Model Curriculum

QP Name: Electric Vehicle Service Lead Technician

QP Code: ASC/Q1424

QP Version: 1.0

NSQF Level: 5

Model Curriculum Version: 1.0

Automotive Skill Development Council
153, Gr Floor, Okhla Industrial Area, Phase-III, Leela Building, New Delhi-110020

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Training Parameters

Sector	Automotive
Sub-Sector	Automotive Vehicle Service
Occupation	Technical Service & Repair
Country	India
NSQF Level	5
Aligned to NCO/ISCO/ISIC Code	NCO-2015/3115.0602
Minimum Educational Qualification & Experience	10th Class + 2 years I.T.I (Mechanic Auto Electrical and Electronics/Diesel Mechanic/ Mechanic Motor Vehicle (MMV)) with 2 years relevant experience OR 12th Class with 4 Years of relevant experience OR 3 years Diploma from recognized body (Mechanical/Electrical/Electronics/Automobile) after Class 12th OR Certificate-NSQF (Four Wheeler Service Technician/Automotive Electrician Level 4) with 2 Years of experience in Automotive Service
Pre-Requisite License or Training	LMV Driving Licence
Minimum Job Entry Age	18 Years
Last Reviewed On	29/01/2021
Next Review Date	29/01/2026
NSQC Approval Date	29/01/2021
Version	1.0
Model Curriculum Creation Date	29/01/2021
Model Curriculum Valid Up to Date	29/01/2026

Model Curriculum Version	1.0
Minimum Duration of the Course	600 Hours, 0 Minutes
Maximum Duration of the Course	600 Hours, 0 Minutes

Program Overview

This section summarizes the end objectives of the program along with its duration.

Training Outcomes

At the end of the program, the learner should have acquired the listed knowledge and skills.

- Work effectively and efficiently as per schedules and timelines while complying with the health and hygiene norms.
- Implement safety practices.
- Optimize the use of resources to ensure less wastage and maximum conservation.
- Communicate effectively and develop interpersonal skills.
- Display sensitivity towards all genders and differently abled people.
- Perform diagnosis of electric vehicle for repair requirements.
- Perform servicing, repairing and overhauling of mechanical aggregates in vehicle.
- Perform servicing, repairing and overhauling of electrical and electronic systems within an aggregate in the vehicle.

Compulsory Modules

The table lists the modules and their duration corresponding to the Compulsory NOS of the QP.

NOS and Module Details	Theory Duration	Practical Duration	On-the-Job Training Duration (Mandatory)	On-the-Job Training Duration (Recommended)	Total Duration
Bridge Module	**05:00**	**00:00**	**-**	**-**	**05:00**
Module 1: Introduction to the role of electric vehicle service lead technician	05:00	00:00	-	-	05:00
ASC/N9801 - Manage work and resources (Service) **NOS Version No. 1.0** **NSQF Level 5**	**20:00**	**40:00**	-	-	**60:00**
Module 2: Plan work effectively, implement safety practices and optimize resources	20:00	40:00	-	-	60:00
ASC/N9802 – Interact effectively with team, customers and others **NOS Version No. 1.0** **NSQF Level 5**	**20:00**	**35:00**	-	-	**55:00**
Module 3: Communicate effectively and efficiently	20:00	35:00	-	-	55:00

ASC/N1435- Carry out diagnosis of electric vehicle for repair requirements **NOS Version No. 1.0** **NSQF Level 5**	**60:00**	**120:00**	-	-	**180:00**
Module 4: Carry out diagnosis of electric vehicle for repair requirements	60:00	120:00	-	-	180:00
ASC/N1436: Carry out service, repair and overhauling of mechanical aggregates in vehicle **NOS Version No. 1.0** **NSQF Level 5**	**30:00**	**90:00**	-	-	**120:00**
Module 5: Carry out service, repair and overhauling of mechanical aggregates in vehicle	30:00	90:00	-	-	120:00
ASC/N1437- Carry out service, repair and overhauling of electrical and electronic systems within an aggregate in the vehicle **NOS Version No. 1.0** **NSQF Level 5**	**60:00**	**120:00**	-	-	**180:00**
Module 6: Carry out service, repair and overhauling of electrical and electronic systems within an aggregate in the vehicle	60:00	120:00	-	-	180:00
Total Duration	**195:00**	**405:00**	-	-	**600:00**

