

QUALIFICATION FILE

Automotive Welding Machine Trainer

☒ Short Term Training (STT) ☐ Long Term Training (LTT) ☐ Apprenticeship

☐ Upskilling ☐ Dual/Flexi Qualification ☒ For ToT ☒ For ToA

☒ General ☐ Multi-skill (MS) ☐ Cross Sectoral (CS) ☐ Future Skills ☐ OEM

NCrF/NSQF Level: 4.5

Submitted By:

Automotive Skills Development Council

E-113, Okhla Industrial Estate

Phase- III,

New Delhi-110020

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Section 1: Basic Details

1.	Qualification Name	Automotive Welding Machine Trainer													
2.	Sector/s	Automotive													
3.	Type of Qualification: ☒ New ☐ Revised ☐ Has Electives/Options ☐ OEM	NQR Code & version of existing/previous qualification: 2021/AUT/ASDC/04643, V1.0	Qualification Name of existing/previous version: Automotive Welding Machine Trainer, V1.0												
4.	a. OEM Name b. Qualification Name (Wherever applicable)														
5.	National Qualification Register (NQR) Code & Version (Will be issued after NSQC approval)	QG-4.5-AU-04194-2025-V1-ASDC	6. NCrF/NSQF Level: 4.5												
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 is using pre-set lesson plans and training materials to plan and conduct training sessions for welding team to impart competency-based skills and knowledge.													
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>1st year of B.E/B.Tech</td> <td></td> </tr> <tr> <td>2</td> <td>12th or Equivalent</td> <td>1.5 years of relevant experience</td> </tr> <tr> <td>3</td> <td>Certificate-NSQF (Automotive Welding Machine Technician Level 4) with minimum education as 8th class pass</td> <td>3 years of relevant experience</td> </tr> </tbody> </table> b. Age: 20 years		S. No.	Academic/Skill Qualification (with Specialization - if applicable)	Required Experience (with Specialization - if applicable)	1	1st year of B.E/B.Tech		2	12th or Equivalent	1.5 years of relevant experience	3	Certificate-NSQF (Automotive Welding Machine Technician Level 4) with minimum education as 8th class pass	3 years of relevant experience
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2	12th or Equivalent	1.5 years of relevant experience													
3	Certificate-NSQF (Automotive Welding Machine Technician Level 4) with minimum education as 8th class pass	3 years of relevant experience													

10.	Credits Assigned to this Qualification, Subject to Assessment (as per National Credit Framework (NCrF))	16	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>172:00</td> <td>278:00</td> <td>30:00</td> <td></td> <td>480</td> </tr> <tr> <td>Online</td> <td></td> <td></td> <td></td> <td></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)	172:00	278:00	30:00		480	Online					
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Online																								
14.	Aligned to NCO/ISCO Codes (if no code is available mention the same)	NCO-2015/3122.4702																						
15.	Progression path after attaining the qualification (Please show Professional and Academic progression)	Training and Development Manager HR Head																						
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, by creating awareness in women and training them																						
20.	Are Greening/ Environment Sustainability Aspects Covered (Specify the NOS/Module which covers it)	☐ Yes ☒ No																						
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 <i>(In case of CS or MS, provide details of both Lead AB & Supporting ABs)</i>	Name: Mr. Arindam Lahiri Email: ceo@asdc.org.in Contact No.: 011-42599800 Website: https://www.asdc.org.in/	
23.	Final Approval Date by NSQC: 08 May 2025	24. Validity Duration: 3 Years	25. Next Review Date: 08 May 2028

NSQC APPROVED

Section 2: Module Summary

NOS/s of Qualifications

(In exceptional cases these could be described as components)

Mandatory NOS/s:

Specify the training duration and assessment criteria at NOS/ Module level. For further details refer curriculum document.

