



# Model Curriculum

**QP Name: Fitter – Electrical and Electronic Assembly**

**QP Code: CSC/Q0305**

**Version: 2.0**

**NSQF Level: 3**

**Model Curriculum Version: 1.0**

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## Training Parameters

<b>Sector</b>	Capital Goods
<b>Sub-Sector</b>	Machine Tools, Plastics Manufacturing Machinery, Textile Manufacturing Machinery, Process Plant Machinery, Electrical and Power Machinery
<b>Occupation</b>	Fitting and Assembly
<b>Country</b>	India
<b>NSQF Level</b>	3
<b>Aligned to NCO/ISCO/ISIC Code</b>	NCO-2015/7241.10, 7241.20, 7242.90, 7242.10
<b>Minimum Educational Qualification and Experience</b>	Ability to Read and Write with 5 years of experience in the relevant field OR 5th Class Pass with 3 years of experience in the relevant field OR 8th Class Pass with 2 years of experience in the relevant field OR Class 8th + ITI (2 years) (Electrical and other relevant fields) Or Class 10th
<b>Pre-Requisite License or Training</b>	NA
<b>Minimum Job Entry Age</b>	18 Years
<b>Last Reviewed On</b>	NA
<b>Next Review Date</b>	NA
<b>NSQC Approval Date</b>	NA
<b>QP Version</b>	2.0
<b>Model Curriculum Creation Date</b>	NA
<b>Model Curriculum Valid Up to Date</b>	NA
<b>Model Curriculum Version</b>	1.0
<b>Minimum Duration of the Course</b>	330 Hours
<b>Maximum Duration of the Course</b>	330 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 to:

- Explain the importance of following the health and safety practices at work.
- Demonstrate ways to coordinate with co-workers to achieve work efficiency.
- Demonstrate the process of setting the CNC VMC for operations.
- Demonstrate the process of carrying out machining using the CNC Vertical Machining Centre (VMC).

### 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
<b>Bridge Module</b>	<b>04:00</b>	<b>00:00</b>	<b>0:00</b>	<b>00:00</b>	<b>04:00</b>
Module 1: Introduction to the role of a Fitter – Electrical and Electronic Assembly	04:00	0:00	0:00	00:00	04:00
<b>CSC/N1335 Follow the health and safety practices at work</b> <b>NOS Version- 2.0</b> <b>NSQF Level- 3</b>	<b>20:00</b>	<b>60:00</b>	<b>0:00</b>	<b>00:00</b>	<b>80:00</b>
Module 2: Health and safety practices	20:00	60:00	0:00	00:00	80:00
<b>CSC/N1336 Coordinate with co-workers to achieve work efficiency</b> <b>NOS Version-2.0</b> <b>NSQF Level- 3</b>	<b>20:00</b>	<b>60:00</b>	<b>0:00</b>	<b>00:00</b>	<b>80:00</b>
Module 3: Process of coordinating with co-workers to achieve work efficiency	20:00	60:00	0:00	00:00	80:00
<b>CSC/N0305 Assemble and wire electrical components and systems to mechanical equipment</b> <b>NOS Version- 2.0</b>	<b>24:00</b>	<b>60:00</b>	<b>0:00</b>	<b>00:00</b>	<b>84:00</b>

<b>NSQF Level- 3</b>					
Module 4: Process of assembling and wiring electrical components and systems to mechanical equipment	24:00	60:00	0:00	00:00	84:00
<b>CSC/N0306: Assemble and wire electronic equipment and systems to mechanical equipment</b> <b>NOS Version- 2.0</b> <b>NSQF Level- 3</b>	<b>22:00</b>	<b>60:00</b>	<b>0:00</b>	<b>00:00</b>	<b>82:00</b>
Module 5: Process of assembling and wiring electrical equipment and systems to mechanical equipment	22:00	60:00	0:00	00:00	82:00
<b>Total Duration</b>	<b>90:00</b>	<b>240:00</b>	<b>0:00</b>	<b>00:00</b>	<b>330:00</b>

# Module Details

## Module 1: Introduction to the role of a Fitter – Electrical and Electronic Assembly

### Bridge Module

#### Terminal Outcomes:

- Discuss the job role of a Fitter – Electrical and Electronic Assembly.

