Model Curriculum

QP Name: Field Engineer RACW

QP Code: ELE/Q3105

QP Version: 3.0

NSQF Level: 5

Model Curriculum Version: 3.0

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 & IT Hardware
Occupation	After Sales Service
Country	India
NSQF Level	5
Aligned to NCO/ISCO/ISIC Code	NCO-2015/7241.1001
Minimum Educational Qualification and Experience	Diploma (after 10 (Electronics/Electrical/Mechanical))) with 1 Year of Relevant Experience OR 12th grade pass with 1 year NTC/ NAC with 1 Year of Relevant Experience OR 12th grade Pass with 2 Years of Relevant Experience OR Previous relevant Qualification of NSQF Level (4) with 3 Years of Relevant Experience OR 10th grade pass with 4 Years of Relevant Experience
Pre-Requisite License or Training	NA
Minimum Job Entry Age	18 Years
Last Reviewed On	27.01.2022
Next Review Date	27.01.2025
NSQC Approval Date	27.01.2022
QP Version	3.0
Model Curriculum Creation Date	27.01.2022
Model Curriculum Valid Up to Date	27.01.2025
Model Curriculum Version	3.0
Maximum Duration of the Course	750 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:

- Describe the process of engaging with customer with service.
- Demonstrate the process of performing installation and repair of refrigerator.
- Demonstrate the process of installation and repair of air conditioners.
- Demonstrate the process of installation and repair of washing machine.
- Explain the importance of following inclusive practices for all genders and PwD at work.
- Demonstrate various practices to be followed to maintain health and safety at work.

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	**21:00**	**39:00**	**00:00**	**00:00**	**60:00**
Module 1: Introduction and orientation to the role of a Field Engineer RACW	21:00	39:00	00:00	00:00	60:00
ELE/N3101: Engage with customer for service	**30:00**	**60:00**	**30:00**	**00:00**	**120:00**
Module 2: Process of engaging with customer with service	30:00	60:00	30:00	00:00	120:00
ELE/N3112: Perform installation and repair of refrigerator	**30:00**	**60:00**	**60:00**	**00:00**	**150:00**
Module 3: Process of performing installation and repair of refrigerator	30:00	60:00	60:00	00:00	150:00
ELE/N3114: Perform installation and repair of air conditioners	**30:00**	**60:00**	**60:00**	**00:00**	**150:00**
Module 4: Process of installation and repair of air conditioners	30:00	60:00	60:00	00:00	150:00

ELE/N3116: Perform installation and repair of washing machine	**60:00**	**60:00**	**60:00**	**00:00**	**180:00**
Module 5: Process of installation and repair of washing machine	60:00	60:00	60:00	00:00	180:00
ELE/N1002 Apply health and safety practices at the workplace	**15:00**	**15:00**	**00:00**	**00:00**	**30:00**
Module 6: Basic Health and Safety Practice	15:00	15:00	00:00	00:00	30:00
DGT/VSQ/N0102- Employability Skills (60 Hours)	**24:00**	**36:00**	**00:00**	**00:00**	**60:00**
Module 7: Employability Skills (60 Hours)	24:00	36:00	00:00	00:00	60:00
Total Duration	**210:00**	**330:00**	**210:00**	**00:00**	**750:00**

Module Details

Module 1: Introduction and orientation to the role of a Field Engineer RACW

Bridge Module

Terminal Outcomes:

- Discuss the job role of a Field Engineer RACW.

Duration: 21:00	Duration: 39:00
Theory – Key Learning Outcomes	**Practical – Key Learning Outcomes**
• Describe the size and scope of the electronic industry and its sub-sectors. • Discuss the role and responsibilities of a Field Engineer RACW. • Describe various employment opportunities for a Field Engineer RACW.	• Familiarization with the tools used in HVAC Technician • Familiarization with the Types of Air Conditioner • Overview of working of the Air Conditioner and its components • Familiarization with the Types of Washing Machines • Overview of working of the Washing Machine and its components
Classroom Aids	
Training Kit - Trainer Guide, Presentations, Whiteboard, Marker, Projector, Laptop	
Tools, Equipment and Other Requirements	
NA	

Module 2: Process of engaging with customer with service

Mapped to ELE/N3101

Terminal Outcomes:

- Explain the importance of interacting with customer.
- Explain the need of suggesting possible solutions.