Th.-Theory **Pr.**-Practical **OJT**-On the Job **Man.**-Mandatory Training **Rec.**-Recommended **Proj.**-Project

S. No	NOS/Module Name	NOS/Module Code & Version (if applicable)	Core/ Non-Core	NCrF/NSQF Level	Credits as per NCrF	Training Duration (Hours)					Assessment Marks					
						Th.	Pr.	OJT-Man.	OJT-Rec.	Total	Th.	Pr.	Proj.	Viva	Total	Weightage (%) (if applicable)
1.	Manage work and resources (Manufacturing)	ASC/N9810, v2.0	Non-Core	4.5	2	25	35			60	50	30		20	100	10
2.	Employability Skills (30 hours)	DGT/VSQ/N0101, v1.0	Non-Core	4.5	1	12	18			30	20	30			50	10
3.	Interpret engineering drawing	ASC/N9805, v2.0	Non-Core	4.5	1	15	15			30	50	30		20	100	5
4.	Plan and deliver competency based, instructor-led training sessions for welding operations as per session plan	ASC/N3117, v1.0	Core	4.5	3	30	50	10		90	30	50		20	100	25
5.	Evaluation and assessment of welders	ASC/N3118, v1.0	Core	4.5	3	30	50	10		90	30	50		20	100	25
6.	Conduct technical training of welding team	ASC/N3119, v2.0	Core	4.5	6	60	110	10		180	30	50		20	100	25
Duration (in Hours) / Total Marks					16	172	278	30		480	210	240		100	550	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 (Mechanical/Automobile) - 5 years industry experience and 1 year training experience Or B.E./ B.Tech (Mechanical/Automobile) - 4 years industry experience and 1 year training experience Or B.E./ B.Tech (Mechanical/Automobile) - 5 years industry experience and 0 year training experience Or M.E./ M.Tech (Mechanical/Automobile) - 2 years industry experience and 2 years training experience Or ITI (Welder)- 7 years industry experience and 1 year training experience
2.	Master Trainer's Qualification and experience in the relevant sector (in years) (as per NCVET guidelines)	B.E./ B.Tech (Mechanical/Automobile) - 7 years industry experience and 2 year training experience Or M.E./ M.Tech (Mechanical/Automobile) - 4 years industry experience and 3 years training experience
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	

Section 4: Assessment Related

1.	Assessor's Qualification and experience in relevant sector (in years) (as per NCVET guidelines)	Diploma (Mechanical/Automobile)- 6 years industry experience and 1 year assessment experience Or B.E./ B.Tech (Mechanical/Automobile)- 5 years industry experience and 1 year assessment experience Or B.E./ B.Tech (Mechanical/Automobile)- 6 years industry experience and 0 year assessment experience Or M.E./ M.Tech (Mechanical/Automobile)- - 3 years industry experience and 2 years assessment experience Or ITI (Welder)- 8 years industry experience and 1 year assessment experience
2.	Proctor's Qualification and experience in relevant sector (in years) (as per NCVET guidelines)	NA

3.	Lead Assessor's/Proctor's Qualification and experience in relevant sector (in years) (as per NCVET guidelines)	Diploma (Mechanical/Automobile)- 7 years industry experience and 1 year assessment experience Or B.E./ B.Tech (Mechanical/Automobile)- 6 years industry experience and 1 year assessment experience Or B.E./ B.Tech (Mechanical/Automobile)- 7 years industry experience and 0 year assessment experience Or M.E./ M.Tech (Mechanical/Automobile)- - 4 years industry experience and 2 years assessment experience Or ITI (Welder)- 9 years industry experience and 1 year assessment experience
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: 23
5.	Estimated nos. of persons to be trained and employed: 300
6.	Evidence of Concurrence/Consultation with Line Ministry/State Departments: In progress If "No", why:

Section 6: Annexure & Supporting Documents Check List

Specify Annexure Name / Supporting document file name

1.	Annexure: NCrf/NSQF level justification based on NCrf level/NSQF descriptors (<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>)	
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>)	Attached
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
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Professional Theoretical Knowledge/Process	The individual on the job needs to conduct training sessions for the welding team to impart competency-based skills and knowledge. He/She also conducts assessment to evaluate the performance of trainee.	The individual on the job is responsible for own work and learning and in welding environment.	4.5
Professional and Technical Skills/ Expertise/ Professional Knowledge	The individual on the job needs to have factual knowledge of: • Various training methods and processes • Different types of assessment • Learning principles and assessment rules • Different welding methods. • Different types of tools and equipment used in the welding process and their identification. • How to read welding drawing and weld the part to create the output as defined in the drawing.	Factual knowledge of welding methods and operation of welding apparatus.	4.5
Employment Readiness & Entrepreneurship Skills & Mind-set/Professional Skill	Recall and demonstrate practical skill to routine and repetitive applications: • Welding methods like MIG, TIG, SPOT etc. • Measuring dimensions and inspects work pieces. • Recognise a workplace problem or a potential problem and take action.	Recall and demonstrate practical skill, routine and repetitive in wide range of application, using appropriate rule and tool, using quality concepts.	4.5
Broad Learning Outcomes/Core Skill	The user individual on the job needs to have written and oral communication skills like: • Apply learning methods and processes • To draw basic level drawings and charts. • Read and interpret symbols given on equipment and work area. • Read welding drawings/ engineering drawings, sketches.	Language to communicate written or oral, with required clarity, skill to basic arithmetic and algebraic principles, basic understanding of social political and natural environment.	4.5

