



Model Curriculum

QP Name: Assistant Technician - Smart Meter

QP Code: ELE/Q5905

QP Version: 1.0

NSQF Level: 3

Model Curriculum Version: 1.0

Electronics Sector Skills Council of India | | 155, 2nd Floor ESC House, Okhla Industrial Area – Phase 3, New Delhi - 110020

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Training Parameters

Sector	Electronics
Sub-Sector	Consumer Electronics and IT Hardware
Occupation	Installation
Country	India
NSQF Level	3
Aligned to NCO/ISCO/ISIC Code	NCO-2015/9623.0300
Minimum Educational Qualification and Experience	10th Grade Pass OR 8th Grade Pass + NTC (2 years after 8th) OR 8th Grade Pass + 2 years relevant experience And 18 Years
Pre-Requisite License or Training	NA
Minimum Job Entry Age	18 Years
Last Reviewed On	29.03.2023
Next Review Date	28.03.2026
NSQC Approval Date	29.03.2023
QP Version	1.0
Model Curriculum Creation Date	29.03.2023
Model Curriculum Valid Up to Date	28.03.2026
Model Curriculum Version	1.0
Minimum Duration of the Course	420 Hours

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.

- Perform preparatory activities such as selection and inspection of tools and equipment etc.
- Perform installation and testing of energy meter.
- Perform installation and testing of water meter.
- Perform installation and testing of gas meter.
- Comply with the health and safety practices followed in the organisation.

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
ELE/N5908 - Installation and troubleshoot of smart energy meter	43:00	57:00	20:00	00:00	120:00
Module 1: Introduction to the role of Assistant Technician – Smart Meter	05:00	00:00	00:00	00:00	05:00
Module 2: Install smart energy meter	38:00	57:00	20:00	00:00	115:00
ELE/N5909 - Installation and troubleshoot of smart water meter	42:00	58:00	20:00	00:00	120:00
Module 3: Install smart water meter	42:00	58:00	20:00	00:00	120:00
ELE/N5910 - Installation and troubleshoot of gas meter	43:00	57:00	20:00	00:00	120:00
Module 4: Install smart gas meter	43:00	57:00	20:00	00:00	120:00
ELE/N1002: Apply health and safety practices at the workplace	10:00	20:00	00:00	00:00	30:00
Module 5: Basic Health and Safety Practices	10:00	20:00	00:00	00:00	30:00
DGT/VSQ/N0101 - Employability Skills (30 hours)	12:00	18:00	00:00	00:00	30:00

Module 6: Introduction to Employability Skills	0.5:00	0.5:00	00:00	00:00	01:00
Module 7: Constitutional values - Citizenship	0.5:00	0.5:00	00:00	00:00	01:00
Module 8: Becoming a Professional in the 21st Century	0.5:00	0.5:00	00:00	00:00	01:00
Module 9: Basic English Skills	01:00	01:00	00:00	00:00	02:00
Module 10: Communication Skills	1.5:00	2.5:00	00:00	00:00	04:00
Module 11: Diversity & Inclusion	0.5:00	0.5:00	00:00	00:00	01:00
Module 12: Financial and Legal Literacy	1.5:00	2.5:00	00:00	00:00	04:00
Module 13: Essential Digital Skills	01:00	02:00	00:00	00:00	03:00
Module 14: Entrepreneurship	2.5:00	4.5:00	00:00	00:00	07:00
Module 15: Customer Service	1.5:00	2.5:00	00:00	00:00	04:00
Module 16: Getting ready for apprenticeship & Jobs	01:00	01:00	00:00	00:00	02:00
Total Duration	150:00	210:00	60:00	00:00	420:00

Module Details

Module 1: Introduction to the role of Assistant Technician - Smart Meter

Mapped to ELE/Q5908

Terminal Outcomes:

- List the role and responsibilities of an Assistant Technician - Smart Meter.

