Model Curriculum

QP Name: Building Management System Service Engineer

QP Code: ELE/Q7104

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	Industrial Automation
Occupation	After Sales Service
Country	India
NSQF Level	5
Aligned to NCO/ISCO/ISIC Code	NCO-2015/7411.0100
Minimum Educational Qualification and Experience	Completed 2nd year of UG (UG Diploma) (Physics/Electronics/ Electrical/Mechanical) with 1.5 years of Relevant Exp. OR Completed 3 year diploma after 10th (Electronics/Electrical/ Mechanical) with 3 Years of Relevant Exp. OR Previous relevant Qualification of NSQF Level (4.5) with 1.5 years of Relevant Exp. #Relevant Exp in Industrial Automation
Pre-Requisite License or Training	NA
Minimum Job Entry Age	18 Years
Last Reviewed On	01.05.2025
Next Review Date	30.04.2028
NSQC Approval Date	08.05.2025
QP Version	3.0
Model Curriculum Creation Date	01.05.2025
Model Curriculum Valid Up to Date	30.04.2028
Model Curriculum Version	3.0
Minimum Duration of the Course	570 Hours
Maximum Duration of the Course	570 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 preparing for installing the BMS.
- Demonstrate the process of carrying out the installation of BMS.
- Demonstrate the process of carrying out commissioning and testing of BMS.
- Demonstrate the process of carrying out repair and maintenance of BMS.
- 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
ELE/N7205: Prepare for installing the BMS	**66:00**	**24:00**	**30:00**	**00:00**	**120:00**
Module 1: Process of preparing for installing the BMS	66:00	24:00	30:00	00:00	120:00
ELE/N7206: Carry out the installation of BMS	**30:00**	**30:00**	**60:00**	**00:00**	**120:00**
Module 2: Process of carrying out the installation of BMS	30:00	30:00	60:00	00:00	120:00
ELE/N7208: Carry out commissioning and testing of BMS	**30:00**	**60:00**	**30:00**	**00:00**	**120:00**
Module 3: Process of carrying out commissioning and testing of BMS	30:00	60:00	30:00	00:00	120:00

ELE/N7207: Carry out repair and maintenance of BMS	**30:00**	**60:00**	**60:00**	**00:00**	**150:00**
Module 4: Process of carrying out repair and maintenance of BMS	30:00	60:00	60:00	00:00	150:00
DGT/VSQ/N0102: Employability Skills (60 Hours)	**24:00**	**36:00**	**00:00**	**00:00**	**60:00**
Module 5: Employability Skills (60 Hours)	24:00	36:00	00:00	00:00	60:00
Total Duration	**180:00**	**210:00**	**180:00**	**00:00**	**570:00**

Module Details

Module 1: Process of preparing for installing the BMS

Mapped to ELE/N7205

Terminal Outcomes:

- Describe the process of checking the availability of required resources.
- Describe the process of checking and test the received resources.
- Demonstrate the process of preparing for installing the BMS.

Duration: 66:00	Duration: 24:00
Theory – Key Learning Outcomes	**Practical – Key Learning Outcomes**
• Explain the apparatus required for the installation of BMS such as Direct Digital Controller (DDC), sensors, actuators, relevant types of cables, Human Machine Interface (HMI) display, computer, server, etc. • List the necessary tools, equipment, and Personal Protective Equipment (PPE) required for BMS installation. • Explain the importance of ensuring that trained personnel assist with the BMS installation process. • Describe the process of examining the BMS apparatus before installation to ensure no physical damage or malfunctions. • List the applicable documentation requirements. • Explain the importance of ensuring all the civil works are completed in the building and necessary approval/ clearance is obtained before starting the installation process. • Elabrate how to prepare the circuit diagram/ shop drawing/ as-built drawings for the installation of BMS in the building. • Explain the importance of ensuring all the outlets related to BMS are	• Dramatize how to test the BMS apparatus to ensure the correct functioning. • Prepare a sample record of receipt/ replacement and testing of the apparatus. • Demonstrate the process of preparing the circuit diagram/ shop drawing/ as-built drawings for the installation of BMS in the building. • Demonstrate the process of installing the Heating, Ventilation and Air-conditioning HVAC equipment as per the BMS installation plan through coordination with HVAC installation technician. • Dramatize how to prepare various equipment for installation as per the manufacturer's instructions.

