



QUALIFICATION FILE

Machine Operator & Programmer – CNC Lathe

☒ 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

Submitted By:

Central Institute of Petrochemicals Engineering & Technology (CIPET)
Department of Chemicals & Petrochemicals, Ministry of Chemicals & Fertilizers, Govt. of India
CIPET Head office, T.V.K Industrial Estate, Guindy, Chennai – 600 032.

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Section 1: Basic Details

1.	Qualification Name	Machine Operator & Programmer – CNC Lathe (MOP-CNC-L)																						
2.	Sector/s	Chemicals & Petrochemicals (CPC)																						
3.	Type of Qualification: ☐ New ☒ Revised ☐ Has Electives/Options ☐ OEM	NQR Code & version of existing/previous qualification: <i>(change to previous, once approved)</i> 2021/CP/CIPET/04630			Qualification Name of existing/previous version: Machine Operator & Programmer – CNC Lathe																			
4.	a. OEM Name b. Qualification Name <i>(Wherever applicable)</i>	Not Applicable.																						
5.	National Qualification Register (NQR) Code & Version <i>(Will be issued after NSQC approval)</i>	QG-04-CP-04126-2025-V2-CIPET			6. NCrf/NSQF Level: Level 4																			
7.	Award (Certificate/Diploma/Advance Diploma/Any Other) <i>(Wherever applicable specify multiple entry/exits also & provide details in annexure)</i>	Certificate																						
8.	Brief Description of the Qualification	The Machine operator & Programmer handle the CNC Lathe Machine, able to generate the program & operate the machine to make precision jobs.																						
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>12th or equivalent</td> <td>-</td> </tr> <tr> <td>2.</td> <td>10th or equivalent</td> <td>2 years of (NTC/ NAC)</td> </tr> <tr> <td>3.</td> <td>11th or equivalent</td> <td>1.5 years relevant experience</td> </tr> <tr> <td>4.</td> <td>10th or equivalent</td> <td>3 years relevant experience</td> </tr> <tr> <td>5.</td> <td>Previous relevant NSQF Level 3.5</td> <td>1.5 years relevant experience</td> </tr> </tbody> </table>					S. No.	Academic/Skill Qualification (with Specialization - if applicable)	Required Experience (with Specialization - if applicable)	1.	12 th or equivalent	-	2.	10 th or equivalent	2 years of (NTC/ NAC)	3.	11 th or equivalent	1.5 years relevant experience	4.	10 th or equivalent	3 years relevant experience	5.	Previous relevant NSQF Level 3.5	1.5 years relevant experience
S. No.	Academic/Skill Qualification (with Specialization - if applicable)	Required Experience (with Specialization - if applicable)																						
1.	12 th or equivalent	-																						
2.	10 th or equivalent	2 years of (NTC/ NAC)																						
3.	11 th or equivalent	1.5 years relevant experience																						
4.	10 th or equivalent	3 years relevant experience																						
5.	Previous relevant NSQF Level 3.5	1.5 years relevant experience																						
10.	Credits Assigned to this Qualification, Subject to Assessment <i>(as per National Credit Framework (NCrf))</i>	22			11. Common Cost Norm Category (I/II/III) <i>(wherever applicable):</i> I																			
12.	Any Licensing requirements for Undertaking Training on This Qualification <i>(wherever applicable)</i>	-																						
13.	Training Duration by Modes of Training Delivery <i>(Specify Total Duration as per selected training delivery modes and as per requirement of the qualification)</i>	☒ 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>210</td> <td>390</td> <td>60</td> <td>-</td> <td>660</td> </tr> <tr> <td>Online</td> <td>-</td> <td>-</td> <td>-</td> <td>-</td> <td>-</td> </tr> </tbody> </table> <i>(Refer Blended Learning Annexure for details)</i>					Training Delivery Modes	Theory (Hours)	Practical (Hours)	OJT Mandatory (Hours)	OJT Recommended (Hours)	Total (Hours)	Classroom (offline)	210	390	60	-	660	Online	-	-	-	-	-
Training Delivery Modes	Theory (Hours)	Practical (Hours)	OJT Mandatory (Hours)	OJT Recommended (Hours)	Total (Hours)																			
Classroom (offline)	210	390	60	-	660																			
Online	-	-	-	-	-																			

14.	Aligned to NCO/ISCO Code/s(if no code is available mention the same)	NCO-2015/7223.6001	
15.	Progression path after attaining the qualification (Please show Professional and Academic progression)	Shift In-charge/ Supervisor in Tool Room, Tool & Die Making, Mould Manufacturing, Capital Goods Manufacturing Industry	
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	During selection of candidates for the training programme, Female candidates are given preference	
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: Arunav Banerjee Email: cipethovtc@cipet.gov.in Website: https://www.cipet.gov.in/ Contact No.: 9402183512	
23.	Final Approval Date by NSQC: 26.05.2025	24. Validity Duration: 3 Years	25. Next Review Date: 25.05.2028

Section 2: Module Summary

NOS/s of Qualifications

(In exceptional cases these could be described as components)

Mandatory NOS/s:

