QUALIFICATION FILE

Robot Systems Integration

☒ 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**	**Robot Systems Integration**	
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)*	**b. Robot Systems Integration**	
5.	**National Qualification Register (NQR) Code & Version** (*Will be issued after NSQC approval)*	QG-4.5-AU-01819-2024-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 robot system integrator must provide technical solutions to the robotization of all or part of a system by incorporating a multi-articulating arm, together with the associated handling tools or special processes (such as handling, machining, painting, and welding), to increase competitiveness and supporting the ergonomics, health and safety of the users and people around them.	
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))*	14	**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/NIL	
15.	**Progression path after attaining the qualification** *(Please show Professional and Academic progression)*	Automation and Robotics Engineer Level 6 Automotive Robotics and Automation Simulation Engineer Level 6, Automotive Robotics and Automation Manager Level 7	
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: 6-02-2024**	**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					
						Th.	Pr.	OJT - Man.	OJT - Rec.	Total	Th.	Pr.	Proj.	Viva	Total	Weightage (%) *(if applicable)*
1.	Work organization and management	ASC/N8356	Non-core	4.5	1	6	6	18		30	15	25		10	50	5
2.	Communication and interpersonal skills	ASC/N9820	Non-core	4.5	1	6	6	18		30	15	25		10	50	5
3.	Layout and design	ASC/N8357	Core	4.5	2	12	12	36		60	30	50		20	100	15
4.	Installation and connectivity	ASC/N8358	Core	4.5	3	12	12	66		90	30	50		20	100	15
5.	Automation and programming	ASC/N8359	Core	4.5	4	18	18	84		120	30	50		20	100	25
6.	Commissioning, maintenance, and troubleshooting	ASC/N8360	Core	4.5	4	18	18	84		120	15	25		10	50	25
7.	Documentation, briefing, and reporting	ASC/N8361	Core	4.5	2	12	12	36		60	15	25		10	50	10
Duration (in Hours) / Total Marks					**17**	**84**	**84**	**342**	**0**	**510**	**150**	**250**	**0**	**100**	**500**	**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)*	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

		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
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 install, interface and program processes of industrial robot and cobot systems in Automotive manufacturing.	The individual on the job is responsible for own work and learning and in automation environment.	4.5
Professional and Technical Skills/ Expertise/ Professional Knowledge	The individual on the job needs to have factual knowledge of: ● Different types of automation processes. ● Different types of tools used in the automation and robotic process and their identification. ● Basic fundamentals of automation and robotics. ● Basic requirements for robot system ● Selection and setup of end-effector and robot ● Installation, commissioning and integration of robot system ● Robot/Cobot programming and application testing	Factual knowledge of automation and robotics and use of different tools and equipment.	4.5
Employment Readiness & Entrepreneurship **Skills & Mind-set/Professional Skill**	Recall and demonstrate practical skill to routine and repetitive applications: ● Installation, commissioning and integration of robot system ● Robot/Cobot programming and application testing ● 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:	Language to communicate written or oral, with required clarity, skill to basic arithmetic	4.5

	● To prepare plans and designs. ● Read and interpret designs and schedules. ● Read machine drawings/ engineering drawings, sketches.	and algebraic principles, basic understanding of social political and natural environment.	
Responsibility	The individual on the job needs to know their own responsibility of installing and programming of the robot within an organization.	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	Robot	Fanuc/Kuka or any other Industrial Robot	1
2	Controller	Fanuc/Kuka or any other Industrial Robot	1
3	Teach Pendant	Fanuc/Kuka or any other Industrial Robot	1
4	Schunk EGP40 Electric Gripper	Standard	1
5	iRVision Camera	Standard	1
6	Laptop with pre-installed software: Roboguide/ Sharepoint designer/Office etc.	Standard	1
7	FANUC Education Cell, modified to support a Competition-specific Test Project	Standard	1
8	Tool Trolley - containing all necessary Tools and Test project equipment including storage of Competitors PC	Standard	1
9	PPE	Standard	30
10	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							
7							
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9							
10							
11							
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14							
15							
16							
17							
18							
19							
20							
21							

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.
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	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

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. prepare and maintain a safe, tidy, and efficient work area	2	3	-	1
	PC2. prepare self for the tasks in hand, including full regard to health, safety, and environment	2	3	-	2
	PC3. schedule work to maximize efficiency and minimize disruption	2	3	-	1
	PC4. select and use all equipment and materials safely and in compliance with manufacturers' instructions	2	4	-	2
	PC5. apply or exceed the health and safety standards applying to the environment, equipment, and materials	2	3	-	1
	PC6. restore the work area to an appropriate state and condition	1	3	-	1
	PC7. contribute to team performance both broadly and specifically	2	3	-	1
	PC8. give and take feedback and support.	2	3	-	1
	Total Marks	**15**	**25**	**-**	**10**
Communication and interpersonal skills	PC1. interact with a range of business and industry, modelling professional conduct at all times	2	3	-	1
	PC2. communicate by oral, written, and electronic means to ensure clarity, effectiveness, and efficiency	1	3	-	2
	PC3. use a standard range of communication technologies	2	3	-	1
	PC4. discuss complex technical principles and applications with others	2	3	-	1
	PC5. use active listening and questioning techniques	2	3	-	1
	PC6. read, interpret, and extract technical data and instructions from documentation in any available format	1	2	-	1
	PC7. complete reports and respond to issues and questions arising	2	3	-	1
	PC8. respond to clients' and personnel's needs face to face and indirectly	2	3	-	1
	PC9. gather information and prepare documentation as required by the client and other individuals and groups.	1	2	-	1
	Total Marks	**15**	**25**	**-**	**10**

