



QUALIFICATION FILE

Jr. Technician -Electrical and Electronic Sub-System

- 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: 3

Submitted By:

Electronics Sector Skills Council of India (ESSCI)

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Section 1: Basic Details

1.	Qualification Name	Jr. Technician -Electrical and Electronic Sub-System													
2.	Sector/s	Electronics													
3.	Type of Qualification: <input type="checkbox"/> New <input checked="" type="checkbox"/> Revised <input type="checkbox"/> Has Electives/Options <input type="checkbox"/> OEM	NQR Code & version of existing/previous qualification: (change to previous, once approved)- 2022/EHW/ESSC/05120 & V 3	Qualification Name of existing/previous version: Electrical Technician												
4.	a. OEM Name b. Qualification Name (Wherever applicable)	NA													
5.	National Qualification Register (NQR) Code & Version (Will be issued after NSQC approval)	QG-03-EH-044922025-V2-ESSCI	6. NCrF/NSQF Level: 3												
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 integrates together modules and sub parts that form the electronic system of the product.													
9.	Eligibility Criteria for Entry for Student/Trainee/Learner/Employee	<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>10th grade or equivalent</td> <td>NA</td> </tr> <tr> <td>2</td> <td>8th grade</td> <td>3 years of relevant experience</td> </tr> <tr> <td>3</td> <td>Certificate of NSQF level 2.5</td> <td>1.5 years of relevant experience</td> </tr> </tbody> </table> <p># Relevant Experience in Industrial Automation</p> <p>a. Entry Qualification & Relevant Experience: b. Age: NA</p>		S. No.	Academic/Skill Qualification (with Specialization - if applicable)	Required Experience (with Specialization - if applicable)	1	10th grade or equivalent	NA	2	8th grade	3 years of relevant experience	3	Certificate of NSQF level 2.5	1.5 years of relevant experience
S. No.	Academic/Skill Qualification (with Specialization - if applicable)	Required Experience (with Specialization - if applicable)													
1	10th grade or equivalent	NA													
2	8th grade	3 years of relevant experience													
3	Certificate of NSQF level 2.5	1.5 years of relevant experience													
10.	Credits Assigned to this Qualification, Subject to Assessment (as per National Credit Framework (NCrF))	13	11. Common Cost Norm Category (I/II/III) (wherever applicable): 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 <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>150:00</td> <td>120:00</td> <td>00:00</td> <td rowspan="2">390</td> </tr> <tr> <td>Online</td> <td>120:00</td> <td>00:00</td> <td>00:00</td> <td>00:00</td> </tr> </tbody> </table> <p><i>(Refer Blended Learning Annexure for details)</i></p>					Training Delivery Modes	Theory (Hours)	Practical (Hours)	OJT Mandatory (Hours)	OJT Recommended (Hours)	Total (Hours)	Classroom (offline)	00:00	150:00	120:00	00:00	390	Online	120:00	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	150:00	120:00	00:00	390																		
Online	120:00	00:00	00:00	00:00																			
14.	Aligned to NCO/ISCO Code/s <i>(if no code is available mention the same)</i>	NCO-2015/8212.2401																					
15.	Progression path after attaining the qualification <i>(Please show Professional and Academic progression)</i>	Electrician																					
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 checked="" type="checkbox"/> Yes <input type="checkbox"/> No (Employability Skills (30 hours)																					
21.	Is Qualification Suitable to be Offered in Schools/Colleges	Schools <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Colleges <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No																					
22.	Name and Contact Details of Submitting / Awarding Body SPOC <i>(In case of CS or MS, provide details of both Lead AB & Supporting ABs)</i>	Name: Saleem Ahmed Email: ceo@essc-india.org Contact No.: 011 – 8447738501 Website: https://www.essc-india.org/																					
23.	Final Approval Date by NSQC: 07.10.2025	24. Validity Duration: 3 Years			25. Next Review Date: 07.10.2028																		