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

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

S. No	NOS/Module Name	NOS/Module Code & Version (if applicable)	Core/ Non-Core	NCrF/ 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.	Basic Engineering	CPC/N 7233 & V2.0	Core	4	2	20	40	-	-	60	30	50	-	-	80	-
2.	Metal Cutting & Cutting Tools	CPC/N 7233 & V2.0	Core	4	1	10	20	-	-	30	20	20	-	-	40	-
3.	Conventional Lathe Machines	CPC/N 7011 & V2.0	Core	4	3	20	70	-	-	90	30	60	-	-	90	-
4.	CNC Lathe Machine Programming	CAO/N 7021 & V2.0	Core	4	5	40	110	-	-	150	30	80	-	-	110	-
5.	CNC Lathe Machine operation	CPC/N 7012 & V2.0	Core	4	3	20	70	-	-	90	30	90	-	-	120	-
6.	Work effectively with Others	CPC/ N 7014 & V2.0	Core	4	1	10	20	-	-	30	10	20	-	-	30	-
7.	Basics of computer and data entry	CPC/ N 0219 & V2.0	Core	4	1	10	20	-	-	30	10	20	-	-	30	-
8.	Soft Skills	CPC/ N 7025 & V2.0	Non-Core	4	1	10	20	-	-	30	10	20	-	-	30	-
9.	Maintain basic health and safety practices at the Workplace,5S	CPC/ N 0411 & V2.0	Core	4	1	10	20	-	-	30	10	20	-	-	30	-
10.	Employability Skills	DGT/VSQ/N010 2 & V1.0	Non-Core	4	2	60	-	-	-	60	20	20	-	-	40	-
11.	On the Job Training (OJT)	N/A	Core	4	2	-	-	60	-	60	-	-	-	-	-	-
Duration (in Hours) / Total Marks			-	-	22	210	390	60	-	660	200	400	-	-	600	-

Elective NOS/s:

S. No	NOS/Module Name	NOS/Module Code & Version (if applicable)	Core/Non-Core	NCrF/NS QF 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/NS QF 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 PercentagePlease specify **any one** of the following:**Minimum Pass Percentage –Aggregate at qualification level:**

50% for theory and 70% for practical (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) <i>(as per NCVET guidelines)</i>	Diploma / Post Diploma / Under Graduate (Engineering with minimum 3 years experience).
2.	Master Trainer's Qualification and experience in the relevant sector (in years) <i>(as per NCVET guidelines)</i>	UG / PG (Engineering) with minimum 5 years experience.
3.	Tools and Equipment Required for Training	☒ Yes ☐ No <i>(If "Yes", details to be provided in Annexure)</i>
4.	In Case of Revised Qualification, Details of Any Upskilling Required for Trainer	Nil

Section 4: Assessment Related

1.	Assessor's Qualification and experience in relevant sector (in years) <i>(as per NCVET guidelines)</i>	Degree in Engineering with minimum 4 years experience.
2.	Proctor's Qualification and experience in relevant sector (in years) <i>(as per NCVET guidelines)</i>	UG / PG (Engineering) in with minimum 6 years experience.
3.	Lead Assessor's/Proctor's Qualification and experience in relevant sector (in years) <i>(as per NCVET guidelines)</i>	UG / PG (Engineering) in with minimum 7 years experience.
4.	Assessment Mode <i>(Specify the assessment mode)</i>	Physical Assessment
5.	Tools and Equipment Required for Assessment	☒ Same as for training ☐ Yes ☐ No <i>(details to be provided in Annexure-if it is different for Assessment)</i>

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 2years) (Yes/No): No
3.	Government /Industry initiatives/ requirement (Yes/No): Yes
4.	Number of Industry validation provided: 05
5.	Estimated nos. of persons to be trained and employed: 1500 Candidates
6.	Evidence of Concurrence/Consultation with Line Ministry/State Departments: Yes If "No", why:

Section 6: Annexure & Supporting Documents Check List

Specify Annexure Name / Supporting document file name

1.	Annexure: NCrf/NSQF level justification based on NCrf level/NSQF descriptors (Mandatory)	- Entry Qualification for this course is 12th or equivalent or 10th or equivalent with 2 years of (NTC/ NAC) or 11th or equivalent with 1.5 years relevant experience or 10th or equivalent with 3 years relevant experience or Previous relevant NSQF Level 3.5 with 1.5 years relevant experience - After successful completion of training, with two years of experience Trainee / Candidate is eligible for Shift In charge/ Supervisor in Manufacturing Industry (Level 4). - Job description: The Machine operator & Programmer handle the CNC Lathe Machine, able to generate the program & operate the machine to make precision jobs.
2.	Annexure: List of tools and equipment relevant for qualification (Mandatory, except in case of online course)	Equipment Required: Class Room equipments: LCD Projector, Screen, Desktop/Laptop, charts, Black / White board & other ancillary items. Measuring equipments: Steel Ruler, Micrometer, Vernier Caliper, Radius gauge, Feeler gauge, Height gauge, Thread gauge, Steel measuring tape, Weighing Balance, etc. Hand Tools: Hammer, screw driver set with Multiple heads, Allen key hexagonal, Twist drill bits, Various Files & fitting items, Hacksaw adjustable, Spanner set double side, Adjustable spanner, Calculator, wrenches, pliers, cutters, striking tools, struck or hammered tools, vises, clamps, snips, saws, drills, emery papers and knives. Personal Protective equipments: Safety Goggles, Rubber Gloves, Asbestos gloves, Fire Extinguisher, Apron, Helmet, Safety goggles, First Aid kit. Raw material: Mild Steel, Stainless Steel, alloy steels, Aluminum & alloys, Brass etc. Machinery & Equipment: Lathe Machine with all attachments, Pedestal Grinder, Tool & Cutter Grinder, Air Compressor, Air Drier, CNC Lathe Machine with all accessories, CNC Simulator. Software & Computers: Desktop/Work Station, CNC CAM software with post processor etc.