Duration: 05:00	Duration: 00:00
Theory – Key Learning Outcomes	Practical – Key Learning Outcomes
<ul style="list-style-type: none"> Describe the size and scope of the electronics industry and its various sub-sectors. Discuss the various opportunities for a Smart Meters - Technician in the industry. Define the basics of electronics and related concepts. Discuss the role and responsibilities of a Smart Meters - Technician. Describe fundamentals of electricity such as ohms law, difference between AC and DC etc. 	
Classroom Aids:	
Laptop, white board, marker, projector	
Tools, Equipment and Other Requirements	
Voltmeter, Ammeter, Wattmeter, basic components	

Module 2: Install smart energy meter

Mapped to ELE/N5908

Terminal Outcomes:

- Identify tools and equipment required for installation and replacement of energy meter.
- Perform installation of energy meter at consumer’s premises.
- Perform replacement of defective meter to tested meter.

Duration: 38:00	Duration: 57:00
Theory – Key Learning Outcomes	Practical – Key Learning Outcomes
<ul style="list-style-type: none"> • Discuss the basic laws of electricity such as Ohms law, Kirchhoff’s Voltage Law (KVL) and Kirchhoff’s Current Law (KCL) in electrical installations. • Recall common electricity terminology used in industry. • List various symbols used in electrical components. • State the electrical units used to measure energy outputs like KVA, KWH, etc. • Describe the types, specifications, selection criteria and uses of consumer energy meters such as single-phase meter and three phase meter, CT meter and HT meters, AMR or AMI meters • Describe the different components of a consumer energy meter and their functions • Discuss the importance of Bureau of Indian Standards (BIS), British Standards (BS), International Electro-technical Commission (IEC) standards and CEA Regulations 2006 relevant to installation, operation and maintenance of consumer energy meters. • Recall Bureau of Indian Standards (BIS) set for energy meter. • Discuss the information and details required for the installation of smart energy meter at customer site. • List the tools and equipment required during installation work. • Discuss the selection criteria of tools and equipment required during tasks. • Summarise the steps to be performed for checking the tools and equipment before use. • Discuss various reasons for changing the energy meter. 	<ul style="list-style-type: none"> • Show how to obtain consumer details from authority for installation work. • Demonstrate organisational specified procedure of using tools and equipment required during work. • Apply appropriate ways to check the tools, and equipment before use. • Apply appropriate ways to check the distance between poles or cables and/or laying of overhead cables. • Apply appropriate ways to identify the reason of changing or replacing the meter. • Employ appropriate practices to locate the area inside or outside the customer’s premise for energy meter installation, meter testing, commissioning, reading, recording and maintenance. • Apply appropriate ways to check the facility’s wiring system for identification of any possible risks, common phase or looping of phase of two or more consumers. • Employ appropriate installation techniques to install or replace the energy meter and required supportive equipment. • Show how to check that energy meter is correct, examined and tested. • Show how to apply anti-tampering features and establish immunity against various types of external factors on energy meter as per regulations and organizational procedures. • Show how to check the energy meter for any earth leakage as per Central Electricity Authority Regulations, 2006. • Apply appropriate ways to test and calibrate the energy meter. • Apply appropriate ways to check that replaced or repaired equipment are working

<ul style="list-style-type: none"> • Discuss the checks need to be done before installing or replacing the energy meter. • Discuss the necessary precautions to avoid any hazard and accident during energy meter installation, testing and commissioning activities. • List the steps to be performed for installation of energy meter and required supportive equipment. • Discuss need of anti-tampering features on energy meter. • Describe external factors i.e., magnetic induction, vibration, electrostatic discharge, switching transients, surge voltages, oblique suspension and harmonics which can affect the correct functioning of energy meter. • Describe various methods for testing and calibrating the energy meter. • Discuss the information and data needed to be recorded and maintained related to the consumer and consumer's energy meter. 	<p>properly and customer's problems are resolved.</p> <ul style="list-style-type: none"> • Perform steps to escalate unresolved problems to appropriate authority for rectifications. • Show how to record the energy meter data. • Apply appropriate ways to verify the accuracy of the meter data recorded.
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Classroom Aids:

Whiteboard, marker pen, computer or laptop attached to LCD projector, scanner, computer speakers

Tools, Equipment and Other Requirements

Different types of energy meter - single phase meter and three phase meter, CT meter and HT meters, AMR or AMI meters

Screw driver, combination plier, phase tester, digital multimeter, clip on meter, megger etc.