Duration: 30:00	Duration: 60:00
Theory – Key Learning Outcomes	**Practical – Key Learning Outcomes**
• Explain company's policies on code of conduct, organisation's culture, customer care, reporting structure and documentation policy. • State company's products and recurring problems reported in consumer appliances. • Explain precautions to be taken while handling field calls and dealing with customers. • Explain the importance of personal grooming with proper etiquettes at the customer's premises. • List basic electrical, mechanical modules of various appliances and electronics involved in the type of appliance. • State models of different appliances, their common and distinguishing features, functionality of different features of appliances and new features.	• Demonstrate how to analyse the details of customer complaint registered at customer care or installation schedule. • Show how to check about warranty status of appliance and annual maintenance contract.
Classroom Aids	
Training Kit (Trainer Guide, Presentations). Whiteboard, Marker, Projector, Laptop	
Tools, Equipment and Other Requirements	
NA	

Module 3: Process of performing installation and repair of refrigerator

Mapped to ELE/N3112

Terminal Outcomes:

- Describe the process of preparing for installation of refrigerator.
- Demonstrate the process of installing refrigerator at customer location.
- Demonstrate the process of diagnosing, repairing and replacing the dysfunctional module of refrigerator.
- Demonstrate the process of completing documentation.
- Describe the process of coordinating with others w.r.t. installation and repair.

Duration: 30:00	Duration: 60:00
Theory – Key Learning Outcomes	**Practical – Key Learning Outcomes**
• Explain the company's policy on product's warranty, sales, installation, after sales support policy and other terms and conditions. • Explain different types of refrigerators such as traditional, frost-free, peltier with all features and functionalities of various models. • State refrigerator manufacturing capabilities of the organisation, models of the company and their respective features. • List installation-site requirements such as structural requirements, ventilation, etc. • Explain the refrigeration cycle and functioning of the appliance and its various modules, including various electromechanical parts of the refrigerator. • Describe the method of refrigeration, its use and functioning of refrigerator sealed system. • Explain types of refrigerants such as R12, R22, R134a, R290, R600a, R410, R32, use of different brazing sticks, types of brazing torches, fluxes and their application. • Describe manual-based procedure of installing the refrigerators. • Describe methods of fixing various accessories, parts that have accompanied the unit and their	• Demonstrate how to provide guidance to the customer for pre-installation requirement as per the appliance w.r.t platform for placing the appliance, plug point, etc. • Show how to remove the packaging from the appliance delivered at the customer location. • Demonstrate the process of clearing up the packaging material waste and disposing it as per company's norms. • Demonstrate the process of fitting water-disposal beaker, handle, shelves, basket and side buckets. • Show how to connect the refrigerator to power supply and set cooling/freezer temperature knobs according to the season so as to demonstrate features/utility. • Demonstrate how to diagnose the fault based on customer interaction, usage pattern and initial inspection. • Show how to unplug the appliance to carry out further inspection. • Demonstrate the process of performing basic tests such as power supply inspection, volt ampere test and earth test power supply. • Show how to inspect every module of the unit separately if the fault is not identified through basic tests such as compressor, motors, PCB, condenser optimise the time taken to fix the