		Machine Accessories: 3-Jaw, 4-Jaw Chuck, Cutting Tools (Single Point) Both HSS & Solid Carbide Insert types.
3.	Annexure: Detailed Assessment Criteria <i>(Mandatory)</i>	1. Criteria for assessment for each Qualification Document are being created by CIPET. 2. Each Assessable outcome (AO) will be assigned marks proportional to its importance in Learning Outcome and few performance criteria may be allotted marks in combine. 3. Each Learning outcome will be assessed both for theoretical knowledge and practical which is being proportionately demonstrated in the table below. 4. The assessment for the theory part will be based on knowledge bank of questions created by CIPET which will contain multiple choice theory questions and Practical question database with mark allotment criteria. 5. To pass the Qualification Document, every trainee should score a minimum of 50 % in Functional and all Generic Learning Outcome's. 6. In case of successfully passing only certain number of Learning Outcome's, the trainee is eligible to take Subsequent assessment on the balance Learning Outcome's to pass the Qualification Document.
4.	Annexure: Assessment Strategy <i>(Mandatory)</i>	Assessment strategy: - Assessment criteria for Qualification Document have been developed. Each Learning outcome has separate marks for Theory and Practical Skills. - The Training Assessment Wing will have assessors who will not be associated with training activities and will be provided training on the said work. Thus it will ensure that the assessment carried out is fair and consistent. - Set of question bank developed to assess the theoretical and practical knowledge. To ensure the quality, each trainees get the unique set of question. - Student has to score minimum marks separately for theoretical and practical skill and overall percentage should also be 50% for theory and 70% for practical. - Empanelment of subject matter expert as assessor to assess trainee specifically on practical skills. - Assessments are preferably conducted by written examination papers in English/ regional languages according to the requirement. - It has been ensure that TP/trainer should not be present during assessment.
5.	Annexure: Blended Learning <i>(Mandatory, in case selected Mode of delivery is "Blended Learning")</i>	-

6.	Annexure: Multiple Entry-Exit Details (<i>Mandatory, in case qualification has multiple Entry-Exit</i>)	-
7.	Annexure: Acronym and Glossary (<i>Optional</i>)	-
8.	Supporting Document: Model Curriculum (<i>Mandatory – Public view</i>)	<i>Enclosed as Annexure-I</i>
9.	Supporting Document: Career Progression (<i>Mandatory - Public view</i>)	<i>Enclosed as Annexure-II</i>
10.	Supporting Document: Occupational Map (<i>Mandatory</i>)	<i>Enclosed as Annexure-III</i>
11.	Supporting Document: Assessment SOP (<i>Mandatory</i>)	<i>Enclosed as Annexure-IV</i>
12.	Any other document you wish to submit: Industry validation	<i>Enclosed as Annexure-V</i>

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	Machine Operator & Programmer – CNC Lathe Operator is expected to ensure housekeeping and safety in the workshop area and select the correct tools, process, parameter etc he/she has to- ➤ To ensure availability of consumables and materials for production in sufficient quantity as per production plan/operators instructions. ➤ Clearly understanding the does and don'ts of the manufacturing process as defined in SOPs/ Work Instructions or defined by operator. ➤ Check availability of the personal protective equipment's (PPE) like Gloves, Goggles etc. ➤ Understand the production procedure and process to be adopted for completing the work order from the operator by referring the Work Instruction document/ SOP manual. ➤ Ensure that the required material, tools, consumables & inspection instruments are procured from the store before starting the process. ➤ Understand the raw material, process required for executing the required operation and ensure that the same is available for operation. ➤ If raw material, tools & consumables are not available collect/procure the same. ➤ Prepare the Job plan/sequence of operations for executing the job. ➤ Add/fix/position the tools & raw material in the machine by using appropriate fixture. ➤ Prepare the proper program & test run the program. After successful test run execute the program to prepare the job. ➤ Ensure cleaning of the machine table, finished job/work piece, apparatus for any chips, metal pieces etc. so as to prevent any accident. ➤ Confirm self - understanding to the in charge once the query is resolved so that all doubts & queries can be resolved before the actual process execution.	Machine Operator & Programmer – CNC Lathe Operator job requires limited range of activities which are routine and predictable like availability of consumables, safety PPE, raw material used, basic machine parts and its functions etc. He has to collect the Raw material, tools, program, fixtures & consumables from storage area. He should understand the program, raw material & tools required for executing the activity. Machine Operator & Programmer – CNC Lathe is responsible for the work in familiar, predictable, routine which justifies the pegging of Level 4.	4

Professional and Technical Skills/ Expertise/ Professional Knowledge	The user/individual on the job needs to know and understand: ➤ General Principle of programming, machine operation, process knowledge, machine start-up & shutdown procedures, work piece loading and unloading procedure. ➤ Types of different tools, programs, materials, fixtures, work holding devices, fixtures and tool holders. ➤ Different types of tools, operations & machinery to process the various jobs. ➤ Identification of various dimensional & other defects in products produced in the CNC lathe machine.	Product Manufacturing CNC lathe programmer & Operator person should understand and know basic facts, process, principle of etc., CNC lathe machine Operator & programmer is having the factual knowledge of the required field which justifies the pegging of Level 4.	4
Employment Readiness & Entrepreneurship Skills & Mind-set/Professional Skill	The user/individual on the job needs to know and understand: ➤ Types of steel materials and the alloys & cutting tools to be used in CNC machine and specifications of the machine being operated. ➤ Different types of tool holders and work holding devices to process the job. ➤ Various types of coolants and their properties. ➤ How to perform CNC machine safety check ➤ Hazards and safety aspects involved in production and usage of relevant PPEs ➤ Safety procedures to be adopted to complete machine job as per specifications ➤ Detect problems in day to day tasks: Support operator in using specific problem solving techniques and detailing out the problems ➤ Discuss possible solution with the operator for problem solving. The user/individual on the job needs to know and understand how to: ➤ Plan and organize the work order and jobs received from the internal customers/ operator. ➤ Organize all process/ equipment manuals so that sorting out The user/individual on the job needs to know and understand how to: ➤ Follow instructions and work on areas of improvement identified ➤ Complete the assigned tasks with minimum supervision ➤ Complete the job defined by the operator within the timelines and quality. The user/individual on the job needs to know and understand how to: ➤ Use common sense and make judgments during day to day basis ➤ Use basic reasoning skills to identify and resolve basic problems ➤ Use intuition to detect any potential problems which could arise during operations.	Machine Operator & Programmer – CNC Lathe – should recall general principles of programming, machine setting, job setting & machine operation, Types of materials and alloys & cutting tools used. Thus he should demonstrate practical skill, routine and repetitive in programming and machine operation. Machine Operator & Programmer – CNC Lathe is demonstrate and recall the practical skills, doing the routine and repetitive work using appropriate methods & tools with quality which justifies the pegging of Level 4.	4