Responsibility	The individual on the job needs to know their own responsibility of conducting the training and assessment of welding team.	The individual on the job is responsible for own work and fully responsible for other's work and learning.	4.5
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Annexure: Tools and Equipment (Lab Set-Up)

List of Tools and Equipment
Batch Size: 30

S. No.	Tool / Equipment Name	Specification	Quantity for specified Batch size
1	Alternating/Direct Current Arc Welding set	As per requirement	2
2	Metal Inert Gas (MIG) Welding Machine	As per requirement	3
3	Oxy-acetylene welding set	As per requirement	2
4	Tungsten Inert Gas (TIG) Welding Machine	As per requirement	2
5	Spot welding machine	As per requirement	2
6	Projection welding machine	As per requirement	2
7	Bench Grinder	As per requirement	2
8	Disc Grinder	As per requirement	1
9	Hand Drill machine/ Tap and die	As per requirement	1
10	Welding table with bench vice	As per requirement	6
11	Spark Lighter	As per requirement	2
12	Bench Drilling Machine	As per requirement	1
13	Try Square	As per requirement	1
14	Hacksaw With Spare Blades	As per requirement	30
15	Flat File	As per requirement	5

16	Square File	As per requirement	1
17	Round File	As per requirement	1
18	Half Round File	As per requirement	1
19	Triangular File	As per requirement	8
20	Adjustable Wrench	As per requirement	2
21	Screw Driver Set	As per requirement	1
22	Allen key Set	As per requirement	2
23	Open Ended Spanner Set	As per requirement	2
24	Ring Spanner Set	As per requirement	2
25	Spanner Set	As per requirement	2
26	C-Clamp Set	As per requirement	2
27	Fixtures For Clamping Components	As per requirement	3
28	Flux Coated Electrodes/ Wire (Different type electrodes)	As per requirement	30
29	Blow Torch/Gas cutter	As per requirement	2
30	Electrode Holder	As per requirement	2
31	Chipping Hammers	As per requirement	5
32	Welder Torch	As per requirement	5
33	Wire Brushes	As per requirement	5
34	Welding Gun	As per requirement	5
35	Vernier Caliper	As per requirement	4
36	Micrometer	As per requirement	4
37	Height Gauge	As per requirement	2
38	Surface Plate	As per requirement	1

