

## Qualification Pack



# Mechanical Engineering and Plumbing General Manager (Electronics)

QP Code: ELE/Q7103

Version: 3.0

NSQF Level: 6

Electronics Sector Skills Council of India || 155, 2nd Floor, ESC House Okhla Industrial Area-Phase 3  
New Delhi- 110020 || email:anu@essc-india.org



## Qualification Pack

### Contents

ELE/Q7103: Mechanical Engineering and Plumbing General Manager (Electronics) .....	3
<i>Brief Job Description</i> .....	3
Applicable National Occupational Standards (NOS) .....	3
<i>Compulsory NOS</i> .....	3
<i>Qualification Pack (QP) Parameters</i> .....	3
ELE/N7106: Manage the tendering, sub-contracting and planning processes for MEP projects .....	5
ELE/N7107: Manage the MEP project execution, commissioning, testing and handover processes ...	12
ELE/N7108: Carry out internal organizational - level responsibilities .....	18
DGT/VSQ/N0102: Employability Skills (60 Hours) .....	24
Assessment Guidelines and Weightage .....	31
<i>Assessment Guidelines</i> .....	31
<i>Assessment Weightage</i> .....	32
Acronyms .....	33
Glossary .....	34

## Qualification Pack

### ELE/Q7103: Mechanical Engineering and Plumbing General Manager (Electronics)

#### Brief Job Description

An Mechanical Engineering and Plumbing (MEP) General Manager (Electronics) is responsible for planning, managing, monitoring and execution of Mechanical Engineering and Plumbing (MEP) projects at the client premises. The individual is also responsible for preparing the tender proposal and making presentations to secure MEP contracts, identifying the training needs of company personnel and arranging training, recruitments, risk assessment, Profit & Loss (P&L) management, etc.

#### Personal Attributes

The individual must have managerial, organisational and problem-solving skills. The person must have good written and verbal communication skills with the ability to multi task and coordinate with multiple parties simultaneously to achieve the work objectives.

#### Applicable National Occupational Standards (NOS)

##### Compulsory NOS:

1. [ELE/N7106: Manage the tendering, sub-contracting and planning processes for MEP projects](#)
2. [ELE/N7107: Manage the MEP project execution, commissioning, testing and handover processes](#)
3. [ELE/N7108: Carry out internal organizational - level responsibilities](#)
4. [DGT/VSQ/N0102: Employability Skills \(60 Hours\)](#)

#### Qualification Pack (QP) Parameters

<b>Sector</b>	Electronics
<b>Sub-Sector</b>	Industrial Automation
<b>Occupation</b>	Engineering-I&A
<b>Country</b>	India
<b>NSQF Level</b>	6
<b>Credits</b>	22
<b>Aligned to NCO/ISCO/ISIC Code</b>	NCO-2015/7411.0100

## Qualification Pack

<b>Minimum Educational Qualification &amp; Experience</b>	<p>Completed 4 year UG program (Physics/Electronics/Electrical/Mechanical) with 2 Years of experience Industrial Automation</p> <p>OR</p> <p>Completed 3 year UG degree (Physics/Electronics/Electrical/Mechanical) with 2 Years of experience Industrial Automation</p> <p>OR</p> <p>Completed 3 year diploma after 10th (Electronics/Electrical /Mechanical) with 4.5 years of experience Industrial Automation</p> <p>OR</p> <p>Previous relevant Qualification of NSQF Level (5.5) with 1.5 years of experience Industrial Automation</p>
<b>Minimum Level of Education for Training in School</b>	10th Class
<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>	30/04/2028
<b>NSQC Approval Date</b>	08/05/2025
<b>Version</b>	3.0
<b>Reference code on NQR</b>	QG-06-EH-03968-2025-V3-ESSCI
<b>NQR Version</b>	3.0

### Remarks:

NA

## Qualification Pack

### ELE/N7106: Manage the tendering, sub-contracting and planning processes for MEP projects

#### Description

This NOS unit is about manage end-to-end MEP tendering, subcontracting, and project planning processes, including cost estimation, proposal preparation, resource coordination, and stakeholder communication to ensure timely and successful project execution.

