QUALIFICATION FILE

Laser Marking and Cutting - Process Supervisor

☒ 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)

155, 2nd Floor, ESC House

Okhla Industrial Area - Phase 3,

New Delhi – 110020

Tel: 011 – 8447738501

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Section 1: Basic Details

<table>
<tr><td>1.</td><td>Qualification Name</td><td colspan="2">Laser Marking and Cutting - Process Supervisor</td></tr>
<tr><td>2.</td><td>Sector/s</td><td colspan="2">Electronics</td></tr>
<tr><td>3.</td><td>Type of Qualification: ☐ New ☒ Revised ☐ Has Electives/Options
☐OEM</td><td>NQR Code & version of existing/previous qualification: (change to previous, once approved)- QG-05-EH-01322-2023-V1.1-ESSC& V2.0</td><td>Qualification Name of existing/previous version:
Laser Marking and Cutting Process Engineer</td></tr>
<tr><td>4.</td><td>a. OEM Name
b. Qualification Name
(Wherever applicable)</td><td colspan="2">NA</td></tr>
<tr><td>5.</td><td>National Qualification Register (NQR) Code & Version
(Will be issued after NSQC approval)</td><td>QG-05-EH-03987-2025-V3-ESSCI</td><td>6. NCrF/NSQF Level: 5</td></tr>
<tr><td>7.</td><td>Award (Certificate/Diploma/Advance Diploma/ Any Other (Wherever applicable specify multiple entry/exits also & provide details in annexure)</td><td colspan="2">Certificate</td></tr>
<tr><td>8.</td><td>Brief Description of the Qualification</td><td colspan="2">A laser marking & cutting process Supervisor is responsible for proper functioning, troubleshooting and maintenance of laser marking & cutting machines, setting up process parameters, new recipes to be incorporated, material characterization and yield monitoring/analysis, etc. for equipment, tools and fixtures. He/she also assists the equipment engineer for any help needed with the laser marking and cutting machines operations.</td></tr>
<tr><td>9.</td><td>Eligibility Criteria for Entry for Student/Trainee/Learner/Employee</td><td colspan="2">a. Entry Qualification & Relevant Experience:
<table>
<tr><th>S. No.</th><th>Academic/Skill Qualification (with Specialization - if applicable)</th><th>Required Experience (with Specialization - if applicable)</th></tr>
<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>
<tr><td colspan="3"># Relevant Experience in Semiconductor & Components.</td></tr>
</table>
b. Age: NA</td></tr>
<tr><td>10.</td><td>Credits Assigned to this Qualification, Subject to Assessment (as per National Credit Framework (NCrF))</td><td>19</td><td>11. Common Cost Norm Category (I/II/III) (wherever applicable): I</td></tr>
<tr><td>12.</td><td>Any Licensing requirements for Undertaking Training on This Qualification (wherever applicable)</td><td colspan="2">NA</td></tr>
</table>

<table>
<tr><td>13.</td><td>Training Duration by Modes of Training Delivery
(Specify Total Duration as per selected training delivery modes and as per requirement of the qualification)</td><td colspan="2">☐Offline ☐Online ☒Blended
<table>
<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>
<tr><td>Classroom (offline)</td><td>00:00</td><td>210:00</td><td>180:00</td><td>00:00</td><td rowspan="2">570:00</td></tr>
<tr><td>Online</td><td>180:00</td><td>00:00</td><td>00:00</td><td>00:00</td></tr>
</table>
(Refer Blended Learning Annexure for details)</td></tr>
<tr><td>14.</td><td>Aligned to NCO/ISCO Code/s (if no code is available mention the same)</td><td colspan="2">NCO-2015/3119.1100</td></tr>
<tr><td>15.</td><td>Progression path after attaining the qualification
(Please show Professional and Academic progression)</td><td colspan="2">Assistant Manager - Process</td></tr>
<tr><td>16.</td><td>Other Indian languages in which the Qualification & Model Curriculum are being submitted</td><td colspan="2">Hindi</td></tr>
<tr><td>17.</td><td>Is similar Qualification(s) available on NQR-if yes, justification for this qualification</td><td colspan="2">☐ Yes ☒ No URLs of similar Qualifications:</td></tr>
<tr><td>18.</td><td>Is the Job Role Amenable to Persons with Disability</td><td colspan="2">☐ Yes ☒ No
If “Yes”, specify applicable type of Disability:</td></tr>
<tr><td>19.</td><td>How Participation of Women will be Encouraged</td><td colspan="2">No gender sensitization</td></tr>
<tr><td>20.</td><td>Are Greening/ Environment Sustainability Aspects Covered (Specify the NOS/Module which covers it)</td><td colspan="2">☒ Yes ☐ No
Employability Skills (DGT/VSQ/N0102)</td></tr>
<tr><td>21.</td><td>Is Qualification Suitable to be Offered in Schools/Colleges</td><td colspan="2">Schools ☐ Yes ☒ No Colleges ☒ Yes ☐ No</td></tr>
<tr><td>22.</td><td>Name and Contact Details of Submitting / Awarding Body SPOC
(In case of CS or MS, provide details of both Lead AB & Supporting ABs)</td><td colspan="2">Name: Saleem Ahmed
Email: ceo@essc-india.org
Contact No.: 011 – 8447738501
Website: https://www.essc-india.org/</td></tr>
<tr><td>23.</td><td>Final Approval Date by NSQC: 07.05.2025</td><td>24. Validity Duration: 6 Months</td><td>25. Next Review Date: 31.10.2025</td></tr>
</table>

