QUALIFICATION FILE

Additive Manufacturing

☒ **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

 Table of Contents

Section 1: Basic Details

1.	Qualification Name	Additive Manufacturing		
2.	Sector/s	Automotive		
3.	Type of Qualification: ☒ New ☐ Revised ☐ Has Electives/Options ☐ OEM	NQR Code & version of existing/previous qualification: *(change to previous, once approved)*		Qualification Name of existing/previous version:
4.	a. OEM Name b. Qualification Name *(Wherever applicable)*	**NA**		
5.	National Qualification Register (NQR) Code & Version *(Will be issued after NSQC approval)*	QG-4.5-AU-01822-2024-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 in this job is responsible for preparing object model of the part/product and manufacturing of parts/product on 3D printing machine.		
9.	Eligibility Criteria for Entry for Student/Trainee/Learner/Employee	a. Entry Qualification & Relevant Experience: No formal education required. b. Age: Below 25 Years of age.		
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

Training Delivery Modes	Theory (Hours)	Practical (Hours)	OJT Mandatory (Hours)	OJT Recommended (Hours)	Total (Hours)
Classroom (offline)	84:00	84:00	342:00		510:00
Online					

(Refer Blended Learning Annexure for details)

14.	Aligned to NCO/ISCO Code/s *(if no code is available mention the same)*	NCO-2015/2144.0801

15.	**Progression path after attaining the qualification** *(Please show Professional and Academic progression)*	Additive Manufacturing Engineer
16.	**Other Indian languages in which the Qualification & Model Curriculum are being submitted**	NA
17.	**Is similar Qualification(s) available on NQR-if yes, justification for this qualification**	☐ Yes ☒No URLs of similar Qualifications:
18.	**Is the Job Role Amenable to Persons with Disability**	☐ Yes ☒No **If "Yes", specify applicable type of Disability:**
19.	**How Participation of Women will be Encouraged**	No gender sensitization
20.	**Are Greening/ Environment Sustainability Aspects Covered** *(Specify the NOS/Module which covers it)*	☒ Yes ☐ No
21.	**Is Qualification Suitable to be Offered in Schools/Colleges**	Schools ☒Yes ☐No Colleges ☒Yes ☐No
22.	**Name and Contact Details of Submitting / Awarding Body SPOC** *(In case of CS or MS, provide details of both Lead AB & Supporting ABs)*	**Name:** Mr. Arindam Lahiri **Email:** ceo@asdc.org.in **Contact No.:** 011-42599800 **Website:** https://www.asdc.org.in/
23.	**Final Approval Date by NSQC: 06-02-2024**	**24. Validity Duration: 2** Years **25. Next Review Date: 06-02-2026**

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					Weightage (%) *(if applicable)*
						Th.	Pr.	OJT-Man.	OJT-Rec.	Total	Th.	Pr.	Proj.	Viva	Total	
1	Work organization and management	ASC/N9821	Non-core	4.5	1	6	6	18		30	15	25		10	50	5
2	Communication and interpersonal skills	ASC/N9822	Non-core	4.5	1	6	6	18		30	20	30		10	60	5
3	3D digitizing	ASC/N6457	Core	4.5	3	12	12	66		90	30	50		20	100	15
4	Component optimization/structural optimization	ASC/N6453	Core	4.5	4	18	18	84		120	20	30		10	60	25
5	Transfer-to-CAD and optimization	ASC/N6454	Core	4.5	4	18	18	84		120	30	50		20	100	20
6	Preparation and forming	ASC/N6455	Core	4.5	3	18	18	54		90	20	30		15	65	25
7	Finalize and deliver work pieces	ASC/N6456	Core	4.5	1	6	6	18		30	20	30		15	65	5
Duration (in Hours) / Total Marks					**17**	**84**	**84**	**342**	**0**	**510**	**155**	**245**	**0**	**100**	**500**	**100**

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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					Weightage (%) *(if applicable)*
						Th.	Pr.	OJT - Man.	OJT - Rec.	Total	Th.	Pr.	Proj.	Viva	Total	
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					Weightage (%) *(if applicable)*
						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: 70 % *(Every Trainee should score specified minimum aggregate passing percentage at qualification level to successfully clear the assessment.)*