accessible and not covered by Mechanical, Electrical and Plumbing (MEP) services. ● Explain the importance of ensuring the work area is ready and safe to start the installation of BMS systems. ● Describe the process of assembling various BMS equipment such as access control, video surveillance, fire alarms, HVAC control, programmable lighting and electric power management for installation.	
Classroom Aids	
Training Kit (Trainer Guide, Presentations). Whiteboard, Marker, Projector, Laptop	
Tools, Equipment and Other Requirements	
Lighting, Heating, Ventilation and Air Conditioning (HVAC), Fire, Smoke Detection and Alarms, Motion Detectors, CCTV, Security and Access Control, ICT Systems, Lifts, Industrial Processes or Equipment, Shading Devices	

Module 2: Process of carrying out the installation of BMS

Mapped to ELE/N7206

Terminal Outcomes:

- Dramatizee the process of installing conduits and carry out wiring.
- Demonstrate the process of installing the Direct Digital Controller (DDC) with field devices.
- Dramatize the process of installing the central peripherals.
- Demonstrate the process of installing the motion sensors.
- Demonstrate the process of installing the duct air temperature sensor and duct temperature/ humidity sensor.
- Dramatize the process of installing the water differential pressure sensor.
- Demonstrate the process of installing the air differential pressure sensor.
- Demonstrate the process of installing the immersion water temperature sensor.
- Dramatize the process of installing the smoke detectors in AC ducts.
- Demonstrate the process of installing the butterfly valves.

Duration: 30:00	**Duration: 30:00**
Theory – Key Learning Outcomes	**Practical – Key Learning Outcomes**
• Describe the process of installing (PVC)/ (GI) conduits and carry out cabling to connect all the BMS equipment/ devices. • Elaborate how to install and terminate the temperature sensor, humidity sensor, motorized damper actuators for HVAC equipment. • Elaborate how to install and terminate the CHW temperature sensor, pressure sensor and flow sensors for CHW pipes. • Describe the process of connecting all the field devices as per the approved BMS point schedule, wiring schedule and schematic diagrams. • Explain how to install the field devices such as outside air humidity sensor, water level sensor, staircase pressurisation sensor as per the approved BMS system. • Describe the process of installing the VFDs inside AHU control panels as per	• Damatize the process of carrying out wiring to connect all the field devices as per the approved BMS point schedule, wiring schedule and schematic diagrams. • Demonstrate the process of installing the control panel with the required power supply at the selected location as per the approved shop drawings. • Dramatize the process of installing and terminating the temperature sensor, humidity sensor, motorized damper actuators for HVAC equipment as per the manufacturer's instructions. • Demonstrate the process of installing and terminating the CHW temperature sensor, pressure sensor and flow sensors for CHW pipes as per the manufacturer's instructions. • Demonstrate the process of installing and connecting the field devices such as outside air humidity sensor, water level sensor, staircase pressurisation