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	Recipe/Program Readiness – Define Process Parameters	ELE/N0117 & V2.0	Core	5	5	66	54	30	0	150	40	60	0	0	100	20
2	Data Analysis and Yield Cost & Productivity Improvement	ELE/N0118 & V2.0	Core	5	4	30	60	30	0	120	40	60	0	0	100	20
3	Equipment Set up Support	ELE/N0119 & V2.0	Core	5	4	30	30	60	0	120	40	60	0	0	100	20
4	Provision for Machine/Tools Buy Off	ELE/N0120 & V2.0	Core	5	4	30	30	60	0	120	40	60	0	0	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	20
Duration (in Hours) / Total Marks					**19**	**180**	**210**	**180**	**0**	**570**	**180**	**270**	**0**	**0**	**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	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	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/ Mechanical/Electronics) with 2 years industrial and 1 year training experience in the field of Laser Marking – Assembly & Packaging. 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/ Mechanical/Electronics) with 3 years industrial and 1 year training experience in the field of Laser Marking – Assembly & Packaging. 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/ Mechanical/Electronics) with 3 years industrial and 1 year training experience in the field of Laser Marking – Assembly & Packaging. Or Certified in relevant CITS Trade
2	**Proctor's Qualification and experience in relevant sector (in years)** *(as per NCVET guidelines)*	Diploma/ITI (Electrical/ Mechanical/Electronics) with 4 years industrial and 1 year training experience in the field of Laser Marking – Assembly & Packaging. 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/ Mechanical/Electronics) with 4 years industrial and 1 year training experience in the field of Laser Marking – Assembly & Packaging. 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
3.	**Government /Industry initiatives/ requirement (Yes/No):** Yes
4.	**Number of Industry validation provided:** 10
5.	**Estimated nos. of persons to be trained and employed:** 100
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.** ● Capability to understand the Design process and Work flow. ● Plan activity based on workflow and deliverables. ● Develop the interface and functional requirements for the embedded software	A Laser Marking and Cutting - Process Supervisor is responsible for assessing the machine's specification requirement, developing tests and validating the software in coordination with design engineers for system integration. Hence Level 5	5
Professional and Technical Skills/ Expertise/ Professional Knowledge	**Factual and theoretical knowledge in broad contexts within a field of work or study.** ● Knowledge of the principles and processes used in the field of laser machines and equipment, software/application used. ● Know the functionality, logic involved in the system.	A Laser Marking and Cutting - Process Supervisor should know the principles and processes used in the laser marking and cutting equipment and machines and guide operators for the smooth functioning of these. Hence Level 5	5
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.** ● Communicate with customer, team and supervisor to understand the work requirement ● Understanding of the general design flow and activities involved ● Plan activity based on workflow and deliverables	A Laser Marking and Cutting - Process Supervisor should be able to plan activity based on workflow and deliverables. He/she assists in code reviews and rework the code to fix identified defects. Hence Level 5.	5

	• Assist in code reviews and rework the code to fix identified defects		
Broad Learning Outcomes/Core Skill	• Assesses the specification requirements • Develops tests and validates the requirements and parameters.	A Laser Marking and Cutting - Process Supervisor needs to know how to assess the specification requirement, develops parameters, tests and validates the software. The operators rely on the knowledge and supervision of the engineer for proper functioning and maintenance of the machines/equipment. 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 Laser Marking and Cutting - Process Supervisor should record the issues and report about the same to managers and also update the status of the work as per organization's 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	Laser marking and cutting machine	pieces	1
2	Laptop	pieces	1
3	Calipers	pieces	2
4	Rulers	pieces	2
5	Alcohol wipes	pack	5
6	Laser lenses	Nos	2
7	Worktable	pieces	1
8	Ventilation system	pieces	1
9	Fire Extinguisher	pieces	1
10	First Aid Kit	Nos	1
11	Safety Glasses	pair	6
12	Safety Helmet	Nos	6
13	Safety Shoes	pair	6
14	Rubber Gloves	pair	2