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/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	Electrical Sub-System Assembly – Preparation & Electronics Component Integration	ELE/N6320 &V1.0	Core	3	7	60	90	60	0	210	40	60	0	0	100	40
2	Electrical Sub-System Wiring, Testing & Compliance	ELE/N6319 &V1.0	Core	3	5	30	60	60	0	150	40	60	0	0	100	40
3	Employability Skills (30 hours)	DGT/VSQ/N0101 & V1.0	Non-core	3	1	30	0	0	0	30	20	30	0	0	50	20
Duration (in Hours) / Total Marks																
					13	120	150	120	0	390	100	150	0	0	250	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	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/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 qualification level: 50 % (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/Electrical/Mechanical) with 1 years industrial and 1 year training experience in the field of Assembling and Integration. 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 (Electronics/ Electrical/Mechanical) with 2 years industrial and 1-year training experience in the field of Assembling and Integration. 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)	Diploma/ ITI (Electronics/ Electrical/Mechanical) with 2 years industrial and 1-year training experience in the field of Assembling and Integration. Or Certified in relevant CITS Trade
2.	Proctor's Qualification and experience in relevant sector (in years) (as per NCVET guidelines)	Diploma/ ITI (Electronics/ Electrical/Mechanical) with 3 years industrial and 2-year training experience in the field of Assembling and Integration. 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 (Electronics/ Electrical/Mechanical) with 4 years industrial and 3-year training experience in the field of Assembling and Integration. 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: 25
5.	Estimated nos. of persons to be trained and employed: 3500
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 <i>(Mandatory)</i>	Attached
2.	Annexure: List of tools and equipment relevant for qualification <i>(Mandatory, except in case of online course)</i>	Attached
3.	Annexure: Detailed Assessment Criteria <i>(Mandatory)</i>	Attached
4.	Annexure: Assessment Strategy <i>(Mandatory)</i>	Attached
5.	Annexure: Blended Learning <i>(Mandatory, in case selected Mode of delivery is "Blended Learning")</i>	Filled
6.	Annexure: Multiple Entry-Exit Details <i>(Mandatory, in case qualification has multiple Entry-Exit)</i>	Filled
7.	Annexure: Acronym and Glossary <i>(Optional)</i>	Attached
8.	Supporting Document: Model Curriculum <i>(Mandatory – Public view)</i>	Attached
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/NSQF Level
Professional Theoretical Knowledge/Process	Demands a wide range of specialized technical skill, clarity of knowledge and practice in broad range of activity	A Jr. Technician -Electrical and Electronic Sub-System is responsible for integration of modules and sub parts from the electronic system of the product.	3

	<p>involving standard and non-standard practices.</p> <ul style="list-style-type: none"> · Integrating the electrical sub system · Reporting problems to the superior · Interacting effectively with colleagues and superiors · Applying health and safety practices at the workplace 		
<p>Professional and Technical Skills/ Expertise/ Professional Knowledge</p>	<p>Factual and theoretical knowledge in broad contexts within a field of work or study.</p> <ul style="list-style-type: none"> <input type="checkbox"/> Knowledge of the electrical sub system <input type="checkbox"/> Knowledge of company's policy on turnaround time, working hours <input type="checkbox"/> Achieving productivity, quality and safety standards as per company's policy 	<p>A Jr. Technician -Electrical and Electronic Sub-System should have the knowledge of integration of modules and sub parts from the electronic system of the product.</p> <p>Hence Level 3</p>	3
<p>Employment Readiness & Entrepreneurship Skills & Mind-set/Professional Skill</p>	<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 the team to understand the work requirement · Complete the documentation of assembly 	<p>A Jr. Technician -Electrical and Electronic Sub-System must be able to communicate effectively to the supervisor about any problems faced and updating of work.</p> <p>Hence Level 3</p>	3
<p>Broad Learning Outcomes/Core Skill</p>	<p>Reasonably good in:</p> <ul style="list-style-type: none"> · Assembling of electrical and electronic sub system · Achieving productivity, quality and safety standards as per company's policy 	<p>A Jr. Technician -Electrical and Electronic Sub-System has to assemble the electrical and electronic sub system and should be able to point out errors to the supervisor in order to achieve productivity.</p> <p>Hence Level 3</p>	3

Responsibility	Responsibility of completing the work assigned and reporting the same as per standards. · Understand the job role and follow the organizational policy · Follow safety regulations at work place · Work and interact effectively with colleagues and superiors	A Jr. Technician -Electrical and Electronic Sub-System should understand the job role and follow safety regulations at the work place along with an effective interaction. Hence Level 3	4
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Annexure: Tools and Equipment (Lab Set-Up)