#### Scope

The scope covers the following :

- Select tenders and prepare the tender proposal
- Submit the tender proposal and make presentations
- Select the sub-contractors
- Carry out planning for the delivery of MEP project

#### Elements and Performance Criteria

##### *Select tenders and prepare the tender proposal*

To be competent, the user/individual on the job must be able to:

- PC1.** Analyses the tenders and shortlist those that the organization is eligible to apply for, establishing the scope of work and any specific requirements
- PC2.** Manage the preparation of MEP shop drawing, specification and Bill of Quantities (BOQ) along with budgeting
- PC3.** Analyses the blueprints, project documents and specifications to prepare accurate cost, materials and labor estimates for all project stages
- PC4.** Prepare Tender Check Estimates (TCE) for contracts and bill of materials, including Electrical, Mechanical and Plumbing quantities, drawings, and technical specifications
- PC5.** Perform detailed calculations to compute and establish construction and installation standards and specifications
- PC6.** Prepare the tender proposal in the prescribed format using the appropriate software tool, highlighting the organization's eligibility for the tender along with information about the projects delivered successfully and the organization's clientele, ensuring the accuracy of the information

##### *Submit the tender proposal and make presentations*

To be competent, the user/individual on the job must be able to:

- PC7.** Analyses the MEP drawings and sketches during proposal preparation for the quotation purpose
- PC8.** Submit the tender proposal documents to the prospective client following the prescribed tendering process
- PC9.** Carry out presentations and negotiations with the prospective client
- PC10.** Carry out necessary documentation with the client after winning the bid
- PC11.** Solicit feedback for the failed bids to identify the areas of

## Qualification Pack

### *Select the sub-contractors*

To be competent, the user/individual on the job must be able to:

- PC12.** Identify the area of MEP work that will require sub- contracting
- PC13.** Prepare customized bids and take-offs/ Bill of Quantities (BOQ) for MEP sub-contractors
- PC14.** Invite bids from potential sub-contractors
- PC15.** Evaluate the bids to shortlist sub-contractors and finalise a sub-contractor
- PC16.** Carry out the necessary documentation and hand over the sub-contract to the eligible sub-contractor

### *Carry out planning for the delivery of MEP project*

To be competent, the user/individual on the job must be able to:

- PC17.** Manage the MEP design process between internal teams, clients and subcontractors
- PC18.** Coordinate with the client and relevant departments in the organization for the approval of BOQ, Goods for Construction (GFC)/ General Arrangement (GA) drawings and shop drawings
- PC19.** Co-ordinate with the procurement team to ensure the required resources are procured for the completion of the MEP project, ensuring the adequacy of the resources for the timely completion of the project
- PC20.** Select a team of skilled managers, engineers and support staff to work on the execution of the project
- PC21.** Provide inputs for effective planning and scheduling of MEP project
- PC22.** Carry out planning and scheduling using the relevant software tools, according to the Service Level Agreement (SLA) signed with the client

## Knowledge and Understanding (KU)

The individual on the job needs to know and understand:

- KU1.** Understanding of tendering processes, including shortlisting and eligibility criteria for MEP projects.
- KU2.** Knowledge of MEP systems, including Electrical, Mechanical, and Plumbing components, for cost estimation and budgeting.
- KU3.** Proficiency in reading and analyzing project blueprints, drawings, and specifications to accurately estimate materials, labor, and costs.
- KU4.** Familiarity with Tender Check Estimates (TCE) and their preparation for contracts and Bill of Quantities (BOQ).
- KU5.** Knowledge of construction standards and installation specifications for MEP projects.
- KU6.** Understanding of the tender proposal preparation process, including formatting, eligibility documentation, and highlighting the organization capabilities.
- KU7.** Awareness of subcontracting processes, including identifying needs, evaluating bids, and finalizing subcontractors for MEP projects.
- KU8.** Knowledge of procurement processes and resource management for MEP projects to ensure timely project completion.
- KU9.** Understanding of planning and scheduling MEP projects using software tools, ensuring alignment with Service Level Agreements (SLAs).