features. • Explain how to use the appliance and its various features/functionalities after installation. • Explain the use of test equipment and tools such as multi-meter, oscilloscope etc. • Explain safety precautions/rules, policies, procedures and quality standards to be followed. • Explain the fundamentals of electricity such as ohms law, difference between ac and dc, understanding of domestic wiring, understanding of series and parallel connections. • Explain how to rectify so as to avoid repeat fault in the refrigerator. • Describe the process of selection of appropriate spares for replacement. • Explain basic knowledge of components such as diode, transformer, LED, photo transistor, capacitor, thermistor ICs etc. • Explain components/modules of refrigerators and their prices. • Describe packaging waste disposal procedures. • State refrigerator energy ratings such as BEE rating. • State troubleshooting knowledge with respect to refrigerators. • Explain various hazards, their causes and prevention/personal safety. • Explain frequently occurring faults such as noise, water dripping and insufficient cooling, their causes and solutions. • Describe other products of the company.	dysfunctional refrigerator. • Demonstrate the process of repairing/replacing component at location, if the fault identified is due to damage of components. • Show how to reassemble the unit to check that all the modules of the unit are working as per specifications. • Demonstrate functionality of the unit to the customer. • Show how to fill in customer acknowledgement form and get it signed by customer, both in case of installation and repair. • Prepare sample document of the work completed on the company ERP software for tracking. • Prepare all sample documents related to complaint closure. • Demonstrate how to escalate customer issues and problems that are unresolved at field level, including queries on non-field service areas. • Roleplay how to provide training to junior level technicians about installation procedures, diagnosis procedures and customer handling.
Classroom Aids	
Training Kit (Trainer Guide, Presentations). Whiteboard, Marker, Projector, Laptop	
Tools, Equipment and Other Requirements	

Different types of Refrigerators, Multi-meter, Pressure Gauge, Electrical Drill, Clamp Meter, Tube Cutter, Tube Bender, Vacuum Pump, Weighing Scale, Gas Cylinder, Temperature meter, Spanner, Screw Driver set

Module 4: Process of installation and repair of air conditioners

Mapped to ELE/N3114

Terminal Outcomes:

- Demonstrate the process of performing pre-installation checks.
- Demonstrate the process of installing the air conditioner.
- Demonstrate the process of analysing symptoms, identifying and rectifying faults.
- Demonstrate the process of completing documentation.

Duration: 30:00	Duration: 60:00
Theory – Key Learning Outcomes	**Practical – Key Learning Outcomes**
• Explain the safety rules, policies, procedures and quality standards to be followed. • State the installation-site requirements such as structural requirements, ventilation, etc. • Describe manual-based procedure of installing the air conditioner. • Explain how to fix various accessories and parts that have accompanied the unit. • Explain how to operate tools such as screw drivers, electric drill for installation. • Describe packaging waste disposal procedures. • Explain how to operate the air conditioner and use the various features. • Describe the method of air conditioning, its use and functioning of sealed system. • Explain the troubleshooting knowledge with respect to air conditioners. • List the frequently occurring faults such as poor/no cooling, noisy unit, condensation water over flowing and basic electrical faults such as improper/no earthing, defective power cord, etc. • Explain the basic electrical and mechanical modules of air	• Demonstrate how to analyze the work requirements by interacting with the supervisor. • Show how to mark position for placement of indoor/outdoor units to get customer confirmation on position and installation on next visit. • Show how to remove the air conditioner packaging without causing any damage and ensure that it matches the customer order in terms of colour. • Demonstrate how to inspect that tools and fitments required for the installation are available. • Demonstrate the process of disposing the packaging material waste as per company's norms. • Show how to measure the location to drill holes ensuring that no internal wiring damage takes place. • Demonstrate how to mount the indoor unit and ensure that the screws are fastened securely. • Show how to place the outdoor unit at a suitable location and attach it firmly to wall/floor. • Show how to connect the indoor and the outdoor units using the field copper pipe of appropriate size and interconnecting cables. • Demonstrate the process of filling additional gas if the distance between the indoor and the outdoor units is