List of Tools and Equipment

Batch Size: 30

S. No.	Tool / Equipment Name	Quantity for specified	Specifications
1	AC Power Source	6	Standard
2	Regulated DC Power Supply	6	Standard
3	Allen Key Set	6	Standard
4	Electrical Drill	3	Standard
5	Plier	10	Standard
6	Precision Screw Driver	10	Standard
7	Screw Driver Set	6	Standard
8	Spanner Set and sensor	6	Standard
9	Wire Stripper	10	Standard
10	Clamp Meter	5	Standard
11	Digital Multimeter	10	Standard
12	Connecting Wires	2	Standard
13	Fuses and Circuit Breakers	6	Standard
14	Cover box	6	Standard
15	Switch Boards	6	Standard
16	Different Types of Switches	6	Standard
17	Conduit (Metal and Pipe) Lead Solder	6	Standard

18	Soldering Iron	6	Temperature controlled-25W with digital display & soldering stand
19	Soldering Flux	2	Boxes
20	AC Motor	6	Standard
21	Inverter Lamps	6	Standard
22	Lights Plugs	6	Standard
23	Sockets	10	Standard
24	Fuses	10	Standard
25	3-phase Circuit Safety Helmet	6	Standard
26	ESD Gloves	6	Standard
27	ESD Mat	6	Standard
28	ESD Wrist Band	6	Standard
29	Safety Shoes	6	Standard
30	Line Tester	10	Standard
31	Desoldering Pump	6	Standard
32	Shear Cutters	6	Standard

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	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@aitunive rsal.com	
3	Bergen Associates Pvt Ltd.	Soubam Sunil	Manager	305-306, Magnum House-I, Commercial Complex, Karampura, New Delhi – 110015	9311780832	s.soubam@bergengroupindia.com	
4	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	
5	Ephicity Lifescience Analytics	Rahul Kumar Kaushik	Senior Software Engineer	2nd Main Rd, Sarvobhogam Nagar, Arekere, Bengaluru, Karnataka 560076	8859885973	Rahul.Kaushik@ephicity.com	
6	IIAE Educational Society	Barinder Singh	President		9829745313	ivyindiaprojects@gmail.com	
7	YADUVANSHI PRIVATE ITI	YADVENDRA	PRINCIPAL	TC229199 - Yaduvanshi pvt iti, hasampur the- neemkathana dist-sikar rajasthan pin code no -332718	8432882688	yaduvanshicollege2008@gmail.com	

8	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	
9	Sri Rajaram Shikshan Sansthan	Rajendra Parsad	Principle		8808696968	rajendraitijnp@gmail.com	
10	Rastriya Khushali Sansthan	Ramkaran Sinsinwar	President	VOP Tajsar Fatehpur Rajasthan	6350658040	Rkstajsar1998@gmail.com	
11	Nexgen Exhibitions Pvt. Ltd.	Saurabh Purwar	Director	1201/1206 Pragati Tower, 26 Rajendra Place, New Delhi-110008, India	9457306691	fbvidgo@gmail.com	
12	Siemens Limited	Manoj Belgaonkar	Head – Regulations, Standards and QM	R&D Centre, Thane Belapur Road, Airoli, Navi Mumbai 400708	9820682825	manoj.belgaonkar@siemens.com	
13	Tata Consultancy Services	Sheepra Kaushik	Consultant – Product Development	Kensington B Wing, Hiranandani SEZ, Powai, Mumbai 400076	8433595090	sheepra.sharma@tcs.com	
14	Evergreen Education Trust	Faizanbazaz	Director	217, Pehari Colony Jammu 180005	7006341193	eetturst@gmail.com	
15	Rastriya Khushali Sansthan	Ramkaran Sinsinwar	President	VOP Tajsar Fatehpur Rajasthan	6350658040	Rkstajsar1998@gmail.com	
16	Shiv shakti techniki evam samanaya shikshan sansthan	Jitendra Kumar Garg	President	B 32 Mahesh nagar jaipur rajasthan-302015	9782912782	jitendra.garg303@gmail.com	
17	Shri Solasar Balaji Shikshan	Nand Kishor Gurjar	SPOC	Rajasthan	9358734466	shribalajiitisujangarh@gmail.com	