39	V-Block with Clamp (Set)	As per requirement	1
40	Steel Rule	As per requirement	1
41	Radius Gauge	As per requirement	1
42	Feeler gauge	As per requirement	1
43	Raw Material/sheet	As per requirement	120
44	Tubes	As per requirement	120
45	Bar	As per requirement	120
46	Angle iron	As per requirement	120
47	Training documents (Trainer guide, Participant handbook, Curriculum, Session plan)	As per requirement	1
48	Drawing tools	As per requirement	10
49	Fire Extinguisher (Different category)	As per requirement	3
50	Portable Welding Curtains with frame	As per requirement	4
51	Leather Safety Aprons	As per requirement	30
52	Leather Safety Gloves	As per requirement	30
53	Safety Glass with Side Shields	As per requirement	30
54	Safety helmet	As per requirement	15
55	Ear Plugs	As per requirement	30
56	Safety Shoes	As per requirement	30
57	First Aid Kit	As per requirement	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	M/S Abhiraj Business Enterprises Pvt. Ltd.	Arun Kumar Sharma	Director				
2	Allied Resource Management services India Pvt Ltd	Netra Salvi	Director				
3	M/s. Atul Auto Limited	Satish Upadhyaya	HR & Admin - Head				
4	Bharat Seats Ltd	Parveen Kr Sharma	Sr. Manager				
5	DMC Finishing School Pvt. Ltd	Dr. Sanjay Zope	Director				
6	Ecocat India Pvt Ltd	Chandar Shekhar	Sr. Manager				
7	Eduspark International Private Limited	Sawan Rajurkar	Project Manager				
8	Hind Hydraulics & Engineers Pvt. Ltd	Amit	Head HR				
9	ISGEC Heavy Engineering Ltd	DN Mishra	Manager (Training)				
10	Jay Bharat Maruti Ltd	Amrainder Rai	Deputy Manager				
11	MEGA CORPSOL LLP	Dhairyasheel Desai	Managing Director				
12	NSEPF ASSESSMENT PVT .LTD	Ashish Kumar	Chief Operating Officer				
13	Polyplastics India Pvt Ltd	Rajiv Arya	Manager HR				
14	Polyplastics Uttar Bharat Pvt Ltd	Rajiv Arya	Manager HR				
15	Pranav Vikas India Pvt Ltd	Sushil Bhardwaj	Sr. Manager				
16	Shri Ram Industries	Vikash Bansal	Managing Director				
17	SHRINIWAS MANRESOURCES PRIVATE LIMITED	Ramdas Kusalkar	Director				
18	Skillmate Technologies Pvt. Ltd	Gajanan R. Trikutkar	Director & Co-Founder				
19	Talbro's Automotive Components Ltd	Harish Kumar	Sr. Manager				
20	Tamil Nadu Smart and Advanced Manufacturing Centre	Sukhpreet Singh	Chief Executive Officer				
21	Udhyog Sahyog Parishad	Virender Kumar Bhardwaj	President and Managing Director				
22	Victoria Industries Pvt. Ltd	Saroj Kumar	Head - Training and PR				
23	DLJM Skill Development Foundation	Amit Kumari	Deputy Manager				

Annexure: Training & Employment Details

Training and Employment Projections:

Year	Total Candidates		Women		People with Disability	
	Estimated Training #	Estimated Employment Opportunities	Estimated Training #	Estimated Employment Opportunities	Estimated Training #	Estimated Employment Opportunities
2025-26	500	350	200	140	50	35
2026-27	1000	700	400	280	100	70
2027-28	1500	1050	600	420	150	105

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

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:

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	40:60
2	☒ Imparting Soft Skills, Life Skills, and Employability Skills /Mentorship to Learners	• Self-Learning Videos • Broadcasts • Mobile Learning • Curated Digital content	40:60
3	☒ Showing Practical Demonstrations to the learners	• Video Content • E-Resource library • AR/ VR/ XR	40:60
4	☒ Imparting Practical Hands-on Skills/ Lab Work/ workshop/ shop floor training	• Training tools (tools list attached) • Video Play • Presentations	40:60
5	☒ Tutorials/ Assignments/ Drill/ Practice	• Online Question Bank • Mobile Quick test app • MCQ based tests	40:60

6	☒ Proctored Monitoring/ Assessment/ Evaluation/ Examinations	- Assessment engine for Essays - Up-loadable file examinations - Mock test sessions	40:60
7	☒ On the Job Training (OJT)/ Project Work Internship/ Apprenticeship Training	- Online tests - Offline assessments	40:60

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
ASC/N9810: Manage work and resources (manufacturing)	<i>Maintain safe and secure working environment</i>	20	13	-	8
	PC1. identify hazardous activities and the possible causes of risks or accidents in the workplace	4	2	-	2
	PC2. implement safe working practices for dealing with hazards to ensure safety of self and others	3	1	-	2
	PC3. conduct regular checks of the machines with support of the maintenance team to identify potential hazards	2	2	-	1
	PC4. ensure that all the tools/equipment/fasteners/spare parts are arranged as per specifications/utility into proper trays, cabinets, lockers as mentioned in the 5S guidelines/work instructions	3	2	-	1
	PC5. organise safety drills or training sessions to create awareness amongst others on the identified risks and safety practices	2	-	-	-
	PC6. fill daily check sheet to report improvements done and risks identified	2	2	-	-