Module Details

Module 1: Introduction to the Role of electric vehicle service lead technician
Bridge Module

Terminal Outcomes:

- Discuss the role and responsibilities of electric vehicle service lead technician

Duration: *05:00*	**Duration**: *00:00*
Theory – Key Learning Outcomes	**Practical – Key Learning Outcomes**
• List the role and responsibilities of an electric vehicle service lead technician • List the standard operating procedures (SOP) w.r.t. handling complaints, allocation of work, invoicing, inspection, diagnosis, repair etc. • State the safety guidelines to be followed by the technician while working on an electric vehicle. • Identify technical specifications of various components/aggregates manufactured by OEM and other competitors • Identify various aspects of component fitments of the electric vehicle as directed by the OEM	
Classroom Aids:	
Laptop with software like MS Office and internet, white board, marker, projector	
Tools, Equipment and Other Requirements	

Module 2: Plan Work Effectively and Implement Safety Practices
Mapped to NOS ASC/N9801, v1.0

Terminal Outcomes:

- Employ appropriate ways to maintain a safe and secure working environment
- Perform work as per the quality standards
- Use the resources efficiently.

Duration: *20:00*	**Duration**: *40:00*
Theory – Key Learning Outcomes	**Practical – Key Learning Outcomes**
• List the potential workplace related risks and hazards, their causes and preventions. • Outline the organizational structure to be followed to report about health, safety and security breaches to the concerned authorities. • Describe the procedures to report accident and health related issues as per SOP • Identify the importance of standard operating procedures of the company w.r.t. privacy, confidentiality and security. • List and explain work requirements to be followed by the team • List some common practices for efficient utilisation of energy, material and water. • Discuss the specified quality standards for work requirements and corrective action to be taken in case work fails to meet the requirements. • Discuss the importance of conducting trainings to develop work expertise. • Discuss the importance of working as per the agreed and assigned requirement. • Identify the issues with process flow improvements, quality of output, product defects received from previous process, repairs and maintenance of tools and machinery and handle them • Define ways to optimize usage of resources • Discuss different set of problems along with their causes and possible solutions.	• Apply appropriate techniques in the work process to save cost and time . • Employ ways to ensure that the team complies with organisation's health, safety policies and procedures. • Keep a check on the routine cleaning of tools, machine and equipment. • Employ different ways to ensure that the team periodically checks tools, equipment and machines. • Apply appropriate techniques to use the resources judiciously. • Demonstrate checking for malfunctions in equipment and report as per SOP • Employ ways to ensure that the team periodically checks for spills and leaks and plugs the same and keeps work area clean and tidy. • Demonstrate segregation of hazardous waste. • Show how to dispose non-recyclable waste and hazardous waste responsibly. • Demonstrate how to follow the organisation's emergency procedures for different emergencies. • Prepare a sample layout of the workshop depicting the location of all the electrical, hydraulic and thermal equipment used.

• Discuss the concept of waste management and methods of waste disposal • List the different categories of waste for the purpose of segregation • State the importance of timely completion of tasks • Discuss the significance of sanitizing the workplace, equipment etc. • Summarise hygiene and sanitation regulations. • Discuss the ways of helping team members deal with stress and anxiety • Explain various ways of time and cost management • Discuss the use of proper PPE for maintaining health and hygiene at workplace and the process of wearing/discarding them. • List some common electrical problems and practices of conserving electricity. • State the importance of using appropriate colour dustbins for different types of waste. • Discuss organizational procedures for minimizing waste. • Discuss the importance of maintaining quality and timely delivery of the services as per the goals set by the manager. • Discuss the common sources of pollution and ways to minimize it. • Discuss organisation's policies for maintaining personal health and hygiene at workplace. • Discuss the significance of greening. • List the requirements like running water, sanitizers, etc. to be checked beforehand at workplace. • Recall the key performance indicators for the new tasks.	

Classroom Aids:
White board/ black board marker / chalk, duster, computer or Laptop attached to LCD projector
Tools, Equipment and Other Requirements
Personal Protection Equipment: safety glasses, head protection, rubber gloves, safety footwear, warning signs and tapes, fire extinguisher and first aid kit

Module 3: Communicate Effectively and Efficiently

Mapped to NOS ASC/N9802, v1.0

Terminal Outcomes:

- Use effective communication and interpersonal skills.
- Apply sensitivity while interacting with different genders and people with disabilities.