conditioner. • Explain the usage of test equipment and tools such as multi-meter, oscilloscope, temperature meter, pressure gauges, etc. • Explain how to detect defects in the compressor, condenser and other problems such as improper alignment of unit, low refrigerant charge, etc along with their reasons. • Explain how to diagnose reasons for improper cooling by diagnosing causes such as dirty filter, blocked coil, bent fins, improper damper setting, low capacity of unit, etc. • Explain the fundamentals of electricity such as ohms law, difference between ac and dc, etc., basic electronic components such as diode, transformer, LED, photo transistor, etc., electrical and electronic symbols, multiples and SI units • Explain the basics of types of refrigerants such as R12, R22, R134a, R290, R600a, R410, R32. • Explain the use of different brazing sticks, types of brazing torches, types of fluxes and their application. • Explain how to document completion note for customer. • Explain how to record completion information in the ERP system.	more than what is recommended. • Demonstrate how to align the air conditioner as per the instructions manual and make necessary power supply connections. • Demonstrate the features/utility to customer for the new installation while explaining the precautions to be taken while using the air conditioner. • Demonstrate how to analyze usage pattern of the air conditioner from the customer. • Show how to diagnose the fault based on customer interaction and initial inspection by carrying out basic tests such as power supply inspection, volt ampere test, etc. • Show how to separate and inspect every module of the unit if the fault is not identified through basic tests. • Demonstrate the process of repairing or replacing faulty part as per requirement at customer location or send it to service center on time in case immediate repair is not possible for specialized parts such as PCB. • Demonstrate the process of carrying out brazing operation at the customer premise or pass the complaint on to a specialist in-charge of handling brazing, if the fault identified is a gas leak. • Show how to reassemble the unit after rectifying identified fault. • Show how to check that all the modules of the unit work as per specifications and confirm functionality to the customer. • Show how to fill in customer acknowledgement form and seek customer's signature. • Prepare sample documents for recording installation/repair of air conditioner and update the company ERP software for tracking/future

	references.
Classroom Aids	
Training Kit (Trainer Guide, Presentations). Whiteboard, Marker, Projector, Laptop	
Tools, Equipment and Other Requirements	
Different types of Air conditioners, Multi-meter, Pressure Gauge, Electrical Drill, Clamp Meter, Tube Cutter, Tube Bender, Vacuum Pump, Weighing Scale, Gas Cylinder, Temperature meter, Spanner, Screw Driver set	

Module 5: Process of installation and repair of washing machine

Mapped to ELE/N3116

Terminal Outcomes:

- Describe the process of preparing for installation of washing machine.
- Demonstrate the process of installing washing machine at customer location.
- Demonstrate the process of diagnosing, repairing and replacing the faulty module of appliance Complete documentation.
- Explain the importance of coordinating with others w.r.t. installation and repair.

Duration: 60:00	Duration: 60:00
Theory – Key Learning Outcomes	**Practical – Key Learning Outcomes**
• State the installation site requirements (structural requirements, ventilation, etc.) with all safety precautions to be taken while installing washing machine. • Explain different types of washing machines such as front load and top load their features and functionalities. • Explain controls, features and functionalities of various washing machine models of the company. • State the safety precautions/rules, policies, procedures and quality standards to be followed. • Describe the manual-based procedure of installing the washing machine. • Describe the methods of fixing various accessories, parts that have accompanied the washing machine. • Describe packaging waste disposal procedures. • Explain how to use the appliance and its various features/functionalities after installation. • Explain the use of test equipment and tools such as multi-meter, oscilloscope etc. • Explain different cycles in the machine running process and possible symptoms of faults in	• Demonstrate how to remove the packaging from the appliance delivered at the customer location. • Show how to verify that the product matches the customer's order in terms of colour, model etc. along with all supporting accessories. • Demonstrate the process of clearing up the packaging material waste and disposing it as per company's norms. • Show how to position the washing machine on appropriate platform as per location guidelines given in the installation manual. • Show how to remove all transport pins or anything lying in the drum of the washing machine before starting the machine. • Demonstrate the process of checking the necessary plumbing installations required for water inlet and outlet. • Demonstrate how to connect the machine's drain hose with the sewage pipe to ensure proper drainage. • Demonstrate how to connect the waste water outlet from the washing machine to the waste system such that the dirty water does not get siphoned back into the washing machine. • Show how to perform steps to make inlet, outlet and power supply