## Qualification Pack

**KU10.** Familiarity with coordination processes between internal teams, clients, and subcontractors to ensure smooth project execution.

### Generic Skills (GS)

User/individual on the job needs to know how to:

- GS1.** Strong communication skills for effective interaction with clients, subcontractors, and internal teams.
- GS2.** Analytical skills to assess tenders, technical drawings, and specifications for accurate cost estimation and decision-making.
- GS3.** Negotiation skills for dealing with clients and subcontractors, ensuring favorable terms for the organization.
- GS4.** Attention to detail in reviewing project documentation, ensuring accuracy in tenders, contracts, and BOQ.
- GS5.** Time management skills to handle multiple tasks such as proposal preparation, budgeting, and scheduling within project timelines.
- GS6.** Decision-making skills for selecting subcontractors and evaluating bids based on quality, cost, and capacity.
- GS7.** Team leadership and management skills to effectively coordinate the efforts of engineers, managers, and support staff.
- GS8.** Problem-solving skills to address challenges during the tendering, subcontracting, and planning phases.
- GS9.** Project management skills for managing all aspects of the MEP project, from tender proposal submission to successful execution.
- GS10.** Proficiency in using project management software and other tools for effective planning, scheduling, and resource allocation.

## Qualification Pack

### Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<i>Select tenders and prepare the tender proposal</i>	<b>10</b>	<b>10</b>	-	<b>10</b>
<b>PC1.</b> Analyses the tenders and shortlist those that the organization is eligible to apply for, establishing the scope of work and any specific requirements	-	-	-	-
<b>PC2.</b> Manage the preparation of MEP shop drawing, specification and Bill of Quantities (BOQ) along with budgeting	-	-	-	-
<b>PC3.</b> Analyses the blueprints, project documents and specifications to prepare accurate cost, materials and labor estimates for all project stages	-	-	-	-
<b>PC4.</b> Prepare Tender Check Estimates (TCE) for contracts and bill of materials, including Electrical, Mechanical and Plumbing quantities, drawings, and technical specifications	-	-	-	-
<b>PC5.</b> Perform detailed calculations to compute and establish construction and installation standards and specifications	-	-	-	-
<b>PC6.</b> Prepare the tender proposal in the prescribed format using the appropriate software tool, highlighting the organization's eligibility for the tender along with information about the projects delivered successfully and the organization's clientele, ensuring the accuracy of the information	-	-	-	-
<i>Submit the tender proposal and make presentations</i>	<b>5</b>	<b>10</b>	-	<b>5</b>
<b>PC7.</b> Analyses the MEP drawings and sketches during proposal preparation for the quotation purpose	-	-	-	-
<b>PC8.</b> Submit the tender proposal documents to the prospective client following the prescribed tendering process	-	-	-	-
<b>PC9.</b> Carry out presentations and negotiations with the prospective client	-	-	-	-



## Qualification Pack

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<b>PC10.</b> Carry out necessary documentation with the client after winning the bid	-	-	-	-
<b>PC11.</b> Solicit feedback for the failed bids to identify the areas of	-	-	-	-
<i>Select the sub-contractors</i>	<b>5</b>	<b>10</b>	-	<b>5</b>
<b>PC12.</b> Identify the area of MEP work that will require sub- contracting	-	-	-	-
<b>PC13.</b> Prepare customized bids and take-offs/ Bill of Quantities (BOQ) for MEP sub-contractors	-	-	-	-
<b>PC14.</b> Invite bids from potential sub-contractors	-	-	-	-
<b>PC15.</b> Evaluate the bids to shortlist sub-contractors and finalise a sub-contractor	-	-	-	-
<b>PC16.</b> Carry out the necessary documentation and hand over the sub-contract to the eligible sub-contractor	-	-	-	-
<i>Carry out planning for the delivery of MEP project</i>	<b>10</b>	<b>10</b>	-	<b>10</b>
<b>PC17.</b> Manage the MEP design process between internal teams, clients and subcontractors	-	-	-	-
<b>PC18.</b> Coordinate with the client and relevant departments in the organization for the approval of BOQ, Goods for Construction (GFC)/ General Arrangement (GA) drawings and shop drawings	-	-	-	-
<b>PC19.</b> Co-ordinate with the procurement team to ensure the required resources are procured for the completion of the MEP project, ensuring the adequacy of the resources for the timely completion of the project	-	-	-	-
<b>PC20.</b> Select a team of skilled managers, engineers and support staff to work on the execution of the project	-	-	-	-
<b>PC21.</b> Provide inputs for effective planning and scheduling of MEP project	-	-	-	-