Duration: *20:00*	**Duration: *35:00***
Theory – Key Learning Outcomes	**Practical – Key Learning Outcomes**
• Explain the importance of complying with organizational requirements to share information with team members. • Discuss the ways to adjust the communication styles to reflect sensitivity towards gender and persons with disability (PwD). • Explain the importance of respecting personal space of colleagues and customers. • Describe the ways to manage and coordinate with team members for work integration. • State the importance of team goals over individual goals, keeping commitment made to team members, and informing them in case of delays. • Discuss the importance of following the organisation's policies and procedures • Discuss the importance of rectifying errors as per feedback and minimizing mistakes. • Discuss gender-based concepts, issues and legislation as well organization standards, guidelines, rights and duties of PwD. • Discuss the importance of PwD and gender sensitization to ensure that team shows sensitivity towards them. • State the importance of following organizational standards and guidelines related to PwD. • Recall the rights and duties at workplace with respect to PwD. • Outline organisation policies and procedures pertaining to written and verbal communication.	• Employ different means and methods of communication depending upon the requirement to interact with the team members. • Employ appropriate ways to maintain good relationships with team members and superiors. • Apply appropriate techniques to resolve conflicts and manage team members for smooth workflow. • Conduct training sessions to train the team members on proper reporting of completed work and receiving feedback. • Employ suitable ways to escalate problems to superiors as and when required. • Prepare a sample report on the progress and team performance . • Role play a situation on how to offer help to people with disability (PwD) if required at work.
Classroom Aids:	

White board/black board marker/chalk, duster, computer or Laptop attached to LCD projector
Tools, Equipment and Other Requirements

Module 4: Carry out diagnosis of electric vehicle for repair requirements

Mapped to NOS ASC/N1435 v1.0

Terminal Outcomes:

- Discuss how to inspect the vehicle and identify/validate faults.
- Perform the steps to prepare for diagnostic tests.
- Demonstrate how to perform diagnostic tests to identify the root cause of fault.

Duration: 60*:00*	**Duration**: *120:00*
Theory – Key Learning Outcomes	**Practical – Key Learning Outcomes**
• Outline the automotive industry in India, workshop structure and role and responsibilities of different people in the workshop. • Explain the basic technologies used in functioning of various systems and components of the vehicle such as batteries, body management system. • List the sources of information required to assess service and repair requirements. • List the various sources to collect information regarding service and repair requirements of the vehicles • Discuss the SOPs for receiving vehicles, opening job cards, allocation of work, etc. • Discuss organizational/professional code of ethics and standards of practice • State the legal regulations that need to be taken into account for handling electric vehicles in the workshop. • Recall various auto components of the vehicle. • List the precautions to be taken to avoid damages to the vehicle and its components. • Discuss the importance of maintaining documentation related to inspection and troubleshooting. • List typical symptoms of common faults/failures in vehicle's mechanical, electrical system. • Draw a comparison between results based on diagnostic inspections/tests with vehicle specifications and regulatory requirements. • Discuss the various interconnections between mechanical and electrical systems and their effect on each other.	• Demonstrate how to check the functioning of the vehicle systems such as lighting system, air conditioning, etc. • Perform visual inspection to identify faults in the vehicle by following the SOPs. • Perform the steps to prepare the vehicle according to nature of job to be performed. • Demonstrate how to mark the vehicles and safeguard the working area during electrical work. • Use different tools and equipment for diagnosing faults in the vehicle. • Apply appropriate techniques to identify common/possible defects in tools and equipment and • Role play a situation on how to report about equipment malfunctioning to the concerned person, if observed • Demonstrate how to use checklists and OEM Standard Operating Procedures (SOPs) to detect the source of the fault. • Apply appropriate ways to select and use appropriate device/equipment for inspection and diagnose faults. • Perform tests by following the SOPs for troubleshooting. • Demonstrate how to carry out diagnostic tests on the HV system based on various stages. • Demonstrate how to diagnose indirect faults in vehicle's mechanical, electrical system as per OEM SOP. • Check the vehicle and report the malfunction to the concerned person with the preliminary diagnostic details • Perform steps to dismantle and reassemble aggregates of a vehicle.