the approved schematic diagrams. ● Describe the process of installing conduits and carrying out the wiring for plumbing systems such as water booster pump sets, fire pump sets, water calorifier and pump from the DDC panel as per the system requirements. ● Describe the process of carrying out terminations at field ends and control cabling for DDC control panels as per approved shop drawings, schematic drawings. ● Describe the process of installing the central peripherals such as the computer, printer, monitor as per the approved BMS system and shop drawings. ● Describe the process of installing the motion sensors and connecting them for BMS digital control. ● Elaborate how to install the duct air temperature sensor and duct temperature/ humidity sensor. ● Explain how to install the water differential pressure sensor. ● Describe the process of installing an air differential pressure sensor. ● Describe the process of installing an immersion water temperature sensor. ● Elaborate how to install smoke detectors in AC ducts. ● Describe the process of installing butterfly and two-port valves.	sensor as per the approved BMS system ● Dramatize the process of installing the VFD's inside AHU control panels and making the required cable connections as per the approved schematic diagrams. ● Demonstrate the process of installing the plumbing system including the water booster pump sets, fire pump sets, water calorifier and pump from the DDC panel, as per the system requirements. ● Demonstrate the process of carrying out control cabling for DDC control panels through GI conduit or GI trunking above the false ceiling as per approved shop drawings, schematic drawings. ● Dramatize the process of installing the pre-assembled peripherals with controllers hubs in the BMS control room. ● Demonstrate the process of carrying out wiring between the central peripherals and the low current systems as per the approved shop drawings. ● Demonstrate the process of installing the central peripherals such as the computer, printer, monitor as per the approved BMS system and shop drawings. ● Demonstrate the process of inserting and installing the duct air temperature sensor and duct temperature/ humidity sensor on the mounting flanges. ● Dramatize the process of installing the water differential pressure sensor below the pressure measuring points using the GI mounting bracket provided with the sensor. ● Demonstrate the process of using the

	standard fittings supplied with the sensor to make connections. ● Demonstrate the process of installing duct probes in the suction and discharge side of the fans. ● Demonstrate the process of installing the thermowell in the chilled water pipeline and temperature sensor inside the thermowell. ● Dramatize the process of installing the immersion water temperature sensor as per the approved shop drawings and manufacturer's recommendations. ● Demonstrate the process of installing the smoke detector with the base unit inside the smoke chamber using the adopter plates. ● Dramatize the process of installing the butterfly valves in a sandwiched position using appropriate flanges. ● Demonstrate the process of installing actuators after installing and insulating the valves.
Classroom Aids	
Training Kit (Trainer Guide, Presentations). Whiteboard, Marker, Projector, Laptop	
Tools, Equipment and Other Requirements	
Lighting, Heating, Ventilation and Air Conditioning (HVAC), Fire, Smoke Detection and Alarms, Motion Detectors, CCTV, Security and Access Control, ICT Systems, Lifts, Industrial Processes or Equipment, Shading Devices	

Module 3: Process of carrying out commissioning and testing of BMS

Mapped to ELE/N7208

Terminal Outcomes:

- Demonstrate the process of carrying out pre-commissioning of BMS.
- Demonstrate the process of carrying out commissioning of DDC panels.
- Demonstrate the process of carrying out commissioning of the Fan Coil Unit (FCU).
- Dramatize the process of testing the digital and analogue inputs and outputs.
- Dramatize the process of testing the communication link, printer and alarms.
- Dramatize the process of testing the third-party system interface connectivity.

Duration: 30:00	**Duration: 60:00**
Theory – Key Learning Outcomes	**Practical – Key Learning Outcomes**
• Describe the process of pre-commissioning a BMS. • Explain the importance of ensuring that all peripheral devices are mounted and connected. • Explain the importance of checking the mechanical installations for the correct location and application. • Elaborate how to check if all the cables are connected correctly inside the control panels/ DDC controllers and to the peripheral devices. • Describe the process of checking the control panel input terminals for interference voltages with the use of an AC range voltmeter. • Elaborate how to check if the Fan Coil Unit (FCU) controllers are installed and connected via the communication bus. • Explain the importance of ensuring the installation of all the sensors, DP switches, valves are completed both mechanically and electrically. • Elaborate the use of a multi meter to test all control cables. • Describe the process of	• Dramatize how to replace any damaged components as per the SOP. • Demonstrate the process of testing all control cables point to point using a multi meter. • Demonstrate the process of installing the DDC controller software for correct automation of DDC, as per the instructions included with the licensed software. • Dramatize how to set the controller address, date and time and check for any system alarms. • Dramatize how to connect the field wiring at DDC controller. • Demonstrate the process of testing that changes occur in field as per the sequence of operation. • Dramatize how to connect each pair of field instrument cable at the appropriate terminals as per the panel wiring termination drawing. • Dramatize how to shorten and disconnect the wires at the field end and check for appropriate LED status at the DI module.