Consumer meter testing with field calibrator, primary injection set for testing

Various anti tampering material in meter viz Magnets, DC injectors, electrostatic discharge etc.

Module 3: Install smart water meter

Mapped to ELE/N5909

Terminal Outcomes:

- Identify tools and equipment required for installation and replacement of water meter.
- Perform installation of water meter at consumer’s premises.
- Perform replacement of defective meter to tested meter.

Duration: 42:00	Duration: 58:00
Theory – Key Learning Outcomes	Practical – Key Learning Outcomes
<ul style="list-style-type: none"> • Describe the types, specifications, selection criteria and uses of consumer water meters such as Positive Displacement Meters (PD Meters), Velocity Flow Meters, Electromagnetic Water Meters and Ultrasonic Water Meters. • Describe the different components of a consumer water meter and their functions. • Recall Bureau of Indian Standards (BIS) set for water meter. • Discuss the information and details required for the installation of smart water meter at customer site. • List the tools and equipment required during installation work. • Discuss the selection criteria of tools and equipment required during tasks. • Summarise the steps to be performed for checking the tools and equipment before use. • Discuss various reasons for changing the water meter. • Discuss the checks need to be done before installing or replacing the water meter. • Discuss the necessary precautions to avoid any hazard and accident during water meter installation, testing and commissioning activities. • List the steps to be performed for installation of water meter and required supportive equipment. • Discuss need of anti-tampering features on water meter. • Describe external factors which can affect the correct functioning of water meter. • Describe various methods for testing and calibrating the water meter. 	<ul style="list-style-type: none"> • Show how to obtain consumer details from authority for installation work. • Demonstrate organisational specified procedure of using tools and equipment required during work. • Apply appropriate ways to check the tools, and equipment before use. • Apply appropriate ways to check the main water line is laid correctly and there is enough place available between main water line and water supply line. • Apply appropriate ways to identify the reason of changing or replacing the meter. • Employ appropriate practices to locate the area inside the customer’s premise near to main water line and check that the identified area is accessible to carry out installation, meter testing, commissioning, reading, recording and maintenance. • Employ appropriate installation techniques to install or replace the smart water meter and required supportive equipment. • Show how to check that smart water meter is correct, examined and tested. • Show how to apply anti-tampering features on water meter as per regulations and organizational procedures. • Show how to check the water meter for any leakage test to ensure there is no water leaks in the pipe connections. • Apply appropriate ways to test and calibrate the smart water meter. • Apply appropriate ways to check that replaced or repaired equipment are working properly and customer’s problems are resolved.

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|---|---|
| <ul style="list-style-type: none"> Discuss the information and data needed to be recorded and maintained related to the consumer and consumer's water meter. | <ul style="list-style-type: none"> Perform steps to escalate unresolved problems to appropriate authority for rectifications. Show how to record the water meter data. Apply appropriate ways to verify the accuracy of the water meter data recorded. |
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Classroom Aids:

Whiteboard, marker pen, computer or laptop attached to LCD projector, scanner, computer speakers

Tools, Equipment and Other Requirements

Different types of water meter - Positive Displacement Meters (PD Meters), Velocity Flow Meters, Electromagnetic Water Meters and Ultrasonic Water Meters
Screw driver, combination plier, pipe wrench, electric drill, drill bits, spanner set, Consumer meter testing kit
Various anti tampering material in meter viz Magnets, DC injectors, electrostatic discharge etc.

Module 4: Install smart gas meter

Mapped to ELE/N5910

Terminal Outcomes:

- Identify tools and equipment required for installation and replacement of gas meter.
- Perform installation of gas meter at consumer’s premises.
- Perform replacement of defective meter to tested meter.