• Identify duplicate or defective parts using manufacturer's and component supplier's specifications • State fundamental terms, laws and principles of electricity used in EV. • Discuss about various electrical and electronic signals such as electrical inputs, outputs, voltage, pulse-width modulation. • Summarise symbols, units and terms used in wiring diagrams associated with the vehicle. • State the important guidelines to validate the options for repair/replacement. • Outline the safety, health and environmental policies and regulations for the work place as well as for automotive trade. • Discuss various SOPs recommended by OEM for using tools/equipment for diagnosis or troubleshooting such as special service tools. • Elucidate various safety rules/requirements to be followed while working on HV systems or vehicles. • Compare the various test results with OEM specifications	• Demonstrate how to use relevant measuring device/equipment and calculate the discrepancies. • Prepare a proposal regarding repair/replacement requirements with justification. • Demonstrate how to use on-line application and OEM technical information/assistance portals.

Classroom Aids:
White board/ black board marker / chalk, duster, computer or Laptop attached to LCD projector

Tools, Equipment and Other Requirements
Electric Vehicle, various body parts, engine, tools and equipment, material, mechanical and electrical components/aggregates, lubricants, grease, oil, etc. Feeler gauges, torque wrench, multimeter, engineering rule (scale), battery charger, tester, wheel cylinder, brake pad/shoe, control arms, tire pressure gauges etc., and ball joint separators, bearing pullers, gear puller tools, slide hammers etc.,

Module 5: Carry out service, repair and overhauling of mechanical aggregates in the vehicle

Mapped to NOS ASC/N1436 v1.0

Terminal Outcomes:

- Apply appropriate steps to prepare for routine services and repairs.
- Perform steps to carry out routine service and repairs.
  Demonstrate how to carry out post service/repair routine.

Duration: 30*:00*	**Duration**: 90*:00*
Theory – Key Learning Outcomes	**Practical – Key Learning Outcomes**
• Outline the automotive industry in India, workshop structure and role and responsibilities of different people in the workshop. • List the sources of information required to assess service and repair requirements. • Discuss the SOPs for receiving vehicles, opening job cards, allocation of work, etc. • Discuss the importance of ensuring that no high voltage activity prior to commencement of work is conducted around the workstation • Recall the various auto components of the vehicle • Outline organizational/professional code of ethics and standards of practice. • State the legal regulations that need to be taken into account for handling electric vehicles in the workshop. • List the various sources of information available for assessing service/repair requirements of the vehicle. • List the precautions to be taken to avoid damages to the vehicle and its components. • Illustrate how to assess mechanical components/aggregates such as brake pads, etc • Discuss the importance of maintaining documentation related to inspection, servicing and repair of the vehicle. • Discuss the organisational policies for cleaning work site and disposing off materials such as waste oil, etc. • List the various auto components/aggregates of the vehicle.	• Employ different ways to check if equipment/tools are functioning as per requirements and report malfunctioning, if observed. • Perform steps to prepare the vehicle according to nature of job to be performed. • Demonstrate how to mark the vehicles and safeguard the working area during electrical work. • Perform visual inspection of the vehicle to identify defects in HV components and other repair requirement as per the sources of information • Prepare a proposal regarding repair/replacement requirements with justification. • Role play a situation on how to report malfunctioning/repairs in the vehicle to the concerned person, if observed. • Demonstrate how to perform tasks on the HV system based on various stages. • Show how to use workshop tools/measuring devices/equipment required for the job as per OEM Standard Operating Procedure (SOP) and return them after task completion. • Use various methods for removal, dismantling, cleaning, adjusting, reassembling and testing of mechanical components for proper functioning • Demonstrate how to repair/replace/calibrate/overhaul mechanical system/aggregate as per the diagnostic results. • Show how to check the completed tasks and performance of the vehicle post repair.