PC7.	ensure that relevant safety boards/signs are placed on the shop floor for the safety of self and others	2	2	-	1
PC8.	report any identified breaches in health, safety and security policies and procedures to the designated person	2	2	-	1
<i>Maintain Health and Hygiene</i>		13	7	-	5
PC9.	ensure workplace, equipment, restrooms etc. are sanitized regularly	3	2	-	1
PC10.	ensure team is aware about hygiene and sanitation regulations and following them on the shop floor	2	1	-	-
PC11.	ensure availability of running water, hand wash and alcohol-based sanitizers at the workplace	2	2	-	1
PC12.	report advanced hygiene and sanitation issues to appropriate authority	1	1	-	1
PC13.	follow stress and anxiety management techniques and support employees to cope with stress, anxiety etc.	2	1	-	1
PC14.	wear and dispose PPEs regularly and appropriately	3	-	-	1
<i>Effective waste management practices</i>		6	4	-	1
PC15.	ensure recyclable, non-recyclable and hazardous wastes are segregated as per SOP	3	2	-	-
PC16.	ensure proper mechanism is followed while collecting and disposing of non-recyclable, recyclable and reusable waste	3	2	-	1
<i>Material/energy conservation practices</i>		11	6	-	6
PC17.	ensure malfunctioning (fumes/ sparks/ emission/vibration/noise) and lapse in maintenance of equipment are resolved effectively	2	2	-	1
PC18.	prepare and analyze material and energy audit reports to decipher excessive consumption of material and water	3	2	-	1
PC19.	identify possibilities of using renewable energy and environment friendly fuels	3	1	-	2
PC20.	identify processes where material and energy/electricity utilization can be optimized	3	1	-	2

	Total Marks	50	30	-	20
ASC/N9805 – Interpret engineering drawing	<i>Interpret information from various views, projection, 2D and 3D shapes</i>	21	11	-	10
	PC1. interpret engineering drawing's uniqueness, dimensions and important features in 2D and 3D shapes	5	3	-	2
	PC2. identify the difference between 2D and 3D shapes	4	2	-	2
	PC3. explain difference between first angle projection and third angle projection in mechanical engineering drawing	4	-	-	2
	PC4. interpret all the 3 axes (x, y and z axis) and geometrical shapes (cones, cylinder, sphere, cuboid, etc.) on to a 2D and 3D projection	5	3	-	2
	PC5. identify details of the machine component which are not clearly visible by interpreting section views	3	3	-	2
	<i>Identify drawing standards and symbols</i>	23	15	-	8
	PC6. Interpret Geometric Dimensioning and Tolerancing (GD&T) symbols in the drawings	6	4	-	2
	PC7. interpret symbols of Radius, controlled radius, spherical radius, diameter, spherical diameter, square, counterbore, spotface, depth, countersink, “by”, maximum dimension, minimum dimension, reference, dimension origin etc.	6	4	-	2
	PC8. identify the sequence of operations which enables the selection and prioritization of the datums	5	3	-	2
	PC9. read and interpret information from Tolerance Zone boundaries for part features in terms of shape and size	6	4	-	2
	<i>Modification and storage of drawing</i>	6	4	-	2
	PC10. observe any modification, changes required in the drawing and communicate the same to the concerned team in the organization	3	2	-	1
	PC11. store the drawings in an easily accessible place, avoiding damage from moisture, chemicals and fire	3	2	-	1
	Total Marks	50	30	-	20
	<i>Identify training delivery requirements</i>	8	16	-	8

ASC/N3117 - Plan and deliver competency based, instructor-led training sessions for welding operations as per session plan	PC1. access, read, and interpret the training documentation such as Trainers guide, Occupational standards to be achieved, Curriculum and Training schedule to determine delivery requirements	2	2	-	2
	PC2. obtain details of the learners from authorized sources	1	3	-	1
	PC3. use available information and documentation to identify group and individual learner needs, and relevant learner characteristics	1	3	-	1
	PC4. identify training environment requirements like venue, tools, equipment, materials, space, layout and seating arrangements, stationery, etc.	1	3	-	1
	PC5. arrange and set up the training tools, equipment and material required during the training sessions	2	3	-	2
	PC6. identify constraints impacting training delivery and relevant risks	1	2	-	1
	<i>Organise training environment</i>	6	7	-	2
	PC7. modify existing session plans as per the learner needs, time and environment constraints, availability of materials, etc., if required in prescribed and/or standard templates	2	3	-	1
	PC8. ensure availability of adequate training materials, facility, technology, tools and equipment in time for delivery of learning sessions	2	2	-	-
	PC9. ensure training area is risk free and equipped with necessary health and safety resources like fire extinguishers, safety signage, clean toilets, dry flooring, security arrangements, etc.	2	2	-	1
	<i>Interpret learning environment and delivery requirements</i>	10	15	-	6
	PC10. conduct training according to the session plan and adjust the delivery method, if required to meet the learner needs	1	3	-	1
	PC11. initiate the session with icebreaker activity and explain the objectives of the training and how it is beneficial for the trainees	2	2	-	1
	PC12. deliver training using a range of training methods and training processes as instructed in trainers guide	2	3	-	1
	PC13. apply basic facilitation techniques and learning principles according to the individual and group learning needs and to ensure effective participation of trainees	2	2	-	1
	PC14. create and maintain a positive learning environment	2	3	-	1