commissioning DDC panels including the installation of relevant DDC controller application software. ● Describe the process of testing the digital input/ output and analogue input/ output. ● Describe the process of commissioning the Fan Coil Unit (FCU). ● Explain the importance of checking the network communication between the BMS servers, workstations, DDC Panels, LON to IP converters (LIP) and Building Automation and Control Network (BACnet) controllers. ● Describe the process of testing the sequence of operation according to changes in the field devices. ● Describe the process of checking the printer and alarms for the correct functioning. ● Elaborate how to check that the communication link is up between the servers/ workstations and printers. ● Elaborate how to check the third-party system interface connectivity.	● Demonstrate the process of changing the Hand-Off-Auto selector switches for all the equipment to auto position. ● Dramatize how to connect all cables of field instruments for analogue inputs/ outputs at the appropriate terminals as per the panel wiring termination drawing. ● Demonstrate how to connect all cables of field instruments for analogue inputs/ outputs at the appropriate terminals as per the panel wiring termination drawing. ● Dramatize how to test each alarm in the system and validate that the system generates the appropriate alarm message, the message appears at workstations and printers, and any other related actions occur as defined. ● Demonstrate how to check and verify the sequence of operations according to the Sequence of Operation Manual after all field cables are verified and checked.
Classroom Aids	
Training Kit (Trainer Guide, Presentations). Whiteboard, Marker, Projector, Laptop	
Tools, Equipment and Other Requirements	
Lighting, Heating, Ventilation and Air Conditioning (HVAC), Fire, Smoke Detection and Alarms, Motion Detectors, CCTV, Security and Access Control, ICT Systems, Lifts, Industrial Processes or Equipment, Shading Devices	

Module 4: Process of carrying out repair and maintenance of BMS

Mapped to ELE/N7207

Terminal Outcomes:

- Demonstrate the process of carrying out repair and maintenance of BMS field devices.
- Dramatize the process of carrying out repair and maintenance of electrical panels.
- Describe the process of managing the BMS helpdesk, complaints and requests.
- Demonstrate the process of maintaining the records.

Duration: 30:00	Duration: 60:00
Theory – Key Learning Outcomes	**Practical – Key Learning Outcomes**
• Describe the process of testing the valve actuators, damper actuator, sensors, transducers, high-low limit thermostats, frost thermostats, pressure switches, control valve, relays, emergency stop button and fire/ smoke shut-down, the shut-off operation of spring return actuators and Digital Input and Output (I/O) for the correct functioning. • Explain the importance of ensuring the field devices are not worn out or damaged. • Elaborate how to check the BMS is connected with the control system and is online. • Elaborate how to identify the repair and maintenance needs of the BMS control system. • Elaborate how to check if the motion sensors are working as expected and replacing them if required. • Describe the process of cleaning the valve actuators, damper actuators and sensors. • Describe the process of re-calibrating all sensors, transducers, valve start points and actuator travel times. • Describe the process of replacing the worn out or damaged field devices.	• Demonstrate the process of testing the valve actuators, damper actuator, sensors, transducers, high-low limit thermostats, frost thermostats, pressure switches, control valve, etc. for correct functioning. • Dramatize how to clean the valve actuators, damper actuators and sensors. • Demonstrate how to re-calibrate all sensors, transducers, valve start points and actuator travel times as per the requirement. • Demonstrate how to replace the worn-out or damaged field devices as per the Standard Operating Procedure. • Dramatize the process of carrying out maintenance of the motion sensors or replace them as required. • Demonstrate the process of carrying out control panel modifications, up-gradation and installations as required. • Dramatize the process of maintaining the logs of calls reporting any issues with the BMS. • Dramatize the process of maintaining and update documents related to BMS room, device hosting and its

