

QUALIFICATION FILE

Quality Supervisor (Consumer Goods)

- ☒ 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: 5

Submitted By:

Electronics Sector Skills Council of India (ESSCI)

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New Delhi – 110020

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Table of Contents

Section 1: Basic Details.....	3
Section 2: Module Summary	5
NOS/s of Qualifications	5
Mandatory NOS/s:.....	5
Elective NOS/s:.....	6
Optional NOS/s:.....	6
Assessment - Minimum Qualifying Percentage.....	6
Section 3: Training Related	7
Section 4: Assessment Related	7
Section 5: Evidence of the need for the Qualification.....	8
Section 6: Annexure & Supporting Documents Check List	8
Annexure: Evidence of Level.....	9
Annexure: Tools and Equipment (Lab Set-Up).....	10
Annexure: Industry Validations Summary	12
Annexure: Training Details	14
Annexure: Detailed Assessment Criteria.....	16
Annexure: Assessment Strategy	23
Annexure: Acronym and Glossary	25

Section 1: Basic Details

1. Qualification Name	Quality Supervisor (Consumer Goods)														
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-05-EH-01341-2023-V1.1-ESSC & V4.0		Qualification Name of existing/previous version: Quality Engineer												
4. a. OEM Name b. Qualification Name (Wherever applicable)	NA														
5. National Qualification Register (NQR) Code & Version (Will be issued after NSQC approval)	QG-05-EH-03982-2025-V5-ESSCI	6. NCrF/NSQF Level: 5													
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	The individual at work is responsible for ensuring compliance to quality regulations during product design, identifying and implementing system evaluation and product assessment procedures in order to ensure conformance to standards and specifications.														
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 Diploma in relevant field (Physics/ Electronics/Electrical/Mechanical)</td> <td>1.5 years of relevant experience.</td> </tr> <tr> <td>2</td> <td>3 years Diploma after 10th (Electronics /Electrical/Mechanical)</td> <td>3 years of relevant experience.</td> </tr> <tr> <td>3</td> <td>Previous relevant qualification of NSQF level 4.5</td> <td>1.5 years of relevant experience.</td> </tr> </tbody> </table> # Relevant Experience in Consumer Electronics & IT Hardware.			S. No.	Academic/Skill Qualification (with Specialization - if applicable)	Required Experience (with Specialization - if applicable)	1	UG Diploma in relevant field (Physics/ Electronics/Electrical/Mechanical)	1.5 years of relevant experience.	2	3 years Diploma after 10th (Electronics /Electrical/Mechanical)	3 years of relevant experience.	3	Previous relevant qualification of NSQF level 4.5	1.5 years of relevant experience.
S. No.	Academic/Skill Qualification (with Specialization - if applicable)	Required Experience (with Specialization - if applicable)													
1	UG Diploma in relevant field (Physics/ Electronics/Electrical/Mechanical)	1.5 years of relevant experience.													
2	3 years Diploma after 10th (Electronics /Electrical/Mechanical)	3 years of relevant experience.													
3	Previous relevant qualification of NSQF level 4.5	1.5 years of relevant experience.													
	b. Age: NA														

10	Credits Assigned to this Qualification, Subject to Assessment (as per National Credit Framework (NCrF))	19	11. Common Cost Norm Category (I/II/III) (wherever applicable): I																						
12	Any Licensing requirements for Undertaking Training on This Qualification (wherever applicable)	NA																							
13	Training Duration by Modes of Training Delivery (Specify Total Duration as per selected training delivery modes and as per requirement of the qualification)	☐ Offline ☐ Online ☒ Blended <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>210:00</td> <td>180:00</td> <td>00:00</td> <td>570:00</td> </tr> <tr> <td>Online</td> <td>180:00</td> <td>00:00</td> <td>00:00</td> <td>00:00</td> <td></td> </tr> </tbody> </table> (Refer Blended Learning Annexure for details)						Training Delivery Modes	Theory (Hours)	Practical (Hours)	OJT Mandatory (Hours)	OJT Recommended (Hours)	Total (Hours)	Classroom (offline)	00:00	210:00	180:00	00:00	570:00	Online	180:00	00:00	00:00	00:00	
Training Delivery Modes	Theory (Hours)	Practical (Hours)	OJT Mandatory (Hours)	OJT Recommended (Hours)	Total (Hours)																				
Classroom (offline)	00:00	210:00	180:00	00:00	570:00																				
Online	180:00	00:00	00:00	00:00																					
14	Aligned to NCO/ISCO Code/s (if no code is available mention the same)	NCO-2015/1213.0101																							
15	Progression path after attaining the qualification (Please show Professional and Academic progression)	Assistant 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 to the 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	Support Product Development with Quality Control	ELE/N4632 & V1.0	Core	5	7	66	54	90	0	210	40	60	0	0	100	30
2	Conduct quality tests and root-cause Analysis	ELE/N4633 & V1.0	Core	5	5	60	60	30	0	150	40	60	0	0	100	30
3	Perform incoming and outgoing material testing	ELE/N7903 & V2.0	Core	5	5	30	60	60	0	150	40	60	0	0	100	30
4	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					19	180	210	180	0	570	140	210	0	0	350	100