Broad Learning Outcomes/Core Skill	The user/ individual on the job needs to know and understand how to: ➤ How to be able to read warnings, instructions and other text material on product labels, components etc., ➤ How to enter into the history card details of the fault identified in the machined Product read equipment manuals and process documents to understand the equipment & processes. ➤ Read instructions especially safety instructions especially symbol while using the equipment in the plant area logs. The user/individual on the job needs to know and understand how to: ➤ Discuss task lists, schedules, and work-loads with co-workers ➤ Question internal customers/ Shop floor operator appropriately in order to understand the nature of the problem and make a dialog ➤ Avoid using jargon, slang or acronyms when communicating with a operator /fellow subordinates etc. Unless it is required.	Machine Operator & Programmer – CNC Lathe should be able to read warnings, instructions and other text material on product labels, components etc., with minimum required clarity, should have skill of basic arithmetic, like raw material weights additions etc. Machine Operator & Programmer – CNC Lathe has the ability to communicate written and oral with required clarity, skill to basic arithmetic and understanding of working environment which justifies the pegging of Level 4.	4
Responsibility	Machine Operator & Programmer – CNC Lathe Operator is majorly responsible for his own job and self-learning. He/she create CNC program Set up basic machine controls job setting and operate machine and process in order to manufacture good quality product as per approved drawing.	Machine Operator & Programmer – CNC Lathe Operator is majorly responsible for his own job and self-learning for programming & operation of CNC lathe which justifies the pegging of level 4.	4

Annexure: Tools and Equipment (Lab Set-Up)

List of Tools and Equipment

Batch Size: Maximum 40 candidates per batch

S. No.	Tool / Equipment Name	Specification	Quantity for specified Batch size
1.	Measuring equipments	Steel Ruler, Micrometer, Vernier Caliper, Radius gauge, Feeler gauge, Height gauge, Thread gauge, Steel measuring tape, Weighing Balance, etc.	As per requirement
2.	Hand Tools	Hammer, screw driver set with Multiple heads, Allen key hexagonal, Twist drill bits, Various Files & fitting items, Hacksaw adjustable, Spanner set double side, Adjustable spanner, Calculator, wrenches, pliers, cutters, striking tools, struck or hammered tools, vises, clamps, snips, saws, drills, emery papers and knives	As per requirement
3.	Personal Protective equipments	Safety Goggles, Rubber Gloves, Asbestos gloves, Fire Extinguisher, Apron, Helmet, Safety goggles, First Aid kit.	As per requirement
4.	Raw material	Mild Steel, Stainless Steel, alloy steels, Aluminum & alloys, Brass etc	As per requirement
5.	Machinery & Equipment	Lathe Machine with all attachments, Pedestal Grinder, Tool & Cutter Grinder, Air Compressor, Air Drier, CNC Lathe Machine with all accessories, CNC Simulator.	As per requirement
6.	Software & Computers	Desktop/Work Station, CNC CAM software with post processor etc.	As per requirement
7.	Machine Accessories	3-Jaw, 4-Jaw Chuck, Cutting Tools (Single Point) Both HSS & Solid Carbide Insert types.	

Classroom Aids

The aids required to conduct sessions in the classroom are:

1. LCD Projector/Screen,
2. Computer/Laptop,
3. Charts/Drawings,
4. White board & Marker pen.

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.	Glanze Engineering Co. Pvt. Ltd.,	Mr. Ajay Kolhe	Production Incharge	G-36, MIDC Chikalthana, Aurangabad – 431 210	8554049994	Ajayglanze.com	-
2.	Hindustan Pipes & Fittings Pvt. Ltd.	Mr. Jitendra Kumar Singhal	Director	E216 & E216A, RIICO Industrial Area, sarna Dungar, Phase-1, Jhotwara Extension, Jaipur – 302 012	9649425333	Hindustanpipe2009@gmail.com	-
3.	Kadambari Industries	Mr. Durgesh Sharma	Manager - QA	Plot No.B-3, Shri Tirupati Udhog Vihar, Near RIICO Industrial Area, Kaladera, Jaipur – 303 801	8278649893	Kdindustries2018@gmail.com	-
4.	Microturners	Mr. Ashwani Kumar	Plant Head	Unit-2, Village Jharmajri, Tehsil Baddi, Solan – 173 205, Himachal Pradesh	9218666023	ashwani.kumar@microturnersmail.com	-
5.	MS Industries	Mr. S Umapathi	Proprietor	No. 3/2, Agathiar Street, Ambal Nagar Manin Road, Ekkattuthangal, Chennai – 600032, Tamil Nadu	8610601614	Msumapathi88@gmail.com	-

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	400	50	37	-	-
2026-27	550	450	55	40	-	-
2027-28	600	500	60	55	-	-

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
1.0	2021-22	276	276	276	223	18	18	18	14	-	-	-	-
1.0	2022-23	462	462	462	479	33	33	33	26	-	-	-	-
1.0	2023-24	417	417	417	334	25	25	25	20	-	-	-	-