18	Shree Hari Shikshan Santhan Aaspura	Mukesh Kumar	SPOC	Rajasthan 341508	7877239952	Harikct2024@gmail.com	
19	YADUVANSHI PRIVATE ITI	YADVENDRA	PRINCIPAL	TC229199 - Yaduvanshi pvt iti, hasampur the- neemkathana dist-sikar rajasthan pin code no -332718	8432882688	yaduvanshicollege2008@gmail.com	
20	Sankalp Education and development society	Jafruddin Khan	SPOC		8104049522		
21	Shri Prasad Sharma Shikshan Sansthan Myana	Suresh		Gautam Budha Nagar UP	8433476571		
22	Ramyash Pvt ITI	Ramyash	Principel	Jamalpur	9454738298	Yashvantiyadav964@gmail.com	
23	B M Upadhyay Shiksha Samiti	K K Upadhyay	SPOC	Agra	9149158684	Kk7500081234@gmail.com	
24	YADUVANSHI PRIVATE ITI	YADVENDRA	PRINCIPAL	TC229199 - Yaduvanshi pvt iti, hasampur the- neemkathana dist-sikar rajasthan pin code no -332718	8432882688	yaduvanshicollege2008@gmail.com	
25	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	

Annexure: Training Details

Training and Employment Projections:

Year	Total Candidates	Women	People with Disability
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	Estimated Training # Total	Estimated Training # Women	Estimated Training # PwD
2025-26	1000	NA	NA
2026-27	1000	NA	NA
2027-28	1500	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	1672	1320	1188	NA	NA	NA	NA	NA	NA	NA	NA	NA
3.0	2023-24	2208	1723	1579	NA	NA	NA	NA	NA	NA	NA	NA	NA
3.0	2024-25	11760	9415	8986	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. Hindi
2. 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	<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:

NOS/Module Name	Assessment Criteria for Performance Criteria/Learning Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
ELE/N6320: Electrical Sub-System Assembly – Preparation & Electronics Component Integration	Introduction and Understanding Work Requirements	4	6	-	-
	PC1. Describe how the individual at work integrates modules and sub-components to assemble the complete electronic system of the product, ensuring proper functionality and alignment with technical specifications.	2	3	-	-
	PC2. Communicate with the supervisor to understand daily production targets and work sequence and Refer to approved drawings, work manuals, and standard job instructions to ensure accuracy.	2	3	-	-
	Component Collection & Preparation	12	18	-	-
	PC3. Collect assembled PCBs from the assembly team based on the production schedule.	2	3	-	-
	PC4. Gather consumables such as wires, connectors, and insulation materials required for assembly.	2	3	-	-
	PC5. Verify the completeness of received components by cross-referencing the bill of materials (BOM).	2	3	-	-
	PC6. Perform a visual inspection of PCBs and electronic components for any physical damage or loose connections.	2	3	-	-
	PC7. Document identified faults and return defective boards to the PCB assembly team for rework.	2	3	-	-
	PC8. Adhere to standard operating procedures (SOPs) to assemble electrical sub-systems efficiently.	2	3	-	-
	Component Installation & Pre-Finalization	15	20	-	-
	PC9. Use digital schematics and ERP-driven component tracking to prepare workstations and integrate smart electrical components (IOT sensors, and software to monitor, control, and optimize power usage and distribution) into subsystems.	3	4	-	-
	PC10. Interpret wiring diagrams and job specifications to ensure correct assembly.	3	4	-	-
	PC11. Verify that the assembled sub-system meets dimensional and functional specifications.	3	4	-	-
PC12. Place assembled systems in assigned storage bins and ensure smooth transfer to the final assembly area.	3	4	-	-	