Duration: 43:00	Duration: 57:00
Theory – Key Learning Outcomes	Practical – Key Learning Outcomes
<ul style="list-style-type: none"> • Describe the types, specifications, selection criteria and uses of consumer gas meters such as Diaphragm/bellows meters, Rotary meters, Turbine meters, Orifice meters and Ultrasonic flow meters. • Describe the different components of a consumer gas meter and their functions. • Recall Bureau of Indian Standards (BIS) set for gas meter. • Discuss the information and details required for the installation of smart gas meter at customer site. • List the tools and equipment required during installation work. • Discuss the selection criteria of tools and equipment required during tasks. • Summarise the steps to be performed for checking the tools and equipment before use. • Discuss various reasons for changing the gas meter. • Discuss the checks need to be done before installing or replacing the gas meter. • Discuss the necessary precautions to avoid any hazard and accident during gas meter installation, testing and commissioning activities. • List the steps to be performed for installation of gas meter and required supportive equipment. • Discuss need of anti-tampering features on gas meter. • Describe external factors which can affect the correct functioning of gas meter. • Describe various methods for testing and calibrating the gas meter. 	<ul style="list-style-type: none"> • Show how to obtain consumer details from authority for installation work. • Demonstrate organisational specified procedure of using tools and equipment required during work. • Apply appropriate ways to check the tools, and equipment before use. • Apply appropriate ways to check the main water line is laid correctly and there is enough place available between main water line and water supply line. • Apply appropriate ways to identify the reason of changing or replacing the gas meter. • Employ appropriate practices to locate the area inside the customer’s premise and check that the identified area is accessible to carry out installation, meter testing, commissioning, reading, recording and maintenance. • Employ appropriate installation techniques to install or replace the smart gas meter and required supportive equipment. • Show how to drill hole in the wall to guide the main gas line connection inside the kitchen. • Apply appropriate ways to measure and the cut the pipes for installation. • Show how to mount the gas meter and required supportive equipment on the selected location and connect them with main gas pipe line and gas stove. • Show how to check that smart gas meter is correct, examined and tested. • Show how to apply anti-tampering features on gas meter as per regulations and organizational procedures.

- | | |
|---|---|
| <ul style="list-style-type: none"> • Discuss the information and data needed to be recorded and maintained related to the consumer and consumer’s gas meter. | <ul style="list-style-type: none"> • Show how to check the gas meter for any leakage test to ensure there is no gas leaks in the pipe connections. • Apply appropriate ways to test and calibrate the smart gas meter. • Apply appropriate ways to check that replaced or repaired equipment are working properly and customer’s problems are resolved. • Perform steps to escalate unresolved problems to appropriate authority for rectifications. • Show how to record the gas meter data. • Apply appropriate ways to verify the accuracy of the gas meter data recorded. |
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Classroom Aids:

Whiteboard, marker pen, computer or laptop attached to LCD projector, scanner, computer speakers

Tools, Equipment and Other Requirements

Different types of gas meter - Diaphragm/bellows meters, Rotary meters, Turbine meters, Orifice meters and Ultrasonic flow meters

Screw driver, combination plier, pipe wrench, electric drill, drill bits, spanner set, Consumer meter testing kit

Various anti tampering material in meter viz Magnets, DC injectors, electrostatic discharge etc.

Module 5: Basic Health and Safety Practices

Mapped to ELE/N1002

Terminal Outcomes:

- Apply health and safety practices at the workplace.

Duration: 10:00	Duration: 20:00
Theory – Key Learning Outcomes	Practical – Key Learning Outcomes
<ul style="list-style-type: none"> • Discuss job-site hazards, risks and accidents. • Explain the organizational safety procedures for maintaining electrical safety, handling tools and hazardous materials. • Elaborate electronic waste disposal procedures. • Describe the process of disposal of hazardous waste • List the name and location of concerned people, documents and equipment for maintaining health and safety in the workplace. • Describe how to interpret warning signs while accessing sensitive work areas. • Explain the importance of good housekeeping. • Describe the importance of maintaining appropriate postures while lifting heavy objects. • List the types of fire and fire extinguishers. • Explain the importance of efficient utilisation of water, electricity and other resources. • List the common sources of pollution and ways to minimize it. • Describe the concept of waste management and methods of disposing hazardous waste. • Explain various warning and safety signs. • Describe different ways of preventing accidents at the 	<ul style="list-style-type: none"> • Demonstrate the use of protective equipment suitable as per tasks and work conditions. • Prepare a report to inform the relevant authorities about any abnormal situation/behaviour of any equipment/system. • Administer first aid in case of a minor accident. • Demonstrate the steps to free a person from electrocution safely. • Administer Cardiopulmonary Resuscitation (CPR). • Demonstrate the application of defined emergency procedures such as raising alarm, safe/efficient, evacuation, moving injured people, etc. • Prepare a sample incident report. • Use a fire extinguisher in case of a fire incident. • Demonstrate the correct method of lifting and handling heavy objects.
Classroom Aids	
Training kit (Trainer guide, Presentations), White board, Marker, projector, laptop, flipchart.	
Tools, Equipment and Other Requirements	
Personal Protection Equipment: safety glasses, head protection, rubber gloves, safety footwear, warning signs and tapes, fire extinguisher, first aid kit, fire extinguishers and warning signs.	