respective cycles. • Explain the fundamentals of electricity such as ohms law, difference between ac and dc, understanding of domestic wiring, series and parallel connections. • Explain the fundamentals of motors, types of motors and their working methods. • Explain the basic knowledge of components such as diode, transformer, LED, photo transistor, capacitor, thermistor ICs etc. and functioning of components and parts such as solenoids and plungers. • Explain the basics of gears, behaviour of gear mechanism, understanding of linear and angular movements, concepts such as rpm, torque etc. • Explain types of switches such as thermal, mechanical, electronic, magnetic, electromagnetic, electromechanical, pressure optical and bimetal. • State the troubleshooting knowledge with respect to washing machine. • Explain the causes and solutions of faults common to all types of washing machines, faults specific to different models and frequently occurring faults such as noise, water not filling/over filling, water not draining. • List the components/modules of the washing machine and their prices. • Explain various hazards, their causes and prevention/personal safety.	connections securely using the correct tools and equipment for installation. • Show how to operate and check that there are no leaks and the machine is in a safe and stable condition. • Show how to diagnose the fault based on customer interaction, usage pattern and initial inspection. • Show how to unplug the appliance to carry out further inspection. • Demonstrate the process of performing basic tests such as power supply inspection, volt ampere test and earth test power supply. • Show how to inspect every module of the unit separately if the fault is not identified through basic tests. • Demonstrate the process of repairing/replacing component at location, if the fault identified is due to damage of components. • Show how to reassemble the unit to check that all the modules of the unit are working as per specifications. • Demonstrate functionality of the unit to the customer. • Show how to fill in customer acknowledgement form and get it signed by customer, both in case of installation and repair. • Prepare sample documents related to the work completed on the company ERP software for tracking. • Prepare sample documents related to complaint closure. • Show how to escalate customer issues and problems that are unresolved at field level, including queries on non-field service areas.
Classroom Aids	
Training Kit (Trainer Guide, Presentations). Whiteboard, Marker, Projector, Laptop	
Tools, Equipment and Other Requirements	

Different types of Washing machines, Multi-meter, Pressure Gauge, Clamp Meter, Weighing Scale, Temperature meter, Spanner, Screw Driver set

Module 6: Basic Health and Safety Practice

Mapped to ELE/N1002

Terminal Outcomes:

- Apply health and safety practices at the workplace.

Duration: 15:00	Duration: 15:00
Theory – Key Learning Outcomes	**Practical – Key Learning Outcomes**
• Discuss job-site hazards, risks and accidents. • Explain the organizational safety procedures for maintaining electrical safety, handling tools and hazardous materials. • Elaborate on 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 workplace.	• 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). Whiteboard, Marker, Projector, Laptop
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 7: Employability Skills (60 Hours)

Mapped to DGT/VSQ/N0102

Terminal Outcomes:

- Discuss about Employability Skills in meeting the job requirements
- Describe opportunities as an entrepreneur.
- Describe ways of preparing for apprenticeship & Jobs appropriately.

Duration: *24:00*	**Duration:** *36:00*
Theory – Key Learning Outcomes	**Practical – Key Learning Outcomes**
• Explain constitutional values, civic rights, responsibility towards society to become a responsible citizen • Discuss 21st century skills • Explain use of basic English phrases and sentences. • Demonstrate how to communicate in a well-behaved manner • Demonstrate how to work with others • Demonstrate how to operate digital devices • Discuss the significance of Internet and Computer/ Laptops • Discuss the need for identifying business opportunities • Discuss about types of customers. • Discuss on creation of biodata • Discuss about apprenticeship and opportunities related to it.	• List different learning and employability related GOI and private portals and their usage • Show how to practice different environmentally sustainable practices. • Exhibit 21st century skills like Self-Awareness, Behavior Skills, time management, etc. • Show how to use basic English sentences for everyday conversation in different contexts, in person and over the telephone • Demonstrate how to communicate in a well -mannered way with others. • Demonstrate how to communicate effectively using verbal and nonverbal communication etiquette • Utilize virtual collaboration tools to workeffectively • Demonstrate how to maintain hygiene and dressing appropriately. • Perform a mock interview
Classroom Aids	
Training Kit (Trainer Guide, Presentations). Whiteboard, Marker, Projector, Laptop	
Tools, Equipment and Other Requirements	
Computer, UPS, Scanner, Computer Tables, LCD Projector, Computer Chairs, White Board OR Computer Lab	