	PC13. Collaborate with the PCB assembly team to maintain production flow and avoid bottlenecks.	3	4	-	-
	Reporting & Problem Identification	9	16	-	-
	PC14. Identify and report any errors detected in the previous assembly stage.	2	4	-	-
	PC15. Notify the supervisor of defective components or insufficient materials.	2	4	-	-
	PC16. Report shortages of consumables such as wires, connectors, screws, and fasteners to prevent delays.	2	4	-	-
	PC17. Communicate assembly process challenges to the supervisor for timely resolution.	3	4	-	-
	NOS TOTAL	40	60	-	-
ELE/N6319: Electrical Sub-System Wiring, Testing & Compliance	Wiring & Electrical Integration	12	18	-	-
	PC1. Use proper wire bundling, routing, and labelling for efficient and error-free wiring.	2	3	-	-
	PC2. Choose wires based on gauge ratings, insulation types, and load capacity.	2	3	-	-
	PC3. Perform wire crimping, stripping, and termination using appropriate tools to prevent connection failures.	2	3	-	-
	PC4. Secure all interconnections using standardized methods such as soldering, crimping, or terminal blocks.	2	3	-	-
	PC5. Implement grounding and shielding techniques to prevent signal interference and electrical hazards.	2	3	-	-
	PC6. Cross-check connections against circuit diagrams to detect potential miswirings before powering the system.	2	3	-	-
	Testing & Quality Assurance	15	22	-	-
	PC7. Perform continuity tests on all electrical connections using a multimeter.	2	3	-	-
	PC8. Verify proper voltage and current levels at critical points in the circuit.	2	3	-	-
	PC9. Check insulation integrity to prevent leakage currents and electrical hazards.	2	4	-	-
	PC10. Inspect terminal points for secure fastening and proper contact.	3	4	-	-
	PC11. Document defects or performance issues and flag them for necessary corrections.	3	4	-	-
	PC12. Verify compliance with electrical specifications before transferring the sub-system for full system integration.	3	4		
Reporting & Documentation	13	20	-	-	

	PC13. Document any defects or inconsistencies observed during wiring and testing.	2	4	-	-
	PC14. Report issues related to quality deviations or material defects to the supervisor.	2	4	-	-
	PC15. Record the consumption of materials and notify stores about replenishment requirements.	3	4	-	-
	PC16. Keep the work area clean, organized, and free from hazards to maintain compliance with workplace safety standards.	3	4	-	-
	PC17. Follow standard workplace safety guidelines, including the use of PPE and electrostatic discharge (ESD) protection methods.	3	4	-	-
	NOS Total	40	60	-	-
DGT/VSQ/N0101 - Employability Skills (30 hours)	Introduction to Employability Skills	1	1	-	-
	PC1. understand the significance of employability skills in meeting the job requirements	-	-	-	-
	Constitutional values – Citizenship	1	1	-	-
	PC2. identify constitutional values, civic rights, duties, personal values and ethics and environmentally sustainable practices	-	-	-	-
	Becoming a Professional in the 21st Century	1	3	-	-
	PC3.explain 21st Century Skills such as Self Awareness, Behavior Skills, Positive attitude, self-motivation, problem-solving, creative thinking, time management, social and cultural awareness, emotional awareness, continuous learning mindset etc.	-	-	-	-
	Basic English Skills	2	3	-	-
	PC4. speak with others using some basic English phrases or sentences	-	-	-	-
	Communication Skills	1	1	-	-
	PC5. follow good manners while communicating with others	-	-	-	-
	PC6. work with others in a team				
	Diversity & Inclusion	1	1	-	-
	PC7. communicate and behave appropriately with all genders and PwD	-	-	-	-
	PC8. report any issues related to sexual harassment	-	-	-	-
	Financial & Legal Literacy	3	4	-	-
PC9. use various financial products and services safely and securely	-	-	-	-	

PC10. calculate income, expenses, savings etc.	-	-	-	-
PC11. approach the concerned authorities for any exploitation as per legal rights and laws	-	-	-	-
Essential Digital Skills	4	6	-	-
PC12. operate digital devices and use its features and applications securely and safely	-	-	-	-
PC13. use internet and social media platforms securely and safely	-	-	-	-
Entrepreneurship	3	5	-	-
PC14. identify and assess opportunities for potential business	-	-	-	-
PC15. identify sources for arranging money and associated financial and legal challenges	-	-	-	-
Customer Service	2	2	-	-
PC16. identify different types of customers	-	-	-	-
PC17. identify customer needs and address them appropriately	-	-	-	-
PC18. follow appropriate hygiene and grooming standards	-	-	-	-
Getting ready for apprenticeship & jobs	1	3	-	-
PC19. create a basic biodata	-	-	-	-
PC20. search for suitable jobs and apply	-	-	-	-
PC21. identify and register apprenticeship opportunities as per requirement	-	-	-	-
NOS Total	20	30	-	-
Grand Total	100	150	-	0

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:

Each module (which covers the job profile of PCB and Jr. Technician Electrical and Electronics Sub-System) will be assessed separately.

1. The candidate must score 50% in each module to successfully complete the OJT.
2. 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.
3. Assessment of each Module will ensure that the candidate is able to:
 - Understand the basic principles of AC, DC and electronic circuits.
 - Work effectively at the workplace
 - 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 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