Elective NOS/s:

S. No	NOS/Module Name	NOS/Module Code & Version (if applicable)	Core/ Non-Core	NCrF/NSQ F 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.																
2.																
Duration (in Hours) / Total Marks																

Optional NOS/s:

S. No	NOS/Module Name	NOS/Module Code & Version (if applicable)	Core/ Non-Core	NCrF/NSQ F 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.																
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)	Diploma/ITI (Electrical/Electronics/Mechanical) with 2 years industrial and 1 year training experience in the field of Quality Management – Electronics. Or Certified in relevant CITS Trade
2.	Master Trainer's Qualification and experience in the relevant sector (in years) (as per NCVET guidelines)	Diploma/ITI (Electrical/Electronics/Mechanical) with 3 years industrial and 1 years training experience in the field of Quality Management – Electronics. 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)	Diploma/ITI (Electrical/Electronics/Mechanical) with 3 years industrial and 1 years training experience in the field of Quality Management – Electronics. Or Certified in relevant CITS Trade
2.	Proctor's Qualification and experience in relevant sector (in years) (as per NCVET guidelines)	Diploma/ITI (Electrical/Electronics/Mechanical) with 4 years industrial and 1 years training experience in the field of Quality Management – 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)	Diploma/ITI (Electrical/Electronics/Mechanical) with 4 years industrial and 1 years training experience in the field of Quality Management – Electronics. Or Certified in relevant CITS Trade
4.	Assessment Mode (Specify the assessment mode)	Blended

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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)
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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: 17
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

<Ratified in 43rd NSQC Meeting & Dated: 08/05/2025>

9.	Supporting Document: Career Progression (<i>Mandatory - Public view</i>)	Attached
10.	Supporting Document: Occupational Map (<i>Mandatory</i>)	Attached
11.	Supporting Document: Assessment SOP (<i>Mandatory</i>)	
12.	Any other document you wish to submit:	

Annexure: Evidence of Level

NCrF/NSQF Level Descriptors	Key requirements of the job role/ outcome of the qualification	How the job role/ outcomes relate to the NCrF/NSQF level descriptor	NCrF/NS QF Level
Professional Theoretical Knowledge/Process	Demands a wide range of specialized technical skill, clarity of knowledge and practice in broad range of activity involving standard and non-standard practices. - Perform quality check activities. - Follow all IPC or ISO standards, guidelines and instructions. - Adhere to industry work practices to achieve productivity and quality standards. - Check the quality of the final component.	A Quality Supervisor (Consumer Goods) is responsible for ensuring compliance to quality regulations during product design, identifying and implementing system evaluation and product assessment procedures.	5
Professional and Technical Skills/ Expertise/ Professional Knowledge	Factual and theoretical knowledge in broad contexts within a field of work or study. - Knowledge of quality check requirements, quality check activities, various types of incoming material and final components. - Know the instructions and guidelines to achieve productivity and quality standards	A Quality Supervisor (Consumer Goods) should know the quality check activities and guidelines to achieve productivity and quality standards. Hence Level 5	5
Employment Readiness & Entrepreneurship	A range of cognitive and practical skills required to generate solutions to specific problems in a field of work or study.	A Quality Supervisor (Consumer Goods) should be able to use basic quality tools in the correct way to perform quality checks of the incoming material and final components. He/she works after getting work requirements from supervisor or other team members.	5

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Skills & Mind-set/Professional Skill	- Communicate with customer, team and concerned department to understand the work requirement - Identify the errors in orders - Maintain inventory - Complete the documentation of inspection and service records	Hence Level 5	
Broad Learning Outcomes/Core Skill	Reasonably good in installing and configuring peripherals. - Quality check procedures - Organizational policies and quality aspects of the incoming material and final components - Guidelines and instructions for inspection	A Quality Supervisor (Consumer Goods) needs to know the quality check procedures, organizational policies and quality aspects of the final components. Hence Level 5	5
Responsibility	Responsibility of completing the work assigned and reporting the same as per standards. - 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.	A Quality Supervisor (Consumer Goods) should record the issues and report about the same to concerned department heads and also update the status of the work as per organizations policy. Hence Level 5	5