Minimum Pass Percentage – NOS/Module-wise: ____% *(Every Trainee should score specified minimum passing percentage in each mandatory and selected elective NOS/Module to successfully clear the assessment.)*

Section 3: Training Related

1.	**Trainer's Qualification and experience in the relevant sector (in years)** *(as per NCVET guidelines)*	B.E/B.Tech (Mechanical/Automobile/ Electrical/ Electronics) with 4 years of industry and 1 year of training experience in Mechanical/ Automobile/ Electronics/ Instrumentation Or B.E/B.Tech (Mechanical/Automobile/ Electrical/ Electronics) with 5 years of industry experience in Mechanical/ Automobile/ Electronics/ Instrumentation

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		Or Diploma (Mechanical/Automobile/ Electrical/ Electronics) with 3 years of industry and 1 year of training experience in Mechanical/ Automobile/ Electronics/ Instrumentation Or Diploma (Mechanical/Automobile/ Electrical/ Electronics) with 4 years of industry experience in Mechanical/ Automobile/ Electronics/ Instrumentation Or M.E/M.Tech (Mechanical/Automobile/ Electrical/ Electronics) with 2 years of industry and 1 year of training experience in Mechanical/ Automobile/ Electronics/ Instrumentation Or M.E/M.Tech (Mechanical/Automobile/ Electrical/ Electronics) with 3 years of industry experience in Mechanical/ Automobile/ Electronics/ Instrumentation
2.	**Master Trainer's Qualification and experience in the relevant sector (in years)** *(as per NCVET guidelines)*	M.E/M.Tech (Mechanical/Automobile/ Electrical/ Electronics) with 4 years of industry and 1 year of training experience in Mechanical/ Automobile/ Electronics/ Instrumentation
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)*	Any Recognized certification with proven industrial and/or practical experience in the relevant skill (minimum 10 years). OR Have worked as a Jury member/expert in skill competitions and other competitions of similar nature at regional/national levels OR Trained/mentored competitors for IndiaSkills/ WorldSkills competitions (national/ international). **OR** As any change per NCVET guidelines.
2.	**Proctor's Qualification and experience in relevant sector (in years)** *(as per NCVET guidelines)*	As per IndiaSkills/ WorldSkills Guidelines
3.	**Lead Assessor's/Proctor's Qualification and experience in relevant sector (in years)** *(as per NCVET guidelines)*	As per IndiaSkills/ WorldSkills Guidelines

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:**
5.	**Estimated nos. of persons to be trained and employed:** 500
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 *(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)*	
8.	**Supporting Document:** Model Curriculum *(Mandatory – Public view)*	Attached

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9.	**Supporting Document:** Career Progression *(Mandatory - Public view)*	Attached
10.	**Supporting Document:** Occupational Map *(Mandatory)*	Attached
11.	**Supporting Document:** Assessment SOP *(Mandatory)*	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
Professional Theoretical Knowledge/Process	The individual on the job needs to prepare object model of the part/product and manufacturing of parts/product on 3D printing machine.	The individual on the job is responsible for own work and learning. Work in designing environment.	4.5
Professional and Technical Skills/ Expertise/ Professional Knowledge	The individual on the job needs to have factual knowledge of: ● Product designing processes. ● Different types of software used in the heat treatment process and their identification. ● Quality check of product design. ● 3D printing of automotive parts	Factual knowledge of product designing and use of different designing software and 3D printing machines.	4.5
Employment Readiness & Entrepreneurship Skills & Mind-set/Professional Skill	Recall and demonstrate practical skill to routine and repetitive applications: ● Product designing activities. ● Validity checks of product design and manufactured part ● 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: ● Read and interpret symbols given in software. ● Read 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 creating product design on CAD software.	The individual on the job is responsible for own work and fully responsible for other's work and learning.	4.5