	PC15. manage inappropriate behaviour of trainees professionally as per established organisational policy	1	2	-	1
	<i>Perform post-training activities</i>	6	12	-	4
	PC16. monitor and document the learner progress to ensure outcomes are being achieved and individual learner needs are being met	2	3	-	2
	PC17. share feedback with the learners on regular basis to keep them updated on their progress and areas that require more focus	1	3	-	1
	PC18. evaluate the learner progress and make adjustments in the delivery sessions as per the learner specific needs and circumstances	2	3	-	-
	PC19. maintain and store learner records according to organisational requirements	1	3	-	1
	Total Marks	30	50	-	20
ASC/N3118 - Evaluation and assessment of welders	<i>Evaluate performance of trainees</i>	4	9	-	4
	PC1. identify performance indicators for conducting the assessment of trainees	2	3	-	2
	PC2. observe the learner performance and evaluate it against the performance criteria to be achieved	1	3	-	1
	PC3. record and share feedback on learner performance with management as well as the learner to support learning	1	3	-	1
	<i>Prepare for conducting assessment</i>	5	10	-	4
	PC4. schedule the assessments in between the training schedule as prescribed in the training plan	-	3	-	1
	PC5. interpret and assess the units of competency which are to be used as benchmarks for assessment and identify the assessment tools required for collecting the assessment evidence	1	3	-	1
	PC6. ensure availability of necessary and adequate tools, equipment and materials for conducting the assessment as per no. of candidates	2	2	-	1
	PC7. explain the purpose of formative assessment and what will be assessed to the learners before conducting the assessment	2	2	-	1
	<i>Conduct assessment of competence</i>	16	22	-	9

	PC8. use assessment tools and technology during assessment for various purposes such as evaluation level of competence and learning retention; monitoring of learner progress against program and session objectives; identification of learning needs against required curriculum; providing feedback to learners on progress; creation of development plan for further learning etc.	2	4	-	1
	PC9. gather evidence of performance by applying the principles of assessment and rules of evidence	2	3	-	1
	PC10. evaluate the collected evidence and check that it is reflecting the required competency or not	1	2	-	1
	PC11. use judgement to infer whether competence has been demonstrated or not, on the basis of available evidence and assessment procedures followed	2	2	-	2
	PC12. record assessment decision whether competency mentioned in assessment criteria has been achieved or not	2	2	-	1
	PC13. identify learning gaps and level of competency achieved as per assessment criteria	2	3	-	1
	PC14. provide clear and constructive feedback to the candidate on the basis of assessment decision	2	3	-	1
	PC15. prepare development plan for the learner to cover the learning gaps as identified in the assessment	3	3	-	1
	<i>Recording and documentation</i>	5	9	-	3
	PC16. complete learner assessment records accurately and submit for further process within the prescribed timeframes and as per organisational guidelines	1	2	-	1
	PC17. document the results on paper or online forms in prescribed templates as per organisational guidelines	2	3	-	1
	PC18. secure, label and pack the evidence accurately as per standard procedures prescribed by the training organisation	2	4	-	1
	Total Marks	30	50	-	20
ASC/N3119 - Conduct technical training of welding team	<i>Conduct training of team on welding preparatory activities</i>	9	17	-	8
	PC1. brief the learners about workplace health and safety requirements and the consequences of not adhering to the same	1	1	-	-