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	Soldering Iron With Stand	25 to 35 Watt	5
2	Soldering Wire	Leaded and Lead Free	250

<Ratified in 43rd NSQC Meeting & Dated: 08/05/2025>

3	Desoldering Pump	NA	5
4	Desoldering Wire	Copper Netting Wire	1
5	Cutter	14 - 24 AWG (Suitable for cutting 14-24 awg Wire)	10
6	Stripper	16-22 AWG (Suitable for stripping 16-22 AWG Wire)	10
7	Multimeter	Digital, Should be able to measure Voltage (upto 1000v, DC, AC), Current (Upto 10 Amp)	10
8	Screwdriver set	Taparia	5
9	Pliers	Taparia	5
10	FLUX	Quickfix, B813-10 Stanadard	2
11	File	NA	3
12	Different PCB's	Single Side, Double Side, General Purpose Board	150
13	Different Electronic Through Hole Components	NA	50
14	Sponge	NA	5
15	Automatic Optical Inspection	Cyber Optics	1
16	LCR Meter	SM 6019 (Scientific), 5VA	5
17	Magnifying Glass with LED	WITH Light	30
18	ESD Tester	Low Fail - 675 KILOOHM RESISTANCE, Low Pass - 825 Kiloohm, High Pass - 32 Mega Ohm, High Fail - 40 Mega Ohm	1
19	ESD Safety Equipments	1 Mega Ohm to 10 Ohm	30
20	Twizzer	NA	12
21	CRO	Standard	1
22	Profiler	Standard	1
23	Vernier Caliper	Standard	5
24	IPC Standards	Standard(Unit type- book)	2
25	ICT	Standard	1
26	Different Types of Testing Jigs (Samples)	Standard	5

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	Nagdeo Education Welfare Society	Vijay Nagdeo	General Manager	Ward No. 11 Junnardeo Dist. Chhindwara M.P. 480551	9425461093	Vijaynagdeo02@gmail.com	
2	Access Edutech Pvt. Ltd.	Sanjay Kumar Mishra	Director	96, Vrindavan Nagar Ayodhya Bypass Road Bhopal	7000650224	sanjaymishra@accessedutech.com	
3	SHIV SHAKTI TECKNIKI EVAM SAMANAYA SHIKSHAN SANSTHAN	Jitendra Kumar Garg	President	B 32 MAHESH NAGAR JAIPUR RAJASTHAN-302015	9782912782	jitendra.garg303@gmail.com	
4	YADUVANSHI PRIVATE ITI	YADVENDRA	PRINCIPAL	TC229199 - YADUVANSHI PVT ITI, HASAMPUR The-NEEMKATHANA DIST-SIKAR RAJASTHAN PIN CODE NO - 332718	8432882688	yaduvanshicollege2008@gmail.com	
5	Vyom Digital Services Pvt Ltd	Kapil Kumar	Director	A 559 Sector 9 New Vijay Nagar Ghaziabad	9717594283	Kapil.parastiar1980@gmail.com	
6	EdgeFX Technologies Pvt. Ltd	Tarun Agarwal	COO	105, Liberty Plaza, Himayatnagar Hedrabad Telangana 500029		info@edgefxkits.in	
7	VVDN Technology	Subnesh Sharma	Avp HR	Sector 8, IMT Manesar	9821630618	Subnesh.sharma@vvdntech.com	
8	Tata Consultancy Services.	Sheepra Kaushik	Consultant – Product Development	Kensington B Wing, Hiranandani SEZ, Powai, Mumbai 400076	8433595090	sheepra.sharma@tcs.com	