15	Screw Driver Set	Nos	2
16	Warning Signs and Tapes	pair	2
17	Whiteboard	pieces	1

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	Balaji Private ITI	Rakesh Kumar	Principal	Moonpur Mundawar Alwar Rajasthan	9829745313	rakeshiti@gamil.com	

6	EdgeFX Technologies Pvt. Ltd	Tarun Agarwal	COO	105, Liberty Plaza, Himayatnagar Hedrabad Telangana 500029		info@edgefxkits.in	
7	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	
8	VVDN Technologies Pvt. Ltd.	Subnesh Sharma	Avp HR	Global innovation parks, plot No. cp 7 sector 8 IMT manesar, Gurugram, Haryana 122050	9821630618	Subnesh.sharma@vvdntech.com	
9	Rastriya Khushali Sansthan	Ramkaran Sinsinwar	President	VOP Tajsar Fatehpur Rajasthan	6350658040	Rkstajsar1998@gmail.com	
10	Manav Shiksha			Vill+Post – OlE, Dis. Mathura	7500000637		

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	25	NA	NA
2026-27	25	NA	NA
2027-28	50	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	5	5	5	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:

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/N0117-Recipe/Program Readiness – Define Process Parameters	Define Process Parameters	**14**	**23**		
	PC1. understand the strip dimensions and internal structure	1	2		
	PC2. define package outline drawing and strip drawing (PIN Holes, Fiducial Marks and Orientation)	1	2		
	PC3. describe the laser type, Laser Speed, Engraving thickness and Engraving orientation	1	2		
	PC4. define marking content, marking depth, width and visibility	1	2		
	PC5. run dummy samples	1	2		
	PC6. ensure that proper measurement of laser depth, marking content size & visibility check is done	1	2		
	PC7. perform repetitive tests till the specified criteria is met	2	2		
	PC8. generate the recipe with best optimized parameters and save it	2	2		
	PC9. input major parameters into Travelling card and SOP both	2	2		
	PC10.prepare full SOP and release to production	1	2		
	PC11.highlight if any special requirement is needed	1	3		
	Verify Process Parameters	**9**	**15**		
	PC12.copy old recipe of similar program	2	2		
	PC13. Make changes as per product and customer requirement	2	2		
	PC14.run dummies do all measurements, Calculate CPK, PPK & other quality parameters	1	2		
	PC15.save the program after all parameters have been verified	1	2		
	PC16. Run real product & do all measurements	1	2		
	PC17. Conduct inspection for visibility, void and wire exposure and prepare for mass production	2	5		
	Prepare SOP and Travelling Card	**7**	**13**		
	PC18. Assess proper features required for working with AUTO CAD	1	2		

	PC19. Prepare process flow with clear specifications like Temperature, Speed, Water Flow, Vacuum etc.	1	2		
	PC20. Prepare SOP in such a way so that it is more understandable to operators with pictures, visuals, data Charts etc.	2	3		
	PC21. Train operators on SOP Flow	2	3		
	PC22. Prepare travelling card with defined process or program name/ code	1	3		
	Manage Daily Activity	**10**	**9**		
	PC23.ensure all travelling cards release to production are ok	3	2		
	PC24. Conduct regular inspection of programs as well as lot data such as yield, failure etc.	3	2		
	PC25. ensure that the machine and equipment is ready for any emergency situation	3	2		
	PC26. Prepare daily activity plan	1	3		
	Total Marks	**40**	**60**	-	-
ELE/N0118-Data Analysis and Yield Cost & Productivity Improvement	*Analyse Data and Yield*	**23**	**29**	-	-
	PC1. understand & prepare data for the strip dimensions and internal structure	4	5		-
	PC2. collect data from drawings and other specification documents	4	5		-
	PC3. record data related to marking content, marking depth, width and visibility	4	5		
	PC4. record measurement details as per formats for laser depth, marking content size & visibility check	4	5		
	PC5. ensure that the recipe is optimal as per the business case and user parameters	4	5		
	PC6. ensure that the SOP and production plan are optimal in terms of parameters and yield	3	4		
	Advise Cost and Productivity Improvements	**17**	**31**		
	PC7. ensure that proper market analysis has been conducted for new products, process parameters has been properly verified	3	5		
	PC8. reuse older program versions to make them better and improved as per current scenario and requirements	3	5		
	PC9. ensure cost and time are kept in mind while making changes as per product and customer requirements	3	5		
	PC10. calculate CPK, PPK and other quality parameters to analyses and suggest productivity improvements	3	5		