Duration: 04:00	Duration: 0:00
Theory – Key Learning Outcomes	Practical – Key Learning Outcomes
<ul style="list-style-type: none"> <li>• Describe the size and scope of the capital good industry and its sub-sectors.</li> <li>• Discuss the role and responsibilities of a Fitter – Electrical and Electronic Assembly.</li> <li>• Identify various employment opportunities for a Fitter – Electrical and Electronic Assembly.</li> </ul>	
<b>Classroom Aids</b>	
Training Kit - Trainer Guide, Presentations, Whiteboard, Marker, Projector, Laptop, Video Films	
<b>Tools, Equipment and Other Requirements</b>	
NA	

## Module 2: Health and safety Practices

### Mapped to CSC/N1335 v2.0

#### Terminal Outcomes:

- Demonstrate ways to maintain personal health and safety.
- Describe the process of assisting in hazard management.
- Explain how to check the first aid box, firefighting and safety equipment.
- Describe the process of assisting in waste management.
- Explain the importance of following the fire safety guidelines.
- Explain the importance of following the emergency and first-aid procedures.
- Demonstrate the process of carrying out relevant documentation and review.

<b>Duration: 20:00</b>	<b>Duration: 60:00</b>
<b>Theory – Key Learning Outcomes</b>	<b>Practical – Key Learning Outcomes</b>
<ul style="list-style-type: none"> <li>• Explain the recommended practices to be followed to ensure protection from infections and transmission to others, such as the use of hand sanitiser and face mask.</li> <li>• Explain the importance and process of checking the work conditions, assessing the potential health and safety risks, and take appropriate measures to mitigate them.</li> <li>• Explain the importance and process of selecting and using the appropriate PPE relevant to the task and work conditions.</li> <li>• Explain the recommended techniques to be followed while lifting and moving heavy objects to avoid injury.</li> <li>• Explain the importance of following the manufacturer’s instructions and workplace safety guidelines while working on heavy machinery, tools and equipment.</li> <li>• Explain the importance and process of identifying existing and potential hazards at work.</li> <li>• Describe the process of assessing the potential risks and injuries associated with the various hazards.</li> <li>• Explain how to prevent or minimise different types of hazards.</li> </ul>	<ul style="list-style-type: none"> <li>• Demonstrate the use of appropriate Personal Protective Equipment (PPE) relevant to the task and work conditions.</li> <li>• Demonstrate how to handle hazardous materials safely.</li> <li>• Demonstrate the process of testing the firefighting and various safety equipment to ensure they are in usable condition.</li> <li>• Demonstrate the process of recycling and disposing different types of waste appropriately.</li> <li>• Demonstrate how to use the appropriate type of fire extinguisher to extinguish different types of fires safely.</li> <li>• Demonstrate how to administer appropriate first aid to the injured personnel.</li> <li>• Demonstrate the process of performing Cardiopulmonary Resuscitation (CPR) on a potential victim of cardiac arrest.</li> <li>• Demonstrate the process of carrying out appropriate documentation following a health and safety incident at work, including all the required information.</li> </ul>