Module 6: Introduction to Employability Skills

Mapped to DGT/VSQ/N0101

Terminal Outcomes:

- Discuss about Employability Skills in meeting the job requirements

Duration: <0.5:00>	Duration: <0.5:00>
Theory – Key Learning Outcomes	Practical – Key Learning Outcomes
<ul style="list-style-type: none"> • Discuss the importance of Employability Skills in meeting the job requirements 	<ul style="list-style-type: none"> • Demonstrate Employability Skills
Classroom Aids:	
Whiteboard, marker pen, projector	
Tools, Equipment and Other Requirements	

Module 7: Constitutional values - Citizenship

Mapped to DGT/VSQ/N0101

Terminal Outcomes:

- Discuss about constitutional values to be followed to become a responsible citizen

Duration: <0.5:00>	Duration: <0.5:00>
Theory – Key Learning Outcomes	Practical – Key Learning Outcomes
<ul style="list-style-type: none"> • Explain constitutional values, civic rights, duties, citizenship, responsibility towards society etc. that are required to be followed to become a responsible citizen. 	<ul style="list-style-type: none"> • Show how to practice different environmentally sustainable practices
Classroom Aids:	
Whiteboard, marker pen, projector	
Tools, Equipment and Other Requirements	

Module 8: Becoming a Professional in the 21st Century

Mapped to DGT/VSQ/N0101

Terminal Outcomes:

- Demonstrate professional skills required in 21st century

Duration: <0.5:00>	Duration: <0.5:00>
Theory – Key Learning Outcomes	Practical – Key Learning Outcomes
<ul style="list-style-type: none"> • Discuss 21st century skills. 	<ul style="list-style-type: none"> • Display positive attitude, self -motivation, problem solving, time management skills and continuous learning mindset in different situations.
Classroom Aids:	
Whiteboard, marker pen, projector	
Tools, Equipment and Other Requirements	

Module 9: Basic English Skills

Mapped to DGT/VSQ/N0101

Terminal Outcomes:

- Practice basic English speaking.

Duration: <01:00>	Duration: <01:00>
Theory – Key Learning Outcomes	Practical – Key Learning Outcomes
<ul style="list-style-type: none"> • Discuss need of basic English skills. 	<ul style="list-style-type: none"> • Use appropriate basic English sentences/ phrases while speaking
Classroom Aids:	
Whiteboard, marker pen, projector	
Tools, Equipment and Other Requirements	

Module 10: Communication Skills

Mapped to DGT/VSQ/N0101

Terminal Outcomes:

- Practice basic communication skills.

Duration: <1.5:00>	Duration: <2.5:00>
Theory – Key Learning Outcomes	Practical – Key Learning Outcomes
<ul style="list-style-type: none"> • Discuss need of communication skills • Describe importance of team work 	<ul style="list-style-type: none"> • Demonstrate how to communicate in a well -mannered way with others. • Demonstrate working with others in a team
Classroom Aids:	
Whiteboard, marker pen, projector	
Tools, Equipment and Other Requirements	

Module 11: Diversity & Inclusion

Mapped to DGT/VSQ/N0101

Terminal Outcomes:

- Describe PwD and gender sensitisation.