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. CSR Scheme
2. PM-DAKSH Scheme
3. NSSH Scheme

Content availability for previous versions of qualifications:

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

Languages in which Content is available: English & Hindi

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		
2	☐ Imparting Soft Skills, Life Skills, and Employability Skills /Mentorship to Learners		
3	☐ Showing Practical Demonstrations to the learners		
4	☐ Imparting Practical Hands-on Skills/ Lab Work/ workshop/ shop floor training		
5	☐ Tutorials/ Assignments/ Drill/ Practice		
6	☐ Proctored Monitoring/ Assessment/ Evaluation/ Examinations		
7	☐ On the Job Training (OJT)/ Project Work Internship/ Apprenticeship Training		

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
1. CPC/N7233: Basic Engineering	A01. Understanding of basics of bench working.	1	3		
	A02. Identify various hand tools.	1	4		
	A03. Importance of filling & fitting.	1	3		
	A04. Understanding various tools used for filling & fitting operation.	2	2		
	A05. Follow the Procedure of filling.	2	3		
	A06. Able to make various fittings like V fit, square fit, dovetail fit.	3	4		
	A07. Able to operate the measuring instruments.	2	4		
	A08. Measurement of outside diameter & inside diameter of shaft without any error.	2	4		
	A09. Able to measure pitch of threads and taper angles.	2	4		
	A10. Do simple calculations to find the weight, angles & tapers.	3	4		
	A11. Understanding of basics of drawing.	2	3		
	A12. Able to make isometric and orthographic projections.	3	3		
	A13. Understanding drawings for preparation of process planning.	2	4		
	A14. Understanding and interpretation of geometric tolerances.	2	2		
	A15. Able to make & measure the job precisely.	2	3		
	Total Marks	30	50		
2.CPC/N7233: Metal Cutting & Cutting Tools	A01. Discuss about the type of materials/metals being used in the industry & for making jobs.	2	3		
	A02. Refer all tool material to understand properties and able to select the tool according to the job requirements.	3	2		
	A03. Able to understand various cutting mechanisms of various machines like Lathe, milling, drilling, Grinding.	2	2		
	A04. Selecting proper tool according to the job requirement.	2	2		
	A05. Ensure that the proper tool is available before initiating the job.	2	3		
	A06. Understanding of various cutting fluids used in manufacturing.	3	3		
	A07. Able to understand the application of various tools.	3	2		
	A08. Understanding of various cutting parameters and selecting proper parameters for the job.	3	3		
	Total Marks	20	20		
	A01. Understand and comply with safety, environmental & other relevant regulations and guidelines.	1	2		
	A02. Wear personal protective equipment (PPE) like safety glasses, apron, no loose cloths/ hair, safety shoes while performing lathe operations regulations while performing CNC turning operations.	1	2		
	A03. Ensure work area is clean and safe	1	1		
	A04.Ensure that machine safety guards are in place and are in correctly working condition.	1	1		
	A05.Ensure that all tools, equipment are in safe and usable conditions.	1	1		
	A06. Ensure availability of job specification i.e. approved drawings, sketches, instructions from the	1	1		

3. CPC/N7011: Conventional Lathe Machines	supervisor, job instruction sheet/ job card.				
	A07. Read and understand the Job requirements from the job specifications and attention shall be given to the geometric tolerances.	1	1		
	A08. Check the work piece material for the dimensions and ensure that it is free from foreign objects, dirt or other contamination and is within the required size.	1	1		
	A09. Plan to perform the turning or other lathe operations and the sequence of operations as per required job specifications.	1	2		
	A10. Obtain all the appropriate tools and measuring instruments/ gauges required for the job.	1	2		
	A11. Check the lathe machine for its functioning and ensure that it is ready for operation.	1	3		
	A12. Prepare the lathe machine for the operations by mounting and setting the required work holding devices and cutting tools.	1	3		
	A13. Clarify any doubt, if any and see necessary instruction /training on the operation of the machine whenever required.	1	3		
	A14. Hold the work piece securely and correctly, without distortion.	1	3		
	A15. Adjust the machine settings as per job requirement to maintain desired accuracy.	1	3		
	A16. Adjust and set the speed and feed of the lathe machine to achieve the job specifications.	1	3		
	A17. Operate the machine tool controls safely and correctly, in line with operational procedures both in manual and power modes.	1	2		
	A18. Stop the lathe machine, both in normal and emergency situations correctly by following the right procedure and should be able to restart the machine after and emergency	1	2		
	A19. Should be able to use the lathe machine accessories and attachments such as steady and follower rests, tail stock, taper turning attachments, profile attachments etc.	1	2		
	A20. Perform various lathe operations using different tools to produce components with various features.	1	2		
	A21. Produce components as per required quality standards and free from burrs & sharp edges	1	2		
	A22. Shall achieve given production targets.	1	2		
	A23. Shall be able to apply roughing and finishing cuts, considering the effect on tool life, surface finish and dimensional accuracy.	1	2		
	A24. Shall be able to use coolants/ cutting fluids for different combinations of work piece and tool as per different locations.	1	2		
	A25. Shall be able to observe and report any difficulties/ discrepancies that may arise during the machine operation and carry out the corrective actions as per instructions.	1	2		
	A26. Correctly shutting down the machine on completion of the machining operations, removing and disposing of the chips/ waste and critical parameters different locations.	1	2		
	A27. Use of measuring instruments/ gauges to check the critical parameters.	1	2		
	A28. Shall be able to carry out the corrective action, in the case of deviation from the required specifications.	1	2		
	A29. Report the problem to the supervisor, if it cannot be resolved.	1	2		
	A30. Seek guidance from the supervisor/ specialist of the problem is outside his/her area of competence.	1	2		