- Explain how to handle and store hazardous materials safely.
- Explain the importance of ensuring the first aid box is updated with the relevant first aid supplies.
- Describe the process of checking and testing the firefighting and various safety equipment to ensure they are in a usable condition.
- Explain the criteria for segregating waste into appropriate categories.
- Describe the appropriate methods for recycling recyclable waste.
- Describe the process of disposing of the non-recyclable waste safely and the applicable regulations.
- Explain the use of different types of fire extinguishers to extinguish different types of fires.
- State the recommended practices to be followed for a safe rescue during a fire emergency.
- Explain how to request assistance from the fire department to extinguish a serious fire.
- Explain the appropriate practices to be followed during workplace emergencies to ensure safety and minimise loss to organisational property.
- State the common health and safety hazards present in a work environment, associated risks, and how to mitigate them.
- State the safe working practices to be followed while working at various hazardous sites and using electrical equipment.
- Explain the importance of ensuring easy access to firefighting and safety equipment.
- Explain the appropriate preventative and remedial actions to be taken in the case of exposure to toxic materials, such as poisonous



chemicals and gases.

- Explain various causes of fire in different work environments and the recommended precautions to be taken to prevent fire accidents.
- Describe different methods of extinguishing fire.
- List different materials used for extinguishing fire.
- Explain the applicable rescue techniques to be followed during a fire emergency.
- Explain the importance of placing safety signs and instructions at strategic locations in a workplace and following them.
- Explain different types of first aid treatment to be provided for different types of injuries.
- State the potential injuries associated with incorrect manual handling.
- Explain how to move an injured person safely.
- State various hazards associated with the use of various machinery, tools, implements, equipment and materials.
- Explain the importance of ensuring no obstruction and free access to fire exits.
- Explain how to free a person from electrocution safely.
- Explain how to administer appropriate first aid to an injured person.
- Explain how to perform Cardiopulmonary Resuscitation (CPR).
- Explain the importance of coordinating with the emergency services to request urgent medical assistance for persons requiring professional medical attention or hospitalisation.
- State the appropriate documentation

<p>to be carried out following a health and safety incident at work, and the relevant information to be included.</p> <ul style="list-style-type: none"> <li>• Explain the importance and process of reviewing the health and safety conditions at work regularly or following an incident.</li> <li>• Explain the importance and process of implementing appropriate changes to improve the health and safety conditions at work.</li> </ul>	
<p><b>Classroom Aids</b></p>	
<p>Computer, Projection Equipment, PowerPoint Presentation and Software, Facilitator’s Guide, Participant’s Handbook.</p>	
<p><b>Tools, Equipment and Other Requirements</b></p>	
<p>Personal Protective Equipment, Cleaning Equipment and Materials, Sanitizer, Soap, Mask</p>	

## Module 3: Process of coordinating with co-workers to achieve work efficiency

*Mapped to NOS CSC/N1336 v2.0*

### Terminal Outcomes:

- Demonstrate ways to Work and communicate effectively with co-workers.
- Discuss ways to promote diversity and inclusion at the workplace.

Duration: 20:00	Duration: 60:00
Theory – Key Learning Outcomes	Practical – Key Learning Outcomes
<ul style="list-style-type: none"> <li>• Explain the importance and process of effective communication in the workplace.</li> <li>• Explain the barriers to effective communication and how to overcome them.</li> <li>• Explain the importance of teamwork in an organisation’s and individual’s success.</li> <li>• Explain the importance of active listening in the work environment.</li> <li>• State the appropriate techniques to be followed for active listening.</li> <li>• Explain the importance of tone and pitch ineffective communication.</li> <li>• Explain the importance of avoiding casual expletives and unpleasant terms while communicating professional circles.</li> <li>• Explain the importance of maintaining discipline and ethical behaviour at work.</li> <li>• <b>State</b> the common reasons for interpersonal conflict and how to resolve them.</li> <li>• Explain the importance of developing effective working relationships for professional success.</li> <li>• Describe the process of expressing and addressing grievances appropriately and effectively.</li> <li>• Explain the importance and process of planning daily tasks to ensure their timely completion and efficient use of</li> </ul>	<ul style="list-style-type: none"> <li>• Demonstrate the process of preparing the relevant documents and reports as per the supervisor’s instructions, providing appropriate information clearly and systematically.</li> <li>• Demonstrate how to mentor and assist subordinates in the execution of their work responsibilities.</li> <li>• Demonstrate the process of using various resources efficiently to ensure maximum utilisation and minimum wastage.</li> <li>• Demonstrate how to communicate clearly and politely to ensure effective communication with co-workers.</li> <li>• Demonstrate appropriate verbal and non-verbal communication that is respectful of genders and disability.</li> </ul>