Module 8: On-the-Job Training

Mapped to Field Engineer RACW

Mandatory Duration: 210:00	Recommended Duration: 00:00
Location: On Site	

Terminal Outcomes

1. Check the warranty status of the appliance and annual maintenance contract.
2. Clearing up the packaging material waste and disposing it as per company's norms.
3. Fitting water-disposal beaker, handle, shelves, basket and side buckets.
4. Diagnose the fault.
5. Perform basic tests such as power supply inspection, volt ampere test and earth test power supply.
6. Reassemble the unit to check that all the modules of the unit are working as per specifications.
7. Inspect the tools and fitments required for the installation are available.
8. Align the air conditioner as per the instructions manual and make necessary power supply connections.
9. Prepare sample documents for recording installation/repair of air conditioner and update the company ERP software for tracking/future references.
10. Communicating effectively at the workplace.
11. Applying health and safety practices at the workplace.

Annexure

Trainer Requirements

Trainer Prerequisites						
Minimum Educational Qualification	**Specialization**	**Relevant Industry Experience**		**Training Experience**		**Remarks**
		Years	***Specialization***	***Years***	***Specialization***	
Diploma/ Degree/ ITI/ Certified in relevant CITS Trade	(Electrical/Electronics/ Mechanical)	2	RAC	1	Electronics	

Trainer Certification	
Domain Certification	**Platform Certification**
"**Field Engineer RACW**", "ELE/Q3105, v3.0", Minimum accepted score is 80%	Recommended that the Trainer is certified for the **Field Engineer - RACW** "Trainer (VET and Skills)", mapped to the Qualification Pack:"MEP/Q2601, V2.0", with minimum score of 80%

Assessor Requirements

Assessor Prerequisites						
Minimum Educational Qualification	**Specialization**	**Relevant Industry Experience**		**Training/Assessment Experience**		**Remarks**
		Years	***Specialization***	***Years***	***Specialization***	
Diploma/ Degree/ ITI/ Certified in relevant CITS Trade	(Electrical/Electronics/ Mechanical)	3	RAC	1	Electronics	

Assessor Certification	
Domain Certification	**Platform Certification**
"**Field Engineer RACW**", "ELE/Q3105, v3.0", Minimum accepted score is 80%	Recommended that the Assessor is certified for the **Field Engineer - RACW** "Assessor (VET and Skills)", mapped to the Qualification Pack: "MEP/Q2701, V2.0", with minimum score of 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
    - The assessment agency deploys the ToA certified Assessor for executing the assessment
    - SSC monitors the assessment process & records
2. Testing Environment

    To ensure a conducive environment for conducting a test, the trainer will:
    - 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 10 a.m. and 5 p.m. respectively
    - Ensure there are 2 Assessors if the batch size is more than 30.
    - 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
    - The assessor must be ToA certified and the trainer must be ToT Certified
    - The 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:

    To verify the details submitted by the training centre, the assessor will undertake:
    - A surprise visit to the assessment location
    - A random audit of the batch
    - A random audit of any candidate
6. Method for assessment documentation, archiving, and access

    To protect the assessment papers and information, the assessor will ensure:
    - 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 on the Hard drive

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	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
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

Term	Description
ISO	International Organization for Standardization
NCO	National Occupational Standards
NOS	National Skills Qualification Committee
NSQF	National Skills Qualification Framework
OJT	On-the-Job Training
OMR	Optical Mark Recognition
PC	Performance Criteria
PwD	Persons with Disabilities
QP	Qualification Pack
SDMS	Skill Development & Management System
SIP	Skill India Portal
SME	Small and Medium Enterprises
SOP	Standard Operating Procedure
SSC	Sector Skill Council
TC	Trainer Certificate
ToA	Training of Assessors
ToT	Training of Trainers
TP	Training Provider