	Total Marks	30	60		
4. CPC/N7021: CNC Lathe Machine Programming	A01. Comply with health and safety, environmental and other relevant regulations at work.	0.5	1		
	A02. Adhere to procedures and guidelines for personal protective equipment (PPE) and other relevant safety regulations while programming CNC Lathe machines.	0.5	1		
	A03. Work following laid down procedures and instructions.	0.5	1		
	A04. Ensure that machine guards are in place and are correctly adjusted.	0.5	1		
	A05. Read and understand safety instructions, warning signs on the machine	0.5	2		
	A06. Ensure work area is clean and safe from hazards.	0.5	1		
	A07. Ensure that all tools, equipment, power tool cables, extension leads are in a safe and usable condition.	0.5	1		
	A08. Ensure availability of job specification i.e. approved drawings, sketches, instructions from the supervisor, job instruction sheet/ job card.	0.5	1		
	A09. Read and establish job requirements from the job specification document accurately.	0.5	1		
	A10. Follow job instructions, assembly drawings and laid down procedures at all times.	0.5	1		
	A11. Report and rectify incorrect and inconsistent information in job specification documents as per organization procedures.	0.5	1		
	A12. Use and extract information from reference charts, tables, graphs and standards.	0.5	1		
	A13. Prepare the work area as per procedure or operational specification.	0.5	1		
	A14. Conduct a preliminary check of the readiness of the program so that the CNC machine operates correctly.	0.5	1		
	A15. Determine what operational objectives and targets need to be achieved and how best the machine needs to be programmed to achieve this.	0.5	1		
	A16. Extract and use information from engineering drawings and related specifications in relation to work undertaken.	0.5	1		
	A17. Identify tool requirements from tooling layout and assess their suitability.	0.5	1		
	A18. Identify suitable work holding or fix turing device as per the job requirement.	0.5	1		
	A19. Ensure the correct and latest part-program is uploaded onto the CNC system.	0.5	1		
	A20. Make CNC program with commands for tool motions, spindle motions, misc. functions & tool change, in syntax corresponding to machine and control system on which the component will be machined.	0.5	1		
	A21. Various ways to make CNC program are by writing it on paper or in computer's text editor, or using CAM software or controllers on machine Ways: written, directly entered into machine controller, using computer software- CAM software.	0.5	1		
	A22. Ensure that part program is efficient & results in minimal cycle time, with optimal cutting parameters and no unnecessary tool motions.	0.5	2		
	A23. Use subprograms and canned cycles, to reduce program size and input time and avoid memory overflow on the machine.	0.5	2		
	A24. Transfer the program to the machine by entering it at the console or transmitting it through a wired link or through a data transfer device.	0.5	2		
	A25. Follow the correct procedures for calling up the program and dealing with any error messages or	0.5	2		

	faults.				
	A26. Handle the typical problems that can occur with the programming, loading and editing activities effectively using approved procedures.	1	2		
	A27. Save the proven program in the appropriate storage medium – paper, computer hard disk, etc. and location.	1	2		
	A28. Complete relevant documentation as per organizational procedure.	1	2		
	A29. Leave the work area in a safe and tidy condition on completion of the activities.	1	2		
	A30. Obtain appropriate equipment or tools needed as per job requirements.	1	2		
	A31. Ensure that all measuring equipment is calibrated and approved for usage.	0.5	2		
	A32. Ensure that the tools and fixtures are in usable condition (Eg. free from breakage, damage, calibration, etc.).	1	2		
	A33. Pre-set tooling appropriately using setting jigs/ fixtures.	1	2		
	A34. Seek any necessary instruction/training on operation of the machine where required.	1	2		
	A35. Mount tools in the correct positions in the tool turret or magazine.	0.5	2		
	A36. Check that the tools have been mounted in positions corresponding to tool numbers in the part program.	1	2		
	A37. Mount the part on machine firmly in the specified work holding devices, with the appropriate clamping forces.	1	2		
	A38. Enter work offset and tool data on the machine – X and Z offsets, tool orientation and radius for lathes; length offsets and tool radius for machining centers.	0.5	2		
	A39. Ensure that tool data has been entered in offset number corresponding to tool offset numbers in part program.	0.5	2		
	A40. Deal with error messages and faults on the program or equipment.	0.5	2		
	A41. Cut a trial part using single block run, dry run and feed and speed override controls.	0.5	2		
	A42. Edit the program and adjust tool and wear offsets to correct any dimensional errors on the part.	0.5	2		
	A43. Ensure that trial part conforms to drawing specifications in terms of dimensions, surface finishes & geometrical parameters like concentricity, parallelism, run out, etc.	0.5	2		
	A44. Correct the tool wear offsets whenever required, based on the results of the period inspection.	0.5	2		
	A45. Change worn out tools and indexable inserts whenever required.	0.5	2		
	A46. After every change of a worn out tool or insert, cut a trial part and correct any dimensional inaccuracies by adjusting the tool offsets or wear offsets.	0.5	2		
	A47. Return worn out cutting tools, work holding device / fixtures / instruments / drawings to store.	0.5	2		
	A48. Ensure that there is no damage to the tool/fixture while doing the prove-out.	0.5	2		
	A49. Shut down the equipment to a safe condition on conclusion of the activities.	0.5	2		
	A50. Deal promptly and effectively with problems within span of responsibility and control and report those that cannot be solved.	0.5	2		
	Total Marks	30	80		
	A01. Understand and comply with safety, environmental & other relevant regulations and guidelines.	0.5	1		
	A02. Wear personal protective equipment (PPE) like safety glasses, apron, no loose cloths/ hair, safety shoes while performing lathe operations while performing CNC turning operations.	0.5	1		