Layout and design	PC1. acquire and check instructions and guidance for given assignments	3	5	-	2
	PC2. identify and resolve areas of uncertainty within the parameters of the brief	3	5	-	2
	PC3. carry out initial systems design for given industrial applications	3	5	-	2
	PC4. inspect installation sites or use alternative methods to test the applicability of initial systems design	3	5	-	2
	PC5. optimize systems designs within the parameters of the given industrial applications	3	5	-	2
	PC6. incorporate the dimensioning of electrical and pneumatic systems	3	5	-	2
	PC7. determine the role of pneumatic engineering in the choice and connection of controls and activators	3	5	-	2
	PC8. carry out systems analyses for risk assessment	3	5	-	2
	PC9. itemize the requirements and implications of installation and integration in relation to: robots, ancillary equipment, and tools, human resources and time, estimated impacts on production during installation, estimated impacts on production following installation, operating parameters and risk management	3	5	-	2
	PC10. present proposals for consideration and approval, and adjust as required.	3	5	-	2
	Total Marks	**30**	**50**	**-**	**20**
Installation and connectivity	PC1. check that all items have been delivered according to specification, and follow up as required	2	4	-	2
	PC2. organize the safe storage of all items, together with arrangements for their checking in and out	2	3	-	1
	PC3. check that the pre-manufactured robot has been delivered ready to run, and follow up as required	3	5	-	2
	PC4. connect robot system components according to instructions and documentation	3	5	-	2
	PC5. assemble, position, and fix robotic tools and equipment according to instructions and documentation	3	5	-	2
	PC6. align, fit, or assemble components, using hand tools, power tools, fixtures, or templates, according to specification	3	5	-	2
	PC7. liaise with specialists for the correct electrical, pneumatic, and mechanical installation of robots and peripheral equipment	3	5	-	2
	PC8. connect Input/Output (I/O) control signals between robot and peripheral equipment, either low voltage (24V) or Ethernet/Bus systems.	3	5	-	2
	PC9. perform tests during the installation process to ensure functionality	3	5	-	2

	PC10. identify installation issues, consider alternative solutions, and implement selected solution(s) to resolve the issues	3	5	-	2
	PC11. respect and take account of the receiving sites' requirements and characteristics, within the bounds of safe working, active risk management, and professionalism.	2	3	-	1
	Total Marks	**30**	**50**	**-**	**20**
Automation and programming	PC1. consult with client/personnel to clarify program intent	2	3	-	1
	PC2. develop diagrams or flow charts of systems operations	2	4	-	2
	PC3. write, analyse, review and rewrite programs, using flow charts and diagrams	3	5	-	2
	PC4. create application software programs that are easy to document, understand and maintain	3	5	-	2
	PC5. conduct trial runs of programs and software applications to ensure they will produce the desired robot and cell performance	3	5	-	2
	PC6. write, update, and maintain computer programs or software packages to handle specific jobs	3	5	-	2
	PC7. optimize robot motion performance and I/O handling to minimize cycle time/maximize throughput while retaining reliable operation	3	5	-	2
	PC8. correct errors by making appropriate changes and rechecking the program to ensure that the desired results are produced	3	5	-	2
	PC9. consult with other personnel to identify problems and suggest changes.	3	5	-	2
	PC10. implement new additional software and hardware options based on standard functionality.	3	5	-	2
	PC11. Integrate simple and advanced sensors	2	3	-	1
	Total Marks	**30**	**50**	**-**	**20**
Commissioning, maintenance, and troubleshooting	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	3	5	-	2
	PC4. develop Human-Machine-Interface (HMI) applications for the users of the robot system, using HTML or other web technologies	3	5	-	2
	PC5. advise on maintenance regimes to maximize efficiency and minimize disruption.	3	5	-	2
	Total Marks	**15**	**25**	**-**	**10**

Documentation, briefing, and reporting	PC1. liaise with other personnel or departments for project integration	2	3	-	1
	PC2. document design and development procedures according to requirements	2	3	-	2
	PC3. compile and write documentation of program development and subsequent revisions, inserting comments in the coded instructions so that others can understand the computer programs	2	3	-	1
	PC4. present and provide test results from the commissioning process	2	4	-	2
	PC5. design or contribute to instructions and guidance to guide end users, with an emphasis on clarity and ease of use	2	3	-	1
	PC6. provide the end user with a set of documentation in appropriate formats, including all necessary robot data such as: operating instructions, application specific fault messages - I/O Listings, user adjustable parameter (register) descriptions	1	3	-	1
	PC7. review each part of the process of design, fabrication and assembly, and operation, against established criteria, including accuracy, consistency, time, and cost	2	3	-	1
	PC8. contribute to individual and collective quality and contract review, responding to questions and challenges appropriately.	2	3	-	1
	Total Marks	**15**	**25**	**-**	**10**
Grand Total		**150**	**250**		**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
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