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	CAD/ CAM Software's (CATIA, Unigraphics, Fusion 360)	Standard	15 License
2	MS-Office	Standard	15 License
3	3D Printing machine	Fixed Deposition Modelling Machine or Stereo-Lithography Machine or Metal Sintering Machine	1
4	Glue stick	Standard	5
5	Deburring tool / knife and cutting mat	Standard	5
6	Pliers	Standard	5
7	Masking tape	Standard	5
8	Tweezers	Standard	5
9	Sandpaper	Standard	5
10	3D Printing Kit	Standard	6
11	Screwdriver	Standard	6
12	Power Backup	Standard	1
13	Measuring tools	Standard	10
14	Drawing tools	Standard	10
15	Fire Extinguisher	Standard	2
16	Safety Gloves (Rubber)	Standard	30
17	Ear Plugs	Standard	30
18	Safety Shoes	Standard	30
19	Any other as per requirement of World Skills Occupation Standard	Standard	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							
2							
3							
4							
5							
6							
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19							
20							
21							

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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
2023-24	500	350	200	140	50	35
2024-25	1000	700	400	280	100	70
2025-26	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. World Skills
2. India Skills
3. Selection Event related to world skills

Content availability for previous versions of qualifications:

☐ Participant Handbook ☐ Facilitator Guide ☐ Digital Content ☐ Qualification Handbook ☐ Any Other:

Languages in which Content is available:

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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	100:0
2	☒Imparting Soft Skills, Life Skills, and Employability Skills /Mentorship to Learners	• Self-Learning Videos • Broadcasts • Mobile Learning • Curated Digital content	100:0
3	☒Showing Practical Demonstrations to the learners	• Video Content • E-Resource library • AR/ VR/ XR	100:0
4	☒Imparting Practical Hands-on Skills/ Lab Work/ workshop/ shop floor training	• Training tools (tools list attached) • Video Play • Presentations	100:0
5	☒Tutorials/ Assignments/ Drill/ Practice	• Online Question Bank • Mobile Quick test app • MCQ based tests	100:0
6	☒Proctored Monitoring/ Assessment/ Evaluation/ Examinations	• Assessment engine for Essays • Up-loadable file examinations • Mock test sessions	100:0
7	☒On the Job Training (OJT)/ Project Work Internship/ Apprenticeship Training	• Online tests • Offline assessments	100:0

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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
Work organization and management	PC1. Provide and maintain a safe, tidy, and efficient work area	2	3	-	1
	PC2. Promote health and safety legislation, best working practice, and environmental protection	1	2	-	1
	PC3. Apply the internationally recognized standards (ISO) and standards currently used and recognized by industry;	2	3	-	1
	PC4. Use planning and time management during the work;	1	2	-	1
	PC5. Prioritize between work demands on a rational basis	1	2	-	1
	PC6. Independently Interpret technical tasks	1	2	-	1
	PC7. Estimate and plan the time, sequence, and duration of tasks and steps	2	2	-	1
	PC8. Produce work that fully meets the technical specifications and standards;	2	3	-	1
	PC9. Create and apply innovative and creative solutions to problems and challenges of AM	1	2	-	1
	PC10. Maintain a productive appearance and demeanour	1	2	-	1
	PC11. Work efficiently, economically, and data rationally	1	2	-	-
	Total Marks	**15**	**25**	**-**	**10**
Communication and interpersonal skills	PC1. Communicate effectively, using strong inter-personal skills with coworkers, clients, and other related professionals to ensure that developing projects meet requirements	3	5	-	2
	PC2. Read, interpret, and extract technical data and instructions from any available sources	3	5	-	2
	PC3. Use discretion and confidentiality when dealing with clients	3	5	-	2
	PC4. Clarify terms of reference, specifications, and instructions, for the most accurate implementation of requirements	5	5	-	2