### Qualification Pack

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<b>PC22.</b> Carry out planning and scheduling using the relevant software tools, according to the Service Level Agreement (SLA) signed with the client	-	-	-	-
<b>NOS Total</b>	<b>30</b>	<b>40</b>	<b>-</b>	<b>30</b>



## Qualification Pack

### National Occupational Standards (NOS) Parameters

<b>NOS Code</b>	ELE/N7106
<b>NOS Name</b>	Manage the tendering, sub-contracting and planning processes for MEP projects
<b>Sector</b>	Electronics
<b>Sub-Sector</b>	Industrial Automation
<b>Occupation</b>	Engineering-I&A
<b>NSQF Level</b>	6
<b>Credits</b>	7
<b>Version</b>	2.0
<b>Last Reviewed Date</b>	08/05/2025
<b>Next Review Date</b>	30/04/2028
<b>NSQC Clearance Date</b>	08/05/2025

## Qualification Pack

### ELE/N7107: Manage the MEP project execution, commissioning, testing and handover processes

#### Description

This NOS unit is about the installation, commissioning, testing, and handover of MEP systems, ensuring compliance with design specifications, statutory regulations, quality standards, and effective coordination between clients, subcontractors, and internal teams.

#### Scope

The scope covers the following :

- Manage MEP installation, commissioning, testing and handover process
- Manage the client and sub-contractor relationships
- Carry out documentation

#### Elements and Performance Criteria

##### *Manage MEP installation, commissioning, testing and handover process*

To be competent, the user/individual on the job must be able to:

- PC1.** Co-ordinate with the relevant authorities to obtain the fire No Objection Certificate (NOC) and Occupancy Certificate (OC) and any other relevant statutory permissions/licenses
- PC2.** Manage the installation of various systems such as plumbing, firefighting system, Sewage Treatment Plant (STP), Waste Treatment Plant (WTP), Heating, Ventilation, and Air-conditioning (HVAC) and lifts
- PC3.** Manage the installation of various equipment such as a substation, High Tension (HT)/ Low Tension (LT) Panels, Transformer, Diesel Generator (DG) sets, bus duct, meter board panels, fire alarm system, etc.
- PC4.** Ensure conducting, electrical wiring, rising main and other internal low side and high side electrical work is carried out appropriately
- PC5.** Ensure the installation of LV distribution, lighting and power circuits, telephone/ data system, access control, Public Address (PA) system, CCTV, cable management, earthing and lightning protection system is carried out as per the shop drawing and client requirements
- PC6.** Manage the MEP execution, commissioning and testing processes through coordination with the internal teams, sub- contractors and client, such as work order amendments when required
- PC7.** Ensure adherence to the design, Bill of Quantities (BOQ) specifications, industry standards, local and international building codes, Quality Control (QC) procedures, planned timelines and consistency with the company strategy and goals in line with the allotted budget
- PC8.** Implement corrective measures to deal with any deviations and delays in project delivery
- PC9.** Compile the necessary documents for handover and check their accuracy
- PC10.** Perform all post-tender activities until the handing over and completion of the defects liability period of the project
- PC11.** Carry out handover to the client following the agreed process

## Qualification Pack

### *Manage the client and sub-contractor relationships*

To be competent, the user/individual on the job must be able to:

- PC12.** Audit the performance of MEP sub-contractors and take appropriate action as required
- PC13.** Ensure compliance with the regulatory and organization's Quality, Health, Safety and Environment (QHSE) guidelines by the MEP subcontractors
- PC14.** Ensure effective coordination among clients, sub- contractors, department heads, MEP project managers and staff
- PC15.** Verify the MEP contractors' bills and co- ordinate with the finance team for their processing