<p>time.</p> <ul style="list-style-type: none"> <li>• Explain the importance of adhering to the limits of authority at work.</li> <li>• Explain the importance of following the applicable quality standards and timescales at work.</li> <li>• Explain the importance of coordinating with co-workers to achieve the work objectives efficiently.</li> <li>• Explain the relevant documentation requirements.</li> <li>• Explain the importance of providing appropriate information clearly and systematically in work documents.</li> <li>• State the escalation matrix to be followed to deal with out of authority tasks and concerns.</li> <li>• Explain the importance and process of mentoring and assisting subordinates in the execution of their work responsibilities.</li> <li>• Explain how to identify possible disruptions to work prevent them.</li> <li>• Explain how to use various resources efficiently to ensure maximum utilisation and minimum wastage.</li> <li>• Explain the recommended practices to be followed at work to avoid and resolve conflicts at work.</li> <li>• Explain the importance and process of efficient and timely dissemination of information to the authorised personnel.</li> <li>• Explain the procedure to report inappropriate behaviour e.g., harassment.</li> </ul>	
<p><b>Classroom Aids:</b></p>	
<p>Training Kit (Trainer Guide, Presentations). Whiteboard, Marker, Projector, Laptop</p>	
<p><b>Tools, Equipment and Other Requirements</b></p>	
<p>NA</p>	

## Module 4: Process of assembling and wiring electrical components and systems to mechanical equipment

*Mapped to CSC/N0305 v2.0*

### Terminal Outcomes:

- Demonstrate the process of assembling and wiring electrical components and systems.
- Explain the importance of using resources optimally.

<b>Duration: 24:00</b>	<b>Duration: 60:00</b>
<b>Theory – Key Learning Outcomes</b>	<b>Practical – Key Learning Outcomes</b>
<ul style="list-style-type: none"> <li>• Explain the concepts and benefits of Industry 4.0 and Industrial Internet of Things (IIoT).</li> <li>• State the applicable documentation requirements and related procedures in the job role.</li> <li>• Explain the relevant safety practices and procedures to be followed while assembling and wiring electrical components mounted on panels or in enclosures.</li> <li>• List the various items used with panels and enclosures.</li> <li>• Explain the various hazards associated with assembling and wiring electrical panels, such as the use of sharp instruments for stripping cable insulation, and soldering equipment, and how to minimise them.</li> <li>• Explain the importance and process of using appropriate PPE such as anti-static earthed wrist straps and mats.</li> <li>• Explain the importance of maintaining cleanliness in the work area.</li> <li>• Explain how to deal with hazardous voltage.</li> <li>• Explain how to free a victim from electrocution and the appropriate first-aid to be administered to them.</li> <li>• Explain the use of insulated tools, rubber matting and isolating transformers to reduce the risks of a phase to earth shock.</li> </ul>	<ul style="list-style-type: none"> <li>• Demonstrate how to perform electrical calculations using a range of variables.</li> <li>• Demonstrate the process of assembling electrical components on panels or in enclosures.</li> <li>• Show how to secure the components using the recommended connectors and securing devices.</li> <li>• Show how to wire and terminate cables to the appropriate connections on the components.</li> <li>• Demonstrate the use of the relevant Personal Protective Equipment (PPE).</li> <li>• Demonstrate the use of various industry 4.0 manufacturing technologies.</li> <li>• Demonstrate the process of carrying out minor repair and maintenance of the relevant tools and equipment.</li> <li>• Demonstrate the process of disposing of industrial waste appropriately.</li> <li>• Show how to use electricity and other resources optimally in various tasks and processes.</li> </ul>