5. CPC/N7012: CNC Lathe Machine operation	A03. Ensure work area is clean and safe.	0.5	1		
	A04. Ensure that machine safety guards are in place and are in correctly working condition.	0.5	1		
	A05. Ensure that all tools, equipment are in safe and usable conditions.	0.5	2		
	A06. Ensure availability of job specification i.e. approved drawings, sketches, instructions from the supervisor, job instruction sheet/ job card.	0.5	2		
	A07. Read and understand the Job requirements from the job specifications and attention shall be given to the geometric tolerances.	0.5	2		
	A08. Check the work piece material for the dimensions and ensure that it is free from foreign objects, dirt or other contamination and is within the required size.	0.5	2		
	A09. Plan to perform the turning or other lathe operations and the sequence of operations as per required job specifications on CNC lathe machine.	1	2		
	A10. Obtain all the appropriate tools and measuring instruments/ gauges required for the job.	1	2		
	A11. Check the CNC lathe machine for its functioning and ensure that it is ready for operation	1	2		
	A12. Prepare the CNC lathe machine for the operations by mounting and setting the required work holding devices and cutting tools	1	2		
	A13. Clarify any doubt, if any and see necessary instruction /training on the operation of the CNC Lathe machine whenever required	1	2		
	A14. Hold the work piece securely and correctly, without distortion	1	2		
	A15. Adjust the CNC Lathe machine settings as per job requirement to maintain desired accuracy	1	2		
	A16. Perform daily maintenance of machine according to defined checklist, at the beginning of day's shifts.	0.5	2		
	A17. Use and extract information from engineering drawings, dimensioning and tolerances	0.5	2		
	A18. Use and extract information from reference charts, tables, graphs and Engineering standards	0.5	2		
	A19. Load and unload component(s) using pre-determined fixtures or work holding devices as per work instructions	1	2		
	A20. Make basic program and check correctness of program through dry run and single block check	1	2		
	A21. Adjust and set the speed and feed of the CNC lathe machine to achieve the job specifications	1	2		
	A22. Operate the machine tool controls safely and correctly, in line with operational procedures.	1	2		
	A23. Stop the CNC lathe machine, both in normal and emergency situations correctly by following the right procedure and should be able to restart the machine after the emergency.	0.5	3		
	A24. Do first part cutting trial by setting tool offsets to get oversize part.	0.5	3		
	A25. Measure the critical parameters of the machined component on the machine (without removing from the machine).	0.5	3		
	A26. Correct the offsets based on the measurements by accessing program edit facility in order to enter tooling data.	1	3		
	A27. Measure the component after unloading to check for accuracy in the critical parameters as per job specifications.	1	3		
	A28. Produce machined components that combine different turning operations and have a range of	0.5	3		

	features.				
	A29. Follow the specified machining sequence and procedure as per job specifications.	1	3		
	A30. Interpret in-built machine alarms & respond to same as per operating manual or specified instructions.	1	2		
	A31. Observe for inconsistency in dimensions due to tool wear and correct the offsets accordingly.	0.5	2		
	A32. Ensure that machine settings are adjusted as and when required, either by self or the setter, to maintain the required accuracy.	1	2		
	A33. Identify when tools need replacement and replace worn tool with new tool.	1	4		
	A34. Produce components as per required standards.	1	4		
	A35. Report problems and seek appropriate assistance in a timely manner	0.5	4		
	A36. Complete documentation during and post operations as per organizational procedures and applicable quality management system.	1	3		
	A37. Return the machine and all tools and equipment to the correct location on completion of activities.	1	2		
	A38. Leave the work area in a safe and tidy condition on completion of job activities as per 5S practices.	0.5	2		
	A39. Report the problem to the supervisor, if it cannot be resolved.	0.5	2		
	A40. Seek guidance from the supervisor/ specialist of the problem is outside his/her area of competence.	0.5	2		
	Total Marks	30	90		
6. CPC/N7014: Work effectively with Others	A01. Display appropriate communication etiquette while working.	1	2		
	A02. Display active listening skills while interacting with others at work.	1	2		
	A03. Demonstrate responsible and disciplined behaviors at the workplace.	1	4		
	A04. Accurately receive information and instructions from the supervisor and fellow workers, getting clarification where required.	1	4		
	A05. Accurately pass on information to authorized persons who require it and within agreed timescale & confirm its receipt.	2	2		
	A06. Display helpful behavior by assisting others in performing tasks in a positive manner, where required and possible.	2	2		
	A07. Consult with & assist others to maximize effectiveness and efficiency in carrying out tasks.	1	2		
	A08. Escalate grievances and problems to appropriate authority as per procedure to resolve them & avoid conflict.	1	2		
	Total Marks	10	20		
7. CPC/DGT/N0219 Basics of computer and data entry	A01. Fill and process mandated forms for receiving, processing, or tracking data, enter data from source documents in to Computer application having MS OFFICE software	2	4		
	A02. Verify data entered with source documents, checks for compliance and corrects all typographical errors and missing or repeated data.	2	4		
	A03. Maintain files of source documents or other information related to data entered.	1	4		
	A04. Update database information to reflect most current source information	2	2		