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	PC5. Maintain proactive continuous professional development in order to sustain knowledge and skill in new and developing technologies and practices	5	10	-	2
	Total Marks	**20**	**30**	**-**	**10**
3D digitizing	PC1. Perform equipment's adjustment and calibration	1	2	-	1
	PC2. Make decisions regarding the possibility of optical 3D digitizing, for technical reasons: Possible or impossible to perform, The accuracy it is possible to attain for the object, The required conditions for digitizing	2	3	-	2
	PC3. Make decisions regarding pre-process works such as disassembly, washing, and painting	1	2	-	1
	PC4. Perform pre-process actions for applying matting coating	2	4	-	1
	PC5. Apply matting coating	2	4	-	1
	PC6. Apply optical marks	2	4	-	1
	PC7. Fix objects for subsequent digitization	2	4	-	1
	PC8. Perform 3D digitizing for various objects with: different materials, different surface characteristics, different geometrical complexity	2	4	-	2
	PC9. Save results in the required form	2	2	-	1
	PC10. Prepare objects and measuring instruments for measurements	2	3	-	1
	PC11. Calibrate, adjust, and align measuring instruments	2	3	-	1
	PC12. Select correct measuring instruments and devices (styluses, probes, etc.), auxiliary and fixing devices (vices, V-blocks, clamps, etc.), relating to measurement strategy	2	3	-	1
	PC13. Perform measurements using various control and measuring instruments	2	4	-	1
	PC14. Read the indications of measuring instruments	1	1	-	1
	PC15. Identify and estimate the correctness of measurements and the reliability of the data obtained, to minimize associated human factor errors	2	3	-	1
	PC16. Find the required information in specialized reference books, tables, or diagrams	1	1	-	1
	PC17. Carry out routine maintenance of measuring instruments	1	2	-	1
	PC18. Transfer measuring data to CAD-models	1	1	-	1
	Total Marks	**30**	**50**	**-**	**20**

Component optimization/ structural optimization	PC1. Select the right type of optimization for the task in hand.	2	3	-	1
	PC2. Define and apply correct boundary conditions	2	3	-	1
	PC3. Carry out component optimizations by applying the given optimization objectives	2	4	-	2
	PC4. Evaluate the results of the optimizations with reference to quality and compliance with the given input variables	2	4	-	2
	PC5. Convert the optimized components into printable components with adapted geometry	2	5	-	1
	PC6. Design components according to given manufacturing processes and exploit the potential of the process for design	5	5	-	2
	PC7. Optimise designs with regard to the required number of components	5	5	-	1
	Total Marks	**20**	**30**	**-**	**10**
Transfer-to-CAD and optimization	PC1. Create editable CAD models by digitized data (polygonal models)	3	5	-	2
	PC2. Apply mathematics to additive technologies	3	5	-	2
	PC3. Restore missing data of the elements of objects to be redesigned, from available data: Of polygonal models (for example, the gear wheel has only one preserved tooth, the worm has only one turn, or there is only one-third of the flange), Taken from connected parts, Taken from existing objects by manual measuring (for example, the depth of a blind hole)	3	5	-	2
	PC4. Change the geometry of created models according to task	3	5	-	2
	PC5. Consider the features of AM and subsequent finishing processing	3	5	-	2
	PC6. Analyse and optimize the structure of the model in accordance with the terms of reference	3	5	-	2
	PC7. Analyse the deviation of created models from the results of 3D scanning	3	5	-	2
	PC8. Provide lattices' and surfaces' topology, with analysis and optimization according to task	3	5	-	2
	PC9. Apply standards for conventional dimensioning and tolerances, and geometric dimensioning and tolerance appropriate to the ISO standard	3	5	-	2
	PC10. Distinguish between, and mix, polygon meshing and standard brep functionalities in a smart way	3	5	-	2

		30	50	-	20
	Total Marks	**30**	**50**	**-**	**20**
Preparation and forming	PC1. investigate whether the robot and its peripheral equipment are responding to the programs' instructions	3	5	-	2
	PC2. revise, repair or expand existing programs to increase operational efficiency or adapt to new requirements	3	5	-	2
	PC3. repair or replace components as required	4	5	-	2
	PC4. develop Human-Machine-Interface (HMI) applications for the users of the robot system, using HTML or other web technologies	5	5	-	4
	PC5. advise on maintenance regimes to maximize efficiency and minimize disruption.	5	10	-	5
	Total Marks	**20**	**30**	**-**	**15**
Finalize and deliver work pieces	PC1. Clean parts	5	8	-	3
	PC2. Deliver parts to the appropriate locations and/or personnel as required by the organization	7	10	-	3
	PC3. Evaluate and report on factors and outcomes relevant to requirements and expectations	8	12	-	4
	Total Marks	**20**	**30**	**-**	**15**
Grand Total		**155**	**245**		**100**

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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

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- 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
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.

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