• Explain the basic technologies used in functioning of various systems and components of the vehicle such as power train, etc. • Discuss the various interconnections in the system and their effect on each other. • List various SOPs recommended by OEM for using tools/equipment for diagnosis or troubleshooting such as special service tools. • Recall standard schedules and checklists recommended by the OEM/auto component manufacturer for servicing. • Discuss the type and quality of consumables/materials used for the job such as seals, sealant, fasteners, lubricants etc. • Discuss the various safety rules/requirements to be followed while working on HV systems or vehicles. • Outline the safety, health and environmental policies and regulations for the work place as well as for automotive trade. • List the Occupational Safety and Health (OSH) measures required for working on electric vehicle	• Prepare a report to be shared with the supervisor for further inspection, if required. • Demonstrate how to work on the HV systems which do not require isolation, troubleshooting and replacing parts on the active HV system. • Perform the steps to check the components of the vehicle such as brake pad/shoe, wheel cylinder, etc. for any wear & tear.
Classroom Aids:	
White board/ black board marker / chalk, duster, computer or Laptop attached to LCD projector	
Tools, Equipment and Other Requirements	
Electric Vehicle, various body parts, engine, tools and equipment, material, mechanical and electrical components/aggregates, lubricants, grease, oil, etc. Feeler gauges, torque wrench, multi meter, engineering rule (scale), battery charger, tester, wheel cylinder, brake pad/shoe, control arms, tire pressure gauges etc., and ball joint separators, bearing pullers, gear puller tools, slide hammers etc.	

Module 6: Carry out service, repair and overhauling of electrical and electronic systems within an aggregate in the vehicle

Mapped to NOS ASC/N1437 v1.0

Terminal Outcomes:

- Apply appropriate steps to prepare for routine service and repairs
- Perform steps to carry out routine service and repairs.
- Demonstrate how to carry out post service/repair routine.

Duration: *60:00*	**Duration**: **120:00**
Theory – Key Learning Outcomes	**Practical – Key Learning Outcomes**
• Outline the automotive industry in India, workshop structure and role and responsibilities of different people in the workshop. • List the sources of information required to assess service and repair requirements. • Outline organizational/professional code of ethics and standards of practice. • State the legal regulations that need to be taken into account for handling electric vehicles in the workshop. State the importance of following the SOPs prescribed by the OEM regarding tools/equipment for troubleshooting of different electrical systems. • List the various auto components of the vehicle. • List the precautions to be taken to avoid damages to the vehicle and its components. • Discuss the importance of maintaining documentation related to inspection, servicing and repair of the vehicle. • Discuss the organisational policies for cleaning work site and disposing off materials such as waste oil, etc. • List the various auto components/aggregates of the vehicle. • Explain the basic technologies used in functioning of various systems and components of the vehicle such as power train, etc. • Discuss the various interconnections in the system and their effect on each other.	• Employ appropriate ways to check if equipment/tools are functioning as per requirements and report malfunctioning, if observed. • Perform steps to prepare the vehicle according to nature of job to be performed. • Demonstrate how to mark the vehicles and safeguard the working area during electrical work. • Perform visual inspection of the vehicle to identify defects in HV components by following the SOPs recommended by OEM. • Prepare a proposal regarding repair/replacement requirements with justification. • Employ appropriate ways to report malfunctioning/repairs in the vehicle to the concerned person, if observed. • Demonstrate how to perform tasks on the HV system based on various stages. • • Show how to use workshop tools/measuring devices/equipment required for the job as per OEM Standard Operating Procedure (SOP). • Perform test of electrical/electronic components post removal as per OEM SOP. • Demonstrate how to repair all electrical system/aggregate faults such as input sensors, wiring harness, etc. • Show how to check the completed tasks, performance of the vehicle post repair and report if further inspection required. •

• List the various sources of information available for servicing/repairing of the vehicle. • Discuss various SOPs recommended by OEM for using tools/equipment for diagnosis or troubleshooting such as special service tools. • Discuss standard schedules and checklists recommended by the OEM/auto component manufacturer for servicing. • List the type and quality of consumables/materials used for the job such as seals, sealant, fasteners etc. • Discuss the various safety rules/requirements to be followed while working on HV systems or vehicles.	• Apply appropriate techniques to maintain workshop tools, equipment and workstations, including scheduled checks, calibration and timely repairs. • Use various methods for removal, dismantling, cleaning, adjusting, reassembling and testing of electrical components for proper functioning • Demonstrate how to work on the HV systems which do not require isolation, troubleshooting and replacing parts on the active HV system.
Classroom Aids:	
White board/ black board marker / chalk, duster, computer or Laptop attached to LCD projector	
Tools, Equipment and Other Requirements	
Electric Vehicle, various body parts, engine, tools and equipment, material, mechanical and electrical components/aggregates, lubricants, grease, oil, etc. Feeler gauges, torque wrench, multi meter, engineering rule (scale), battery charger, tester, wheel cylinder, brake pad/shoe, control arms, tire pressure gauges etc., and ball joint separators, bearing pullers, gear puller tools, slide hammers etc.	

