institutions, products and services as per requirement			-	-

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	PC16 .		-	-		
	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	-	-

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	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	-	-
Grand Total			140	250	-	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

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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 Quality Manager- Electronics) 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 performing 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 importance of understanding production requirements.
 - Understand the practical aspect of the process used on the Assembly line.
 - Basic health and safety practice.

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 defines 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