9	Siemens Limited, R&D Centre	Belgaonkar Manojkumar	Head Regulations, Standards and QM	Thane Belapur Road, Airoli, Navi Mumbai 400708	Head Regulations, Standards and QM	manoj.belgaonkar@sie mens.com	
10	Nagravision India Pvt. Ltd	Avinash Yadav	System Administrator	RMZ Centennial, Tower C unit 301 and 302, Opp. Graphite India, Mahadevapura Post ITPL Road, 560048 Bangalore, India	9808326626	avinash.yadav@nagra.c om	
11	Nexgen Exhibitions Pvt. Ltd.	Saurabh Purwar	Director	1201/1206 Pragati Tower, 26 Rajendra Place, New Delhi- 110008, India	9457306691	fbvidgo@gmail.com	
12	Global CNC Automation	Vinod	HR - Manager	Rajkot	9924249497	hrd@globalone.in	
13	Ephicity Lifescience Analytics	Rahul Kumar Kaushik	Senior Software Engineer	2nd Main Rd, Sarvobhogam Nagar, Arekere, Bengaluru, Karnataka 560076	8859885973	Rahul.Kaushik@ephica cy.com	
14	Involute Automation Pvt. Ltd	Vijaya Chandra	Operationa In Charge	Plot No. 12 Tecgnocrats Industrial Estate Balanaga, Hyderabad, Telangna 500037 india		Vijaya.chandra@involut etraining.in	
15	Conduent- https://www.conduent.com	Prince Jain	Senior Business Analyst	7 to 9th Floor & 6 to 9th Floor, Building No.5 & 6, Plot No 20&21, Candor Tech Space, IT/ITES SEZ., Noida, Uttar Pradesh 201304	8439385780	prince.jain@conduent. com	
16	Artificial Intelligence Technologies	Rohit Kumar Sharma	Manager Product Development	A-21, sector 4, Block A, Kailash Colony, Greater Kailash, New Delhi	9927564461	rohit.sharma@aitunive rsal.com	
17	Apsecuritas Pvt. Ltd	Col A K Singh	AVP		8800591268	traininghead@apsecurit as.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
4.0	2022-23	17	17	15	NA	NA	NA	NA	NA	NA	NA	NA	NA
4.0	2023-24	45	38	36	NA	NA	NA	NA	NA	NA	NA	NA	NA
4.0	2024-25	176	152	101	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.
- 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

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	☒ 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	Assessment Criteria for Performance Criteria/Learning Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
ELE/N4632: Support Product Development with Quality Control	<i>Interpreting quality standards and regulations</i>	8	8	-	-
	PC1. receive specifications and design details of the medical device under development from the R&D team	2	2		
	PC2. check and interpret quality standards and regulations governing the medical device under development	2	2		
	PC3. interact with the design team and give inputs on selection of right components and parts for the new medical device	2	2		
	PC4. complete the documentation as per the SOP	2	2		
	<i>Designing quality test procedures for new medical device</i>	8	8	-	-
	PC6. design functional and electrical safety test procedures for newly developed medical device	3	3		
	PC7. design and develop medical device test software with the help of design team	3	3		
	PC8. complete the documentation as per the SOP	2	2		
	<i>Improving existing processes and products</i>	15	23	-	-
	PC9. monitor the existing production processes by capturing data at various levels of production	2	3		
	PC10. perform internal audits against applicable quality standards	2	3		
	PC11. Identify gaps between existing processes against applicable quality standards	2	3		
	PC12. Design improvement in existing processes for manufacturing medical devices using improvement methodologies like Lean, Six Sigmaetc.	2	3		
	PC13. Implement improvement methodologies to reduce process variance and enhance product quality	2	4		
	PC14. do continual quality improvement by eliminating non-value adding activities& sources of resource losses and identifying improvement opportunities in quality system compliance	2	4		
	PC15. complete the documentation as per the SOP	3	4		
	<i>Train functional tester</i>	5	11	-	-

<Ratified in 43rd NSQC Meeting & Dated: 08/05/2025>

	PC16. arrange necessary tools and equipment required for performing functional and electrical safety tests on newly developed medical device	1	1		
	PC17. give theoretical and practical training to functional testers for performing functional tests on newly developed medical device at different stages of its production	1	2		
	PC18. give practical training on usages of tools,equipment and test software for performing functional tests	1	2		
	PC19. complete the documentation as per the SOP	1	1		
	Achieve productivity and quality standards	1	1		
	PC20. interpret the quality standards applicable to medical device correctly		1		
	PC21. design quality tests for medical device to capture all its functional parameters		1		
	PC22. train functional testers to get zero or minimum rejections of final products		1		
	PC23. design and implement process improvement initiatives to reduce errors and unit cost of medical device		1		
	NOS Total	40	60	-	-
ELE/N4633: Conduct quality tests and root-cause Analysis	<i>Performing functional tests on Xray device</i>	6	14	-	-
	PC1. receive X-ray device from box assembly operators	1	2		
	PC2. complete the documentation as per company's policy / SOP	1	3		
	PC3. perform Tube Seasoning test, Over KV test and Calibration with different ranges of mA using digital multi-meter and Digital Storage Oscilloscope	1	3		
	PC4. perform Dose-kVp Linearity test, Dose- mAs Linearity test, kVp Accuracy and repeatability test,HVL (Half Value Layer) test, Radiation output test,reproducibility test and reciprocity test using test software, Digital multimeter and Digital Storage Oscilloscope (DSO)	2	3		
	PC5. if test readings are within the specified limits mentioned in the SOP, send the device for electrical safety testing	1	3		
	<i>Performing functional tests on Ultrasound device</i>	8	12	-	-
	PC6. receive ultrasound device from box assembly operators	2	3		
	PC7. complete the documentation as per company's policy / SOP	2	3		