### *Carry out documentation*

To be competent, the user/individual on the job must be able to:

- PC16.** Prepare the relevant reports such as project progress report using the relevant software tools after compiling data from various departments in the organization
- PC17.** Review the resource reports such as manpower histograms along with the machinery schedule
- PC18.** Communicate with all the stakeholders based on the reports and agree on an action plan as required

## Knowledge and Understanding (KU)

The individual on the job needs to know and understand:

- KU1.** Understanding of statutory regulations and the process to obtain necessary permissions/licenses such as Fire No Objection Certificate (NOC) and Occupancy Certificate (OC).
- KU2.** Knowledge of MEP system installation processes, including plumbing, firefighting systems, HVAC, and lifts.
- KU3.** Proficiency in managing the installation of critical equipment such as substations, panels, transformers, and Diesel Generator (DG) sets.
- KU4.** Familiarity with electrical systems, including low-voltage distribution, lighting, power circuits, and communication systems (telephone, CCTV, PA system).
- KU5.** Understanding of building codes, design specifications, and Bill of Quantities (BOQ) to ensure compliance during installation and execution.
- KU6.** Awareness of Quality Control (QC) procedures and industry standards in MEP projects for effective installation and testing.
- KU7.** Knowledge of corrective actions to address project deviations and delays, ensuring projects are on track.
- KU8.** Understanding of documentation requirements for project handover, including compliance with all necessary forms and reports.
- KU9.** Knowledge of client-subcontractor relationship management, ensuring smooth communication and performance audits.
- KU10.** Proficiency in using project management software tools for preparing progress reports, reviewing resource schedules, and managing communication.

## Generic Skills (GS)

## Qualification Pack

User/individual on the job needs to know how to:

- GS1.** Strong communication skills to effectively liaise with clients, subcontractors, and internal teams.
- GS2.** Leadership skills for managing and coordinating MEP installation teams and subcontractors.
- GS3.** Problem-solving skills to identify and address deviations and delays during project execution.
- GS4.** Project management skills for overseeing multiple MEP systems and ensuring timely, cost-effective delivery.
- GS5.** Negotiation skills to manage subcontractor agreements and ensure adherence to project requirements.
- GS6.** Attention to detail in verifying that all installations are carried out according to designs, specifications, and safety guidelines.
- GS7.** Time management skills to balance multiple tasks and ensure deadlines for installation, commissioning, and handover are met.
- GS8.** Conflict resolution skills to handle issues between clients, subcontractors, and internal teams during project execution.
- GS9.** Financial management skills for reviewing subcontractor bills and coordinating with finance for timely processing.
- GS10.** Analytical skills to review progress reports, resource schedules, and project performance data, making adjustments as necessary to ensure project success.

## Qualification Pack

### Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<i>Manage MEP installation, commissioning, testing and handover process</i>	8	15	-	10
<b>PC1.</b> Co-ordinate with the relevant authorities to obtain the fire No Objection Certificate (NOC) and Occupancy Certificate (OC) and any other relevant statutory permissions/licenses	-	-	-	-
<b>PC2.</b> Manage the installation of various systems such as plumbing, firefighting system, Sewage Treatment Plant (STP), Waste Treatment Plant (WTP), Heating, Ventilation, and Air- conditioning (HVAC) and lifts	-	-	-	-
<b>PC3.</b> Manage the installation of various equipment such as a substation, High Tension (HT)/ Low Tension (LT) Panels, Transformer, Diesel Generator (DG) sets, bus duct, meter board panels, fire alarm system, etc.	-	-	-	-
<b>PC4.</b> Ensure conducting, electrical wiring, rising main and other internal low side and high side electrical work is carried out appropriately	-	-	-	-
<b>PC5.</b> Ensure the installation of LV distribution, lighting and power circuits, telephone/ data system, access control, Public Address (PA) system, CCTV, cable management, earthing and lightning protection system is carried out as per the shop drawing and client requirements	-	-	-	-
<b>PC6.</b> Manage the MEP execution, commissioning and testing processes through coordination with the internal teams, sub- contractors and client, such as work order amendments when required	-	-	-	-
<b>PC7.</b> Ensure adherence to the design, Bill of Quantities (BOQ) specifications, industry standards, local and international building codes, Quality Control (QC) procedures, planned timelines and consistency with the company strategy and goals in line with the allotted budget	-	-	-	-
<b>PC8.</b> Implement corrective measures to deal with any deviations and delays in project delivery	-	-	-	-