• Explain how to check settings, ratings and operation of protective devices such as overloads, residual current devices, circuit breakers and fuses. • Elaborate signs of overheating of components such as contactors, cables, connectors and internal temperature within the electrical panels. • Describe the process of re-torqueing the busbar nuts and bolts. • Elaborate how to check if the electrical panel is earth-bonded correctly. • Elaborate how to check if the main door electrical isolator is engaged and operational. • Explain the importance of ensuring ventilation fans and grilles are functional and clean. • Explain the importance of ensuring isolators, relays, contactors and starters are functioning correctly and free from pitting. • Explain the importance of ensuring incoming power supply voltages are within the prescribed limits. • Explain the importance of ensuring status indicators on all panels are functional. • Explain the importance of ensuring the closure of BMS-related requests/ complaints with timely resolution. • Explain the importance of directing the BMS complaints requiring vendor attention to the concerned vendor promptly and escalating the unresolved complaints to the relevant authority as per the escalation matrix. • List various records to be maintained	maintenance. • Dramatize the process of maintaining records and logs regarding the building temperatures, energy consumption, control panel readings, issues encountered and the steps taken to correct the problem, etc. • Prepare a sample daily/ weekly/ monthly Management Information Systems (MIS) report regarding the requests/ complaints received.

regarding the BMS operations.	
Classroom Aids	
Training Kit (Trainer Guide, Presentations). Whiteboard, Marker, Projector, Laptop	
Tools, Equipment and Other Requirements	
Lighting, Heating, Ventilation and Air Conditioning (HVAC), Fire, Smoke Detection and Alarms, Motion Detectors, CCTV, Security and Access Control, ICT Systems, Lifts, Industrial Processes or Equipment, Shading Devices	

Module 5: 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 work effectively • 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 6: On-the-Job Training

Mapped to Building Management System Service Engineer

Mandatory Duration: 180:00	**Recommended Duration: 00:00**
Location: On Site	

Terminal Outcomes

1. Explain the process of preparing for installing the BMS.
2. Install conduits and carry out wiring
3. Install the Direct Digital Controller (DDC) with field devices
4. Install the central peripherals and motion sensors
5. Install the duct air temperature sensor and duct temperature/ humidity sensor
6. Install the water and air differential pressure sensor
7. Install the immersion water temperature sensor
8. Install the smoke detectors in AC ducts
9. Install the butterfly valves
10. Carry out pre-commissioning of BMS
11. Carry out commissioning of DDC panels and Fan Coil Unit (FCU)
12. Test the digital and analogue inputs and outputs
13. Test the communication link, printer and alarms
14. Test the third-party system interface connectivity
15. Carry out repair and maintenance of BMS field devices and electrical panels
16. Use professional language and behaviour that is respectful of PwD and all genders.
17. Use protective equipment suitable as per tasks and work conditions.

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	BMS Service Engineering/ Building Automation	1	Electronics	

Trainer Certification	
Domain Certification	**Platform Certification**
"**Building Management System Service Engineer**", "ELE/Q7104, v3.0", Minimum accepted score is 80%	Recommended that the Trainer is certified for the "**Building Management System Service Engineer**" 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	BMS Service Engineering/ Building Automation	1	Electronics	

Assessor Certification	
Domain Certification	**Platform Certification**
"**Building Management System Service Engineer**", "ELE/Q7104, v3.0", Minimum accepted score is 80%	Recommended that the Assessor is certified for the "**Building Management System Service Engineer**" 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
BMS	Building Management System
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