Annexure

Trainer Requirements

Trainer Prerequisites						
Minimum Educational Qualification	**Specialization**	**Relevant Industry Experience**		**Training Experience**		**Remarks**
		Years	***Specialization***	***Years***	***Specialization***	
ITI	Mechanic Motor Vehicle/Mechanic Auto Electrical and Electronics/Diesel Mechanic	5	Four Wheeler Service	1	Four Wheeler Service	**NA**
ITI	Mechanic Motor Vehicle/Mechanic Auto Electrical and Electronics/Diesel Mechanic	6	Four Wheeler Service	0	Four Wheeler Service	**NA**
Diploma	Automobile Engineering/ Mechanical Engineering	4	Four Wheeler Service	1	Four Wheeler Service	**NA**
Diploma	Automobile Engineering/ Mechanical Engineering	5	Four Wheeler Service	0	Four Wheeler Service	**NA**
Bachelor of Engineering	Automobile/Mechanical / Electrical/ Engineering	2	Four Wheeler Service	1	Four Wheeler Service	**NA**
Bachelor of Engineering	Automobile/Mechanical / Electrical/ Engineering	3	Four Wheeler Service	0	Four Wheeler Service	**NA**

Trainer Certification	
Domain Certification	**Platform Certification**
"*Electric Vehicle Service Lead Technician***", "***ASC/Q1424***, v1.0", Minimum accepted score is 80%**	"Trainer", "MEP/Q2601, v1.0" with scoring of minimum 80%

Assessor Requirements

Assessor Prerequisites						
Minimum Educational Qualification	**Specialization**	**Relevant Industry Experience**		**Training Experience**		**Remarks**
		Years	***Specialization***	***Years***	***Specialization***	
ITI	Mechanic Motor Vehicle/Mechanic Auto Electrical and Electronics/Diesel Mechanic	6	Four Wheeler Service	1	Four Wheeler Service	**NA**
ITI	Mechanic Motor Vehicle/Mechanic Auto Electrical and Electronics/Diesel Mechanic	7	Four Wheeler Service	0	Four Wheeler Service	**NA**
Diploma	Automobile Engineering/ Mechanical Engineering	5	Four Wheeler Service	1	Four Wheeler Service	**NA**
Diploma	Automobile Engineering/ Mechanical Engineering	6	Four Wheeler Service	0	Four Wheeler Service	**NA**
Bachelor of Engineering	Automobile/Mechanical / Electrical/ Engineering	3	Four Wheeler Service	1	Four Wheeler Service	**NA**
Bachelor of Engineering	Automobile/Mechanical / Electrical/ Engineering	4	Four Wheeler Service	0	Four Wheeler Service	**NA**

Assessor Certification	
Domain Certification	**Platform Certification**
"*Electric Vehicle Service Lead Technician***", "***ASC/Q1424***, v1.0", Minimumaccepted score is 80%**	"Assessor", "MEP/Q2701, v1.0" with scoring ofminimum 80%

Assessment Strategy

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:

The assessor should

- 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
    - Center 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

References

Glossary

Term	Description
Declarative Knowledge	Declarative knowledge refers to facts, concepts and principles that need to be known and/or understood in order to accomplish a task or to solve a problem.
Key Learning Outcome	Key learning outcome is the statement of what a learner needs to know, understand and be able to do in order to achieve the terminal outcomes. A set of key learning outcomes will make up the training outcomes. Training outcome is specified in terms of knowledge, understanding (theory) and skills (practical application).
OJT (M)	On-the-job training (Mandatory); trainees are mandated to complete specified hours of training on site
OJT (R)	On-the-job training (Recommended); trainees are recommended the specified hours of training on site
Procedural Knowledge	Procedural knowledge addresses how to do something, or how to perform a task. It is the ability to work, or produce a tangible work output by applying cognitive, affective or psychomotor skills.
Training Outcome	Training outcome is a statement of what a learner will know, understand and be able to do **upon the completion of the training**.
Terminal Outcome	Terminal outcome is a statement of what a learner will know, understand and be able to do **upon the completion of a module.** A set of terminal outcomes help to achieve the training outcome.

Acronyms and Abbreviations

NOS	National Occupational Standard(s)
NSQF	National Skills Qualifications Framework
QP	Qualifications Pack
TVET	Technical and Vocational Education and Training
PwD	Persons with Disability