	PC11.perform inspection of equipment and machines to ensure they are working for optimal productivity	3	5		
	PC12.analyse any additional maintenance cost and prepare a budget for the same	2	6		
	NOS Total	**40**	**60**	-	-
ELE/N0119 Equipment Set up Support	*Support Loader/Unloader & Rail setup*	**10**	**20**		
	PC1. define magazine loading parameter	2	3		
	PC2. list the strip pickup criteria and specify the orientation of strip	2	3		
	PC3. ensure that the placement location is properly marked	2	3		
	PC4. outline the rail moving speed and laser height for marking	2	3		
	PC5. define strip unloading parameters and strip unloading direction/Orientation with location inside the magazine	1	4		
	PC6. list the handling steps of magazine and strips during marking	1	4		
	Material Handeling procedure	**12**	**20**		
	PC7. outline the instructions to handle/hold the magazine	2	3		
	PC8. list the specifications to place the magazine inside the loader	2	3		
	PC9. advise the operator to avoid ESD and other mishappening issues	2	3		
	PC10. ensure that all operators understand alarms and mention if its false or not	2	3		
	PC11. Guide the operators how to wear fingertips	2	3		
	PC12. Advise the operators to process lot or material inside the machine	1	3		
	PC13. supervise the operators for collecting the data and make the data log sheet for each lot	1	2		
	Support Laser Setup	**6**	**12**		
	PC14. Define the laser head criteria	2	3		
	PC15. Identify strip location and orientation for correct marking as well as laser height and angle	1	3		
	PC16. define laser power and moving speed	1	2		
	PC17. Save all parameters	1	2		
	PC18. Check all marking parameters whether they are ok or not	1	2		

	Support change over	**12**	**8**		
	PC19.make different recipes for different products	2	1		
	PC20.save these recipes as per the well-defined naming rule	2	1		
	PC21.guide operators to change the recipe as per product	2	1		
	PC22. Verify all the parameters on samples based	2	1		
	PC23. run original product after verifying all parameters	2	2		
	PC24. keep the records of all abnormalities (False Alarm, stoppage, mis-marking etc.) that happened throughout the day	2	2		
	NOS Total	**40**	**60**	**-**	**-**
ELE/N0120 Provision for Machine/Tools Buy Off	Factory Acceptance Test at Equipment manufacturer site	**19**	**33**		
	PC1. create a FAT Report	2	4		
	PC2. ensure that the general machine specifications (operation, main controller, main panel should function as per requirements given to manufacturer)	2	4		
	PC3. check that laser specification, dimensions and other parameters are clearly defined by the process and equipment engineer	2	4		
	PC4. verify all equipment and process parameters during testing at site	2	4		
	PC5. outline the sample size required to buy off machines as per specification and CPK requirements	4	5		
	PC6. run all the material through equipment along with manufacturers team	2	5		
	PC7. prepare a report to avoid any future issues	2	5		
	PC8. record all observations and findings	3	2		
	Site acceptance test at product manufacturer site	**11**	**16**		
	PC9. create a SAT Report	3	4		
	PC10. ensure that all general machine specification (operation, main controller, main panel should function as per requirements given to manufacturer) are considered in the SAT report	3	3		
	PC11. Check all equipment and process parameters to ensure that they DMAT during testing at site	2	3		
	PC12. outline the sample size required to buy off machines as per the specification and CPK Requirements	2	3		