Duration: <0.5:00>	Duration: <0.5:00>
Theory – Key Learning Outcomes	Practical – Key Learning Outcomes
<ul style="list-style-type: none"> Discuss the significance of reporting sexual harassment issues in time 	<ul style="list-style-type: none"> Show how to conduct oneself appropriately with all genders and PwD
Classroom Aids:	
Whiteboard, marker pen, projector	
Tools, Equipment and Other Requirements	

Module 12: Financial and Legal Literacy

Mapped to DGT/VSQ/N0101

Terminal Outcomes:

- Describe ways of managing expenses, income, and savings.

Duration: <1.5:00>	Duration: <2.5:00>
Theory – Key Learning Outcomes	Practical – Key Learning Outcomes
<ul style="list-style-type: none"> Discuss the significance of using financial products and services safely and securely. Explain the importance of managing expenses, income, and savings. Explain the significance of approaching the concerned authorities in time for any exploitation as per legal rights and laws 	<ul style="list-style-type: none"> Demonstrate ways of managing expenses, income, and savings.
Classroom Aids:	
Whiteboard, marker pen, projector	
Tools, Equipment and Other Requirements	

Module 13: Essential Digital Skills

Mapped to DGT/VSQ/N0101

Terminal Outcomes:

- Demonstrate procedure of operating digital devices and associated applications safely.

Duration: <01:00>	Duration: <02:00>
Theory – Key Learning Outcomes	Practical – Key Learning Outcomes
<ul style="list-style-type: none"> • Discuss the significance of using internet for browsing, accessing social media platforms, safely and securely 	<ul style="list-style-type: none"> • Show how to operate digital devices and use the associated applications and features, safely and securely
Classroom Aids:	
Whiteboard, marker pen, projector	
Tools, Equipment and Other Requirements	

Module 14: Entrepreneurship

Mapped to DGT/VSQ/N0101

Terminal Outcomes:

- Describe opportunities as an entrepreneur.

Duration: <2.5:00>	Duration: <4.5:00>
Theory – Key Learning Outcomes	Practical – Key Learning Outcomes
<ul style="list-style-type: none"> Discuss the need for identifying opportunities for potential business, sources for arranging money and potential legal and financial challenges 	<ul style="list-style-type: none"> Demonstrate ways for identifying opportunities for potential business, sources for arranging money and potential legal and financial challenges
Classroom Aids:	
Whiteboard, marker pen, projector	
Tools, Equipment and Other Requirements	

Module 15: Customer Service

Mapped to DGT/VSQ/N0101

Terminal Outcomes:

- Describe ways of maintaining customer.

Duration: <1.5:00>	Duration: <2.5:00>
Theory – Key Learning Outcomes	Practical – Key Learning Outcomes
<ul style="list-style-type: none"> • Differentiate between types of customers. • Explain the significance of identifying customer needs and addressing them. • Discuss the significance of maintaining hygiene and dressing appropriately. 	<ul style="list-style-type: none"> • Show how to maintain hygiene and dressing appropriately.
Classroom Aids:	
Whiteboard, marker pen, projector	
Tools, Equipment and Other Requirements	

Module 16: Getting ready for apprenticeship & Jobs

Mapped to DGT/VSQ/N0101

Terminal Outcomes:

- Describe ways of preparing for apprenticeship & Jobs appropriately.

Duration: <01:00>	Duration: <01:00>
Theory – Key Learning Outcomes	Practical – Key Learning Outcomes
<ul style="list-style-type: none"> Discuss the significance of dressing up neatly and maintaining hygiene for an interview Discuss how to search and register for apprenticeship opportunities 	<ul style="list-style-type: none"> Create a biodata Use various sources to search and apply for jobs
Classroom Aids:	
Whiteboard, marker pen, projector	
Tools, Equipment and Other Requirements	

Annexure

Trainer Requirements

Trainer Prerequisites						
Minimum Educational Qualification	Specialization	Relevant Industry Experience		Training Experience		Remarks
		Years	Specialization	Years	Specialization	
BE/ BTech	Electrical/ Mechanical/ Electronics	1	Smart meters installation and repair	1	Trainer	
Diploma/ITI	Electrical/ Mechanical/ Electronics	2	Smart meters installation and repair	1	Trainer	
Certified in relevant CITS Trade						