	A05. Assist in the filing and storage of security and back up data files	1	2		
	A06. Respond to requests for information and access relevant files	2	4		
	Total Marks	10	20		
8. CPC/DGT/N7025 Soft Skills	A01. Accurately receive information and instructions from the supervisor/operator and fellow workers, getting clarification where required.	1	2		
	A02. Accurately pass on information to authorized persons who require it and within agreed timescale and confirm its receipt.	1	2		
	A03. Display helpful behavior by assisting others in performing tasks in a positive manner, where required and possible.	1	2		
	A04. Basic Knowledge of consult with and assist others to maximize effectiveness and efficiency in carrying out tasks.	1	2		
	A05. Basic Study of Fundamental of Computers.	1	2		
	A06. Components of Computer: - Hardware and the software.	1	2		
	A07. Display active listening skills while interacting with others at work.	1	2		
	A08. Use appropriate tone, pitch and language to convey politeness, assertiveness, care and professionalism	1	2		
	A09. Demonstrate responsible and disciplined behaviors at the workplace	1	2		
	A10. Escalate grievances and problems to appropriate authority as per procedure to resolve them and avoid conflict	1	2		
	Total	10	20		
9. CPC/DGT/N0411 Understanding & Implementation of 5S	A01. Wear protective clothing/equipment for specific tasks and work conditions	0.5	1		
	A02. Carry out safe working practices while dealing with hazards to ensure the safety of self and others.	0.5	1		
	A03. Apply good housekeeping practices at all times	0.5	1		
	A04. Use the various appropriate fire extinguishers on different types of fires correctly	0.5	1		
	A05. Demonstrate rescue techniques applied during fire hazard, demonstrate good housekeeping in order to prevent fire hazards, demonstrate the correct use of a fire extinguisher.	0.5	1		
	A06. Identify activities which can cause potential injury through sharp objects, burns, fall, electricity, gas leakages, radiation, poisonous fumes, chemicals, loud noise, and Identify areas in the plant which are potentially hazardous/unhygienic in nature. Conduct regular checks with support of the maintenance team on machine health to identify potential hazards due to wear and tear of machine.	0.5	1		
	A07. Inform the concerned authorities on the potential risks identified in the processes, workplace area/ layout, materials used etc, Inform the concerned authorities about machine breakdowns, damages which can potentially harm man/ machine during operations.	0.5	1		
	A08. Create awareness amongst other by sharing information on the identified risks.	0.5	1		
	A09. Follow the sorting process and check that the tools, fixtures & jigs that are lying on workstations are the ones in use and un- necessary items are not cluttering the workbenches or work surfaces.	0.5	1		
	A10. Ensure segregation of waste in hazardous/ non Hazardous waste as per the sorting work instructions	0.5	1		

	A11. Follow the technique of waste disposal and waste storage in the proper bins as per SOP	0.5	1		
	A12. Segregate the items which are labeled as red tag items for the process area and keep them in the correct places	0.5	1		
	A13. Sort the tools/ equipment/ fasteners/ spare parts as per specifications/ utility into proper trays, cabinets, lockers as mentioned in the 5S guidelines/ work instructions	0.5	1		
	A14. Ensure that areas of material storage areas are not overflowing	0.5	1		
	A15. Properly stack the various types of boxes and containers as per the size/ utility to avoid any fall of items/ breakage and also enable easy sorting when required	0.5	1		
	A16. Return the extra material and tools to the designated sections and make sure that no additional material/ tool is lying near the work area	0.5	1		
	A17. Follow the floor markings/ area markings used for demarcating the various sections in the plant as per the prescribed instructions and standards.	0.5	1		
	A18. Follow the proper labelling mechanism of instruments/ boxes/ containers and maintaining reference files/ documents with the codes and the lists	0.5	1		
	A19. Check that the items in the respective areas have been identified as broken or damaged	0.5	1		
	A20. Follow the given instructions and check for leveling of fluids, oils, lubricants, solvents, chemicals etc. and proper storage of the same To avoid spillage, leakage, fire etc.	0.5	1		
	Total Marks	10	20		
10. CPC/DGT/N0103 Employability Skills	AO1. Essential skills for success 1. Building basic skills to navigate life and career. 2. Self-Awareness, articulating personal values, Value-based decision making, Dilemma situations. 3. Identify sources and types of stress (positive / negative stress), Managing stress (long-term / short-term), Handling rejection and building resilience, Identify day wasters.	5	5		
	AO2. Labour welfare legislation Benefits guaranteed under various acts- Factories Act, Apprenticeship Act, Employees State Insurance Act (ESI), Payment Wages Act, Employees Provident Fund Act, The Workmen's compensation Act, POSH. Interpret applicable labour and industrial laws.	5	5		
	AO3. Preparation to the world of work 1. Career Plan 2. Career Pathways 3. Search and apply for a job	5	5		
	AO4. Customer interaction / service 1. Greeting customers 2. Probing-understanding customer requirements 3. Handling grievances 4. Relationship building with customers	5	5		
	Total	20	20		
	Grand Total	200	400		

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 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:

- Check the Assessment location, date and time
- If the batch size is more than 40, then there should be 2 Assessors.
- Check that the allotted time to the candidates to complete Theory & Practical Assessment is correct.

3. Assessment Quality Assurance levels/Framework:

- Question bank is created by the Subject Matter Experts (SME) are verified by the other SME
- Questions are mapped to the specified assessment criteria
- Assessor must be ToA certified & trainer must be ToT Certified

4. Types of evidence or evidence-gathering protocol:

- Time-stamped & geo tagged reporting of the assessor from assessment location
- Centre photographs with signboards and scheme specific branding

5. Method of verification or validation:

- Surprise visit to the assessment location

6. Method for assessment documentation, archiving, and access

- Hard copies of the documents are stored

On the Job:

1. Each module (which covers the job profile of Automotive Service Assistant Technician) will be assessed separately.
2. The candidate must score 60% in each module to successfully complete the OJT.
3. Tools of Assessment that will be used for assessing whether the candidate is having desired skills and etiquette of dealing with customers, understanding needs & requirements, assessing the customer and perform Soft Skills effectively:
 - Videos of Trainees during OJT
4. Assessment of each Module will ensure that the candidate is able to:
 - Effective engagement with the customers
 - Understand the working of various tools and equipment

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