- State the relevant precautions to be taken to prevent Electrostatic Discharge (ESD) damage to circuits and sensitive components
- Explain how to interpret drawings, circuit and physical layouts, charts, specifications, graphical electrical symbols, etc.
- State the applicable national and international wiring regulations.
- Explain the functions of different types of components and sub-assemblies used in the assembly activities such as contactors; relays/ Switch Mode Power Supply (SMPS); ballast chokes; terminal blocks; etc.
- State the appropriate preparations to be undertaken on the components and enclosure before the mounting activities.
- Explain how the components must be aligned and positioned before securing, and the use of relevant tools and equipment.
- Explain how to identify any orientation requirements, values or polarity for the components used in the electrical assembly and wiring activities.
- Explain various types of cabling to be used in the assembly and wiring of the panels or enclosures, such as single-core, screened, twisted pair/ribbon, multicore, fibre-optic, data/communication, laminated copper, braided copper, etc.
- Explain the importance of electrical bonding/earthing, and the process of ensuring it is mechanically and electrically secure.
- Describe the process of selecting wires and cables according to the requirement and applicable safety procedures.
- Describe the applicable assembly methods and techniques to be used when wiring electrical panels or

components mounted in enclosures.

- Describe the process of cable stripping, soldering, crimping, securing wires and cables using cable ties/ lacing/strapping/ harnessing of wires etc.
- Explain different types, applications, and methods of attaching identification markers/labels during the electrical wiring activities.
- Describe the process of conduct necessary checks to ensure the accuracy and quality of assembly.
- Explain how to check the positional accuracy of all components; termination of all wires to components; orientation; security of terminations; alignment; completeness; component security; etc.
- Describe the process of checking cable offcuts/insulation, enclosure/trunking breakouts; continuity of cable/wiring connections e.g. battery and lamp checks.
- Explain the importance of checking that tools and equipment are free from damage or defects, and in a safe and usable condition with appropriate testing and calibration.
- Explain the functions and application of various electrical components.
- State the current and voltage distribution in series and parallel circuits.
- Explain how to make screwed/clamped connections; install and terminate pre-formed looms; make crimped connections; making soldered connections, etc.
- Explain different types of cable and wires such as single-core, screened, twisted pair/ribbon, multicore, fibre-optic, data/communication, laminated copper, braided copper, etc.

<ul style="list-style-type: none"> <li>• Explain the importance of conducting visual checks for the completeness of conductors or components; mechanical checks to be conducted for the security of components and connections.</li> <li>• List various checks to be conducted to ensure electrical continuity and earth continuity.</li> <li>• Explain the benefits and methods of resource optimisation.</li> </ul>	
<p><b>Classroom Aids</b></p>	
<p>Training Kit (Trainer Guide, Presentations). Whiteboard, Marker, Projector, Laptop</p>	
<p><b>Tools, Equipment and Other Requirements</b></p>	
<p>Cable Ties, Clips, Plastic Strapping, Lacing, Harnessing, Sleeves or Grommets, Spade End, Loops, Tags and Pins Single Core, Screened, Twisted Pair/Ribbon, Multicore, Fibreoptic, Data/Communication, Laminated Copper, Braided Copper, Sensors; Contactors; Capacitors; Plugs/Sockets; Overload And Other Relays; Resistors; Grommets/Grommet Strip, Cutting Tools Measuring Tools, Hand Tools, PPE, Etc.</p>	



## Module 5: Process of assembling and wiring electrical equipment and systems to mechanical equipment

*Mapped to CSC/N0306 v2.0*

### Terminal Outcomes:

- Demonstrate the process of assembling and wiring electronic equipment and systems.
- Explain the importance of following safety guidelines.