Trainer Certification	
Domain Certification	Platform Certification
“Assistant Technician - Smart Meter, ELE/Q5905, version 1.0”. Minimum accepted score is 80%.	Recommended that the Trainer is certified for the Assistant Technician – Smart Meter “Trainer (VET and Skills)”, mapped to the Qualification Pack: “MEP/Q2601, V2.0”, with minimum score of 80%

Assessor Prerequisites						
Minimum Educational Qualification	Specialization	Relevant Industry Experience		Training/Assessment Experience		Remarks
		Years	Specialization	Years	Specialization	
BE/ BTech	Electrical/ Mechanical/ Electronics	2	Smart meters installation and repair	2	Assessor	
Diploma/ITI	Electrical/ Mechanical/ Electronics	3	Smart meters installation and repair	2	Assessor	
Certified in relevant CITS Trade						

Assessor Certification	
Domain Certification	Platform Certification
“Assistant Technician - Smart Meter, ELE/Q5905, version 1.0”. Minimum accepted score is 80%.	Recommended that the Assessor is certified for the Assistant Technician – Smart Meter “Assessor (VET and Skills)” , mapped to the Qualification Pack: “MEP/Q2701, V2.0”, with minimum score of 80%

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

Glossary

Sector	Sector is a conglomeration of different business operations having similar business and interests. It may also be defined as a distinct subset of the economy whose components share similar characteristics and interests.
Sub-sector	Sub-sector is derived from a further breakdown based on the characteristics and interests of its components.
Occupation	Occupation is a set of job roles, which perform similar/ related set of functions in an industry.
Job role	Job role defines a unique set of functions that together form a unique employment opportunity in an organisation.
Occupational Standards (OS)	OS specify the standards of performance an individual must achieve when carrying out a function in the workplace, together with the Knowledge and Understanding (KU) they need to meet that standard consistently. Occupational Standards are applicable both in the Indian and global contexts.
Performance Criteria (PC)	Performance Criteria (PC) are statements that together specify the standard of performance required when carrying out a task.
National Occupational Standards (NOS)	NOS are occupational standards which apply uniquely in the Indian context.
Qualifications Pack (QP)	QP comprises the set of OS, together with the educational, training and other criteria required to perform a job role. A QP is assigned a unique qualifications pack code.
Unit Code	Unit code is a unique identifier for an Occupational Standard, which is denoted by an 'N'
Unit Title	Unit title gives a clear overall statement about what the incumbent should be able to do.
Description	Description gives a short summary of the unit content. This would be helpful to anyone searching on a database to verify that this is the appropriate OS they are looking for.
Scope	Scope is a set of statements specifying the range of variables that an individual may have to deal with in carrying out the function which have a critical impact on quality of performance required.

Knowledge and Understanding (KU)	Knowledge and Understanding (KU) are statements which together specify the technical, generic, professional and organisational specific knowledge that an individual needs in order to perform to the required standard.
Organisational Context	Organisational context includes the way the organisation is structured and how it operates, including the extent of operative knowledge managers have of their relevant areas of responsibility.
Technical Knowledge	Technical knowledge is the specific knowledge needed to accomplish specific designated responsibilities.
Core Skills/ Generic Skills (GS)	Core skills or Generic Skills (GS) are a group of skills that are the key to learning and working in today's world. These skills are typically needed in any work environment in today's world. These skills are typically needed in any work environment. In the context of the OS, these include communication related skills that are applicable to most job roles.
Electives	Electives are NOS/set of NOS that are identified by the sector as contributive to specialization in a job role. There may be multiple electives within a QP for each specialized job role. Trainees must select at least one elective for the successful completion of a QP with Electives.
Options	Options are NOS/set of NOS that are identified by the sector as additional skills. There may be multiple options within a QP. It is not mandatory to select any of the options to complete a QP with Options.

Acronyms and Abbreviations

NOS	National Occupational Standard(s)
NSQF	National Skills Qualifications Framework
QP	Qualifications Pack
TVET	Technical and Vocational Education and Training
IPR	Intellectual Property Rights