PC2. explain learners about how to read and interpret welding drawing, Welding Procedure Specification (WPS), job orders, SOPs, manual to get information about type of welding need to perform, tools, equipment and input material required and output product specifications and requirements	1	2	-	1
PC3. explain and demonstrate each step of checking of the tools, equipment and input material for defects and required quality standards	1	1	-	1
PC4. clarify all technical aspects and performance parameters of the different types of welding	-	2	-	1
PC5. show learners how to select and prepare raw material and electrodes as per the selected welding method	1	2	-	1
PC6. demonstrate each step of setting the welding machine and its parameters as per the selected welding method	1	2	-	1
PC7. demonstrate each step of installing the work pieces and fixture on the apparatus and aligning them with the electrodes as per the job requirements	1	2	-	-
PC8. ensure that all learners can see the demonstration and hear the instructions and explanations clearly	1	2	-	1
PC9. provide opportunity to each learner for practicing each step in the task or procedure required to be learned immediately after the demonstration	1	2	-	1
PC10. guide participant to demonstrate the welding work preparatory activities during the sessions	1	1	-	1
<i>Conduct training of team on welding activities</i>	7	13	-	5
PC11. explain the various welding methods, their process flow and do's/don'ts of the manufacturing process	1	2	-	1
PC12. conduct training sessions on various welding methods i.e. spot, seam, MIG, TIG and robotic welding for producing the components as per the drawing, SOP and WI	1	2	-	1
PC13. demonstrate correct angle of holding torch and filler wire, the direction of weld and feed and travel speed during the welding operation	1	1	-	-
PC14. demonstrate each step of producing joints of the specified dimensional accuracy and required weld quality	1	2	-	1

PC15. explain and demonstrate each step of measuring the welded component and comparing it with the dimensions and specifications prescribed in the WPS and engineering drawing	1	2	-	1
PC16. demonstrate how to observe the malfunctions/defects in the machine during operations and monitor the process parameters by reading gauges	1	2	-	1
PC17. provide opportunity and guide each participant to demonstrate the welding process as per the selected welding method and producing components as per the dimensions and specifications given in the WPS and drawing	1	2	-	-
<i>Conduct training of team on post-welding activities</i>	6	11	-	4
PC18. conduct training session on post welding activities such as quality inspection of welded components, segregation and storage of final components, machine maintenance and preparation of records and documents as per organisational guidelines	1	2	-	1
PC19. elaborate various welding defects and their impact on the welded component	1	2	-	1
PC20. explain and demonstrate each step of quality check tests and repairing of defects from the components	1	2	-	1
PC21. demonstrate the procedure of segregating, tagging and storing the final components followed in an organisation	1	2	-	-
PC22. explain and demonstrate each step of tools and machine maintenance activities after completion of work	1	2	-	-
PC23. describe various documents and records related to welding work, maintenance work etc. need to update and maintain after completion of work	1	1	-	1
<i>Perform post-training activities</i>	8	9	-	3
PC24. address the queries and doubts of the participants	1	1	-	1
PC25. provide appropriate feedback to the participants	1	-	-	-
PC26. store and maintain relevant records related to training	-	1	-	-
PC27. monitor the cleanliness and tidiness of the workshop area	-	1	-	-
PC28. secure equipment and tools in safe places in accordance with procedures	1	1	-	-

	PC29: Use welding simulators to practice weld paths and evaluate accuracy of technique.	-	1	-	1
	PC30: Write basic robotic welding program for automated welding setup using sample workpieces.	1	1	-	-
	PC31: Analyze weld quality using real-time sensor feedback and modify parameters accordingly.	1	1	-	1
	PC32: Retrieve and interpret process logs from smart welding machines or cloud platforms.	1	1	-	-
	PC33: Conduct a sustainability assessment to monitor material wastage and energy use during welding.	1	-	-	-
	PC34: Collaborate with design/R&D team to recommend design changes based on weld output feedback.	1	1	-	-
	Total Marks	30	50	-	20
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	-	-
	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	-	-	-	-
	<i>Becoming a Professional in the 21st Century</i>	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	-	-	-	-
<i>Basic English Skills</i>	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	-	-	-	-
<i>Career Development & Goal Setting</i>	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	-	-	-	-
<i>Communication Skills</i>	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	-	-	-	-
<i>Diversity & Inclusion</i>	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	-	-	-	-
<i>Financial and Legal Literacy</i>	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	-	-	-	-
<i>Essential Digital Skills</i>	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	-	-	-	-
<i>Entrepreneurship</i>	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	-	-	-	-
<i>Customer Service</i>	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	-	-	-	-
<i>Getting ready for apprenticeship & Jobs</i>	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		210	240		100

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

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
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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