<b>Duration: 22:00</b>	<b>Duration: 60:00</b>
<b>Theory – Key Learning Outcomes</b>	<b>Practical – Key Learning Outcomes</b>
<ul style="list-style-type: none"> <li>• Explain the importance of leaving the work area in a safe and clean condition on completion of the electronic assembly and wiring activities.</li> <li>• Explain the importance of storing the tools and equipment safely at the designated storage.</li> <li>• Describe the process of dealing with and disposing of industrial waste.</li> <li>• State the relevant safety precautions to be taken while working with soldering and crimping equipment/tools and wiring aids within an electronics assembly and wiring environment.</li> <li>• State the regulations and standards relevant to electronic wiring and assembly operations.</li> <li>• Explain how to interpret and use single line diagram.</li> <li>• Explain how mechanical assembly instructions are represented and how to interpret them.</li> <li>• Explain how to set up, program and use automated wiring termination equipment.</li> <li>• Describe the process of attaching wire terminations following the appropriate methods such as soldering, crimping, etc.</li> <li>• Explain how to set/position interconnection wiring and bundle/strap/tie wiring looms and cables.</li> </ul>	<ul style="list-style-type: none"> <li>• Demonstrate how to analyse the assembly drawings and charts; interconnection net diagrams; wiring specifications; wire running lists to determine the job specifications.</li> <li>• Show how to prepare cable strapping for use by cutting them to nominal length in appropriate sizes.</li> <li>• Demonstrate how to set up, program and use automated wiring termination equipment.</li> <li>• Demonstrate the process of attaching wire terminations following an appropriate method such as soldering, crimping, etc.</li> <li>• Show how to cut wires appropriately to the required length, and strip insulation from wire ends.</li> <li>• Demonstrate how to use the relevant manual/ automatic tools to secure all fastenings.</li> <li>• Demonstrate the process of assembling sub-units to support housings/brackets, along with connectors and allied devices.</li> <li>• Show how to secure the components using the appropriate connectors and securing devices.</li> <li>• Prepare the sample relevant records as per the applicable organisational procedures.</li> <li>• Demonstrate the use of the relevant power and manual tools, equipment, and accessories as per the manufacturer's instructions.</li> </ul>

- Describe the process of setting and terminating fibre optic links.
- Explain how to strip insulation from wires ends.
- Describe the process of termination identification such as ferruling, transfer printing; tin/lead soldering; lead-free soldering systems; no-wash fluxing; crimping, etc.
- Explain how different types of electronic wiring and insulation are coded and specified.
- Explain how information on wiring interconnections is specified concerning the role of wiring schedules, wire-running lists; and backplane net interconnects lists.
- List various accessories and aids used for securing electronic wiring such as heat shrink sleeves, strapping, cable ties, P-Clips, etc.
- List various tools and aids used in wiring and assembly work, such as soldering tools and equipment, crimp tools, joint/crimp, etc.
- Describe the process of testing and checking equipment for continuity, and short circuit testing.
- Explain how to recognise wiring types and sizes, their identification, coding and range of termination methods.
- Explain how to identify the types and read the values of electronic components.
- Explain how to take anti-static precautions concerning component handling during the wiring and assembly of electronic products.
- State the handling requirements and termination methods used for Switch-Mode Power Supply (SMPS), high-level protective devices and fibre-optic links.
- List various checks and tests carried out within wiring and assembly work such as insulation resistance,