	PC13. run all the tests through managers and manufacturers team	2	3		
	Laser Type selection and Qualification	**10**	**11**		
	PC14. Seek the laser type based on molding compound	1	1		
	PC15. design the DOE to verify laser type	1	1		
	PC16. Collect all the quality and reliability data for each characterization, feasibility and qualification build	1	1		
	PC17. Generate PCN (Process Change Notification) and inform the customer	1	1		
	PC18. Prepare qualification report and present it to the management	2	2		
	PC19. release to LVM (Low volume Mass Production) and coordinate with production team to make smooth transition to high volume mass production	2	2		
	PC20. ensure that characterization phase, feasibility phase, customer samples phase and qualification phase is considered	2	3		
	NOS Total	**40**	**60**	**-**	**-**
DGT/VSQ/N0102 - Employability Skills (60 hours)	Introduction to Employability Skills	1	1	-	-
	PC1. identify employability skills required for jobs in various industries				
	PC2. identify and explore learning and employability portals				
	Constitutional values – Citizenship	1	1	-	-
	PC3. recognize the significance of constitutional values, including civic rights and duties, citizenship, responsibility towards society etc. and personal values and ethics such as honesty, integrity, caring and respecting others, etc.				
		-	-	-	-
	PC4. follow environmentally sustainable practices	-	-	-	-
	Becoming a Professional in the 21st Century	2	4	-	-
	PC5. recognize the significance of 21st Century Skills for employment				
		-	-	-	-
	PC6. practice the 21st Century Skills such as Self- Awareness, 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	-	-
	PC16. select financial institutions, products and services as per requirement	-	-	-	-
	PC17. carry out offline and online financial transactions, safely and securely	-	-	-	-
	PC18. identify common components of salary and compute income, expenses, taxes, investments etc.	-	-	-	-
	PC19. identify relevant rights and laws and use legal aids to fight against legal exploitation	-	-	-	-
	Essential Digital Skills	3	4	-	-

	PC20. operate digital devices and carry out basic internet operations securely and safely	-	-	-	-
	PC21. use e- mail and social media platforms and virtual collaboration tools to work effectively	-	-	-	-
	PC22. use basic features of word processor, spreadsheets, and presentations	-	-	-	-
	Entrepreneurship	2	3	-	-
	PC23. identify different types of Entrepreneurship and Enterprises and assess opportunities for potential business through research	-	-	-	-
	PC24. develop a business plan and a work model, considering the 4Ps of Marketing Product, Price, Place and Promotion	-	-	-	-
	PC25. identify sources of funding, anticipate, and mitigate any financial/ legal hurdles for the potential business opportunity	-	-	-	-
	Customer Service	1	2	-	-
	PC26. identify different types of customers	-	-	-	-
	PC27. identify and respond to customer requests and needs in a professional manner.	-	-	-	-
	PC28. follow appropriate hygiene and grooming standards	-	-	-	-
	Getting ready for apprenticeship & Jobs	2	3	-	-
	PC29. create a professional Curriculum vitae (Résumé)	-	-	-	-
	PC30. search for suitable jobs using reliable offline and online sources such as Employment exchange, recruitment agencies, newspapers etc. and job portals, respectively	-	-	-	-
	PC31. apply to identified job openings using offline/online methods as per requirement	-	-	-	-
	PC32. answer questions politely, with clarity and confidence, during recruitment and selection	-	-	-	-
	PC33. identify apprenticeship opportunities and register for it as per guidelines and requirements	-	-	-	-
	Total Marks	**20**	**30**	**-**	**-**
Grand Total		**180**	**270**	**-**	**-**

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 center is available at the same address as mentioned on SDMS or SIP
   - Check the duration of the training.
   - Check the Assessment Start and End time to be as 10 a.m. and 5 p.m.
   - If the batch size is more than 30, then there should be 2 Assessors.
   - Check that the allotted time to the candidates to complete Theory & Practical Assessment is correct.
   - Check the mode of assessment—Online (TAB/Computer) or Offline (OMR/PP).
   - Confirm the number of TABs on the ground are correct to execute the Assessment smoothly.
   - Check the availability of the Lab Equipment for the particular Job Role.

3. Assessment Quality Assurance levels / Framework:
   - Question papers created by the Subject Matter Experts (SME)
   - Question papers created by the SME verified by the other subject Matter Experts
   - Questions are mapped with NOS and PC
   - Question papers are prepared considering that level 1 to 3 are for the unskilled & semi-skilled individuals, and level 4 and above are for the skilled, supervisor & higher management
   - Assessor must be ToA certified & trainer must be ToT Certified
   - Assessment agency must follow the assessment guidelines to conduct the assessment

4. Types of evidence or evidence-gathering protocol:
   - Time-stamped & geotagged reporting of the assessor from assessment location
   - Centre photographs with signboards and scheme specific branding
   - Biometric or manual attendance sheet (stamped by TP) of the trainees during the training period
   - Time-stamped & geotagged assessment (Theory + Viva + Practical) photographs & videos

5. Method of verification or validation:
   - Surprise visit to the assessment location
   - Random audit of the batch
   - Random audit of any candidate

6. Method for assessment documentation, archiving, and access

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

On the Job:

1. Each module (which covers the job profile of Laser Marking and Cutting - Process Supervisor) 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