<Ratified in 43rd NSQC Meeting & Dated: 08/05/2025>

PC8. put ultrasound machine on operation mode and conduct Monitor resolution test, Spatial distortion test, Grey scale uniformity test, Depth of visualization test, Low contrast visibility test, Display artefacts, Distance measurement test, Area estimation test and String object test as per the model specific SOP using Tissue Mimicking Phantoms	2	3		
PC9. if test readings are within the specified limits mentioned in the SOP, send the device for electrical safety testing	2	3		
<i>Perform functional tests on Patient Monitoring device</i>	12	18	-	-
PC10. receive patient monitoring device from boxassembly operators	2	3		
PC11. complete the documentation as per company's policy / SOP	2	3		
PC12. plug in the power supply, turn it on and connect the Patient Monitoring Device to simulator(s) and Digital Storage Oscilloscope	2	3		
PC13. take Patient Monitoring Devices graph measurements, parameters and Digital StorageOscilloscopes readings	2	3		
PC14. compare PMDs readings with simulator readings	2	3		
PC15. if readings are within the specified limits mentioned in the SOP, send the device for electrical safety testing	2	3		
<i>Performing electrical safety tests on medical device</i>	2	4	-	-
PC16. perform Dielectric withstand (Hi- potential)test, Insulation resistance test, Leakage current test and Ground continuity test for electrical safety of the medical device as per the SOP	2	4		
<i>Performing root cause analysis</i>	8	8	-	-
PC17. separate medical devices which failed functional or / and electrical testing	2	2		
PC18. perform root-cause analysis on the failed medical devices as per the SOP	2	2		
PC19. send the failed medical devices back to assembly line for reassembly along with reassembly / repair specific suggestions	2	2		
PC20. complete the documentation as per the SOP	2	2		
<i>Achieving productivity and quality standards</i>	4	4	-	-
PC21. achieve 100% daily target of number of medical devices tested	2	2		
PC22. ensure thorough root-cause analysis to avoid failed medical devices and their reassembly	2	2		
NOS Total	40	60	-	-

ELE/N7903: Perform incoming and outgoing material testing	<i>Performing incoming material testing</i>	15	20	-	-
	PC1. place plastic moulds of patient medical devices and other components in the cyclical chamber	3	4		
	PC2. set the temperature and humidity level of cyclical chamber as per the SOP	3	4		
	PC3. take plastic moulds and other components out of cyclical chamber after the time mentioned in the SOP	3	4		
	PC4. check plastic moulds physically and electrical & electronic components with multi-meter	3	4		
	PC5. pass materials which are as per the specifications mentioned in the SOP, reject others and send them back	3	4		
	<i>Performing out-going cartons test</i>	21	34	-	-
	PC6. perform the visual inspection of packed carton	3	5		
	PC7. check that the carton is undamaged and packed as per the SOP	3	5		
	PC8. check that the medical device model and its specifications are mentioned correctly on the carton	3	5		
	PC9. check that the bar code mentioned on the label is correct	3	5		
	PC10. check that the carton is strapped properly	3	5		
	PC11. put the carton on vibrator for vibration test to check that it is safe for transportation	3	5		
	PC12. complete the documentation related to final testing as per the company's policy	3	4		
	<i>Achieving productivity and quality standards</i>	4	6	-	-
	PC13. complete the incoming and outgoing material testing within the agreed time				
	PC14. ensure the work quality as per the company standard to avoid rework				
	NOS Total	40	60	-	-
DGT/VSQ/N0102 - Employability Skills (60 hours)	<i>Introduction to Employability Skills</i>	1	1	-	-
	PC1. identify employability skills required for jobs in various industries				
	PC2. identify and explore learning and employability portals				
	<i>Constitutional values – Citizenship</i>	1	1	-	-

<Ratified in 43rd NSQC Meeting & Dated: 08/05/2025>

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	-	-	-	-

<Ratified in 43rd NSQC Meeting & Dated: 08/05/2025>

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	-	-	-	-

<Ratified in 43rd NSQC Meeting & Dated: 08/05/2025>

	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	-	-
	Grand Total	140	210	-	

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

<Ratified in 43rd NSQC Meeting & Dated: 08/05/2025>

- 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 Quality Supervisor (Consumer Goods)) 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