<p>flashover testing, continuity, short circuit testing, etc.</p> <ul style="list-style-type: none"> <li>• Explain the calibration requirements for tools and equipment used in wiring.</li> <li>• Explain the importance of maintaining a dust-free environment for electronic assembly.</li> <li>• Explain how to handle multilayered populated Printed Circuit Boards (PCBs).</li> <li>• Explain various problems encountered with wiring and assembly work and how to resolve them.</li> <li>• List the basic units used in electro-technology.</li> <li>• Explain the function and applications of various electrical components.</li> <li>• Describe the process of current and voltage distribution in series and parallel circuits.</li> <li>• Describe the process of determining the input and output voltage of double wound transformers.</li> <li>• Explain how to construct a simple bridge rectifier circuit, its functions and termination identification, such as ferruling and transfer printing; tin/lead soldering; lead-free soldering; no-wash fluxing; crimping, etc.</li> </ul>	
<p><b>Classroom Aids</b></p>	
<p>Training Kit (Trainer Guide, Presentations). Whiteboard, Marker, Projector, Laptop</p>	
<p><b>Tools, Equipment and Other Requirements</b></p>	
<p>Returning Tools and Equipment, In/Lead Soldering; Lead-Free Soldering Systems; No-Wash Fluxing; Crimping, Heat Shrink Sleeves, Strapping, Cable Ties, P-Clips), Resistors, Capacitors, Diodes, Integrated Circuits, Pcb, Transformers</p>	

# Annexure

## Trainer Requirements

Trainer Prerequisites						
Minimum Educational Qualification	Specialization	Relevant Industry Experience		Training Experience		Remarks
		Years	Specialization	Years	Specialization	
Diploma /Degree	Diploma /Degree in Mechanical Engineering	4	Fitter – Electrical and Electronic Assembly	0		Practical skills and knowledge required in the relevant field

Trainer Certification	
Domain Certification	Platform Certification
Certified for Job Role: “ <b>Fitter – Electrical and Electronic Assembly</b> ” mapped to QP: “CSC/Q0305, v1.0”. The minimum accepted score is 80%	Recommended that the Trainer is certified for the Job Role: “Trainer”, mapped to the Qualification Pack: “MEP/Q0102”. The Minimum accepted as per respective SSC guidelines is 80%.

## Assessor Requirements

Assessor Prerequisites						
Minimum Educational Qualification	Specialization	Relevant Industry Experience		Training/Assessment Experience		Remarks
		Years	Specialization	Years	Specialization	
Diploma /Degree	Diploma /Degree in Mechanical Engineering	4	Fitter – Electrical and Electronic Assembly	0		Practical skills and knowledge required in the relevant field

Assessor Certification	
Domain Certification	Platform Certification
Certified for Job Role: <b>“Fitter – Electrical and Electronic Assembly”</b> mapped to QP: <b>“CSC/Q0305, v1.0”</b> . The minimum accepted score is 80%	Certified for the Job Role: <b>“Assessor”</b> , mapped to the Qualification Pack: <b>“MEP/Q2701, v1.0”</b> , with a 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 levels 1 to 3 are for the unskilled & semi-skilled individuals, and levels 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
<b>Declarative knowledge</b>	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.
<b>Key Learning</b>	The 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).
<b>OJT (M)</b>	On-the-job training (Mandatory); trainees are mandated to complete specified hours of training on-site
<b>OJT (R)</b>	On-the-job training (Recommended); trainees are recommended the specified hours of training on-site
<b>Procedural Knowledge</b>	Procedural knowledge addresses how to do something, or how to perform a
<b>Training Outcome</b>	Training outcome is a statement of what a learner will know, understand and be able to do <b>upon the completion of the training</b> .
<b>Terminal Outcome</b>	The terminal outcome is a statement of what a learner will know, understand and be able to do <b>upon the completion of a module</b> . A set of terminal outcomes help to achieve the training outcome.



## Acronyms and Abbreviations

Term	Description
<b>NOS</b>	National Skills Qualification Committee
<b>NSQF</b>	National Skills Qualification Framework
<b>OJT</b>	On-the-Job Training
<b>OMR</b>	Optical Mark Recognition
<b>PC</b>	Performance Criteria
<b>PwD</b>	Persons with Disabilities
<b>QP</b>	Qualification Pack
<b>SDMS</b>	Skill Development & Management System
<b>SIP</b>	Skill India Portal
<b>SSC</b>	Sector Skill Council
<b>TC</b>	Trainer Certificate
<b>ToA</b>	Training of Assessors
<b>ToT</b>	Training of Trainers
<b>TP</b>	Training Provider