### Qualification Pack

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<b>PC9.</b> Compile the necessary documents for handover and check their accuracy	-	-	-	-
<b>PC10.</b> Perform all post-tender activities until the handing over and completion of the defects liability period of the project	-	-	-	-
<b>PC11.</b> Carry out handover to the client following the agreed process	-	-	-	-
<i>Manage the client and sub-contractor relationships</i>	<b>10</b>	<b>10</b>	-	<b>10</b>
<b>PC12.</b> Audit the performance of MEP sub-contractors and take appropriate action as required	-	-	-	-
<b>PC13.</b> Ensure compliance with the regulatory and organization's Quality, Health, Safety and Environment (QHSE) guidelines by the MEP subcontractors	-	-	-	-
<b>PC14.</b> Ensure effective coordination among clients, sub- contractors, department heads, MEP project managers and staff	-	-	-	-
<b>PC15.</b> Verify the MEP contractors' bills and co-ordinate with the finance team for their processing	-	-	-	-
<i>Carry out documentation</i>	<b>12</b>	<b>15</b>	-	<b>10</b>
<b>PC16.</b> Prepare the relevant reports such as project progress report using the relevant software tools after compiling data from various departments in the organization	-	-	-	-
<b>PC17.</b> Review the resource reports such as manpower histograms along with the machinery schedule	-	-	-	-
<b>PC18.</b> Communicate with all the stakeholders based on the reports and agree on an action plan as required	-	-	-	-
<b>NOS Total</b>	<b>30</b>	<b>40</b>	-	<b>30</b>

## Qualification Pack

### National Occupational Standards (NOS) Parameters

<b>NOS Code</b>	ELE/N7107
<b>NOS Name</b>	Manage the MEP project execution, commissioning, testing and handover processes
<b>Sector</b>	Electronics
<b>Sub-Sector</b>	Industrial Automation
<b>Occupation</b>	Engineering-I&A
<b>NSQF Level</b>	6
<b>Credits</b>	9
<b>Version</b>	2.0
<b>Last Reviewed Date</b>	08/05/2025
<b>Next Review Date</b>	30/04/2028
<b>NSQC Clearance Date</b>	08/05/2025

## Qualification Pack

### ELE/N7108: Carry out internal organizational - level responsibilities

#### Description

This NOS unit is about oversee staffing, daily operations, financial management, and team development within the MEP department, ensuring efficient project delivery, performance monitoring, training, and strategic business growth

#### Scope

The scope covers the following :

- Arrange for the training of the MEP team and mentor them
- Manage the department finances
- Manage staff and daily operation
- Carry out miscellaneous managerial responsibilities

#### Elements and Performance Criteria

##### *Manage staff and daily operations*

To be competent, the user/individual on the job must be able to:

- PC1.** Co-ordinate the development of key performance goals for functions and subordinates
- PC2.** Carry out staffing, ensuring staff with the required skills are deployed at different levels of project delivery
- PC3.** Manage the daily operations of the business unit such as budgeting, production planning, inventory management
- PC4.** Monitor the performance of the key managers and executives

##### *Arrange for the training of the MEP team and mentor them*

To be competent, the user/individual on the job must be able to:

- PC5.** Identify knowledge and skills gaps among the various MEP departments in the organization through internal audits and surveys
- PC6.** Arrange for regular training of the MEP workforce to ensure effective delivery of projects
- PC7.** Lead and mentor a team of mechanical and electrical managers to achieve the best results in line with the agreed goals

##### *Manage the department finances*

To be competent, the user/individual on the job must be able to:

- PC8.** Carry out Profit and Loss (P&L) management and devise strategies to grow the business and communicate the strategies to the Board of Directors (BOD) for their approval
- PC9.** Review and analyses the expenditure to ensure compliance with the set budget

##### *Carry out miscellaneous managerial responsibilities*

To be competent, the user/individual on the job must be able to:

- PC10.** Carry out risk assessment and contingency planning, and communicate the same to internal and external stakeholders
- PC11.** Ensure effective control on the distribution of information among the client, internal departments and sub-contractors

## Qualification Pack

- PC12.** Coordinate with various organizational departments to ensure streamlined business processes and develop effective operations plans to achieve the organizational objectives
- PC13.** Develop and execute strategies to identify and connect with potential clients

### Knowledge and Understanding (KU)

The individual on the job needs to know and understand:

- KU1.** Understanding of organizational staffing processes, including skill assessment and workforce deployment across project stages.
- KU2.** Knowledge of developing and managing performance goals for business functions and individual team members.
- KU3.** Familiarity with business unit operations such as budgeting, production planning, and inventory control.
- KU4.** Awareness of internal audit practices to identify training needs and performance gaps in MEP teams.
- KU5.** Knowledge of training and development strategies for upskilling MEP staff across departments.
- KU6.** Proficiency in financial management principles including Profit and Loss (P&L) analysis and budget compliance.
- KU7.** Understanding of leadership and mentoring techniques for managing mechanical and electrical teams.
- KU8.** Knowledge of risk assessment, contingency planning, and communication with stakeholders.
- KU9.** Familiarity with interdepartmental coordination practices for streamlined project execution and operational efficiency.
- KU10.** Understanding of strategic business development approaches, including identifying and engaging potential clients.

### Generic Skills (GS)

User/individual on the job needs to know how to:

- GS1.** Leadership skills to guide and mentor multidisciplinary teams toward achieving operational goals
- GS2.** Strategic thinking for business planning, growth strategies, and operational improvements.
- GS3.** Analytical skills to evaluate performance, financial data, and training needs.
- GS4.** Communication skills to coordinate with clients, internal departments, and subcontractors.
- GS5.** Decision-making abilities in staffing, budgeting, and contingency planning.
- GS6.** Problem-solving skills to address operational bottlenecks and workforce challenges.
- GS7.** Time management to balance daily operations, long-term planning, and team development.
- GS8.** Interpersonal skills to manage and motivate teams while fostering a collaborative work
- GS9.** Presentation and reporting skills for communicating strategies to stakeholders, including the Board of Directors.



## Qualification Pack

**GS10.** Organizational skills for overseeing multiple processes like training, finance, risk management, and client acquisition.

## Qualification Pack

### Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<i>Manage staff and daily operations</i>	<b>8</b>	<b>10</b>	-	<b>10</b>
<b>PC1.</b> Co-ordinate the development of key performance goals for functions and subordinates	-	-	-	-
<b>PC2.</b> Carry out staffing, ensuring staff with the required skills are deployed at different levels of project delivery	-	-	-	-
<b>PC3.</b> Manage the daily operations of the business unit such as budgeting, production planning, inventory management	-	-	-	-
<b>PC4.</b> Monitor the performance of the key managers and executives	-	-	-	-
<i>Arrange for the training of the MEP team and mentor them</i>	<b>4</b>	<b>10</b>	-	<b>5</b>
<b>PC5.</b> Identify knowledge and skills gaps among the various MEP departments in the organization through internal audits and surveys	-	-	-	-
<b>PC6.</b> Arrange for regular training of the MEP workforce to ensure effective delivery of projects	-	-	-	-
<b>PC7.</b> Lead and mentor a team of mechanical and electrical managers to achieve the best results in line with the agreed goals	-	-	-	-
<i>Manage the department finances</i>	<b>6</b>	<b>10</b>	-	<b>5</b>
<b>PC8.</b> Carry out Profit and Loss (P&L) management and devise strategies to grow the business and communicate the strategies to the Board of Directors (BOD) for their approval	-	-	-	-
<b>PC9.</b> Review and analyses the expenditure to ensure compliance with the set budget	-	-	-	-
<i>Carry out miscellaneous managerial responsibilities</i>	<b>12</b>	<b>10</b>	-	<b>10</b>
<b>PC10.</b> Carry out risk assessment and contingency planning, and communicate the same to internal and external stakeholders	-	-	-	-

### Qualification Pack

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<b>PC11.</b> Ensure effective control on the distribution of information among the client, internal departments and sub-contractors	-	-	-	-
<b>PC12.</b> Coordinate with various organizational departments to ensure streamlined business processes and develop effective operations plans to achieve the organizational objectives	-	-	-	-
<b>PC13.</b> Develop and execute strategies to identify and connect with potential clients	-	-	-	-
<b>NOS Total</b>	<b>30</b>	<b>40</b>	<b>-</b>	<b>30</b>



## Qualification Pack

### National Occupational Standards (NOS) Parameters

<b>NOS Code</b>	ELE/N7108
<b>NOS Name</b>	Carry out internal organizational - level responsibilities
<b>Sector</b>	Electronics
<b>Sub-Sector</b>	Industrial Automation
<b>Occupation</b>	Engineering-I&A
<b>NSQF Level</b>	6
<b>Credits</b>	4
<b>Version</b>	2.0
<b>Last Reviewed Date</b>	08/05/2025
<b>Next Review Date</b>	30/04/2028
<b>NSQC Clearance Date</b>	08/05/2025

## Qualification Pack

### DGT/VSQ/N0102: Employability Skills (60 Hours)

#### Description

This unit is about employability skills, Constitutional values, becoming a professional in the 21st Century, digital, financial, and legal literacy, diversity and Inclusion, English and communication skills, customer service, entrepreneurship, and apprenticeship, getting ready for jobs and career development.

#### Scope

The scope covers the following :

- Introduction to Employability Skills
- Constitutional values - Citizenship
- Becoming a Professional in the 21st Century
- Basic English Skills
- Career Development & Goal Setting
- Communication Skills
- Diversity & Inclusion
- Financial and Legal Literacy
- Essential Digital Skills
- Entrepreneurship
- Customer Service
- Getting ready for Apprenticeship & Jobs

#### Elements and Performance Criteria

##### *Introduction to Employability Skills*

To be competent, the user/individual on the job must be able to:

- PC1.** identify employability skills required for jobs in various industries
- PC2.** identify and explore learning and employability portals

##### *Constitutional values – Citizenship*

To be competent, the user/individual on the job must be able to:

- PC3.** recognize the significance of constitutional values, including civic rights and duties, citizenship, responsibility towards society etc. and personal values and ethics such as honesty, integrity, caring and respecting others, etc.
- PC4.** follow environmentally sustainable practices

##### *Becoming a Professional in the 21st Century*

To be competent, the user/individual on the job must be able to:

- PC5.** recognize the significance of 21st Century Skills for employment
- PC6.** practice the 21st Century Skills such as Self-Awareness, Behaviour Skills, time management, critical and adaptive thinking, problem-solving, creative thinking, social and cultural awareness, emotional awareness, learning to learn for continuous learning etc. in personal and professional life

##### *Basic English Skills*

To be competent, the user/individual on the job must be able to:

## Qualification Pack

- PC7.** use basic English for everyday conversation in different contexts, in person and over the telephone
- PC8.** read and understand routine information, notes, instructions, mails, letters etc. written in English
- PC9.** write short messages, notes, letters, e-mails etc. in English

### *Career Development & Goal Setting*

To be competent, the user/individual on the job must be able to:

- PC10.** understand the difference between job and career
- PC11.** prepare a career development plan with short- and long-term goals, based on aptitude

### *Communication Skills*

To be competent, the user/individual on the job must be able to:

- PC12.** follow verbal and non-verbal communication etiquette and active listening techniques in various settings
- PC13.** work collaboratively with others in a team

### *Diversity & Inclusion*

To be competent, the user/individual on the job must be able to:

- PC14.** communicate and behave appropriately with all genders and PwD
- PC15.** escalate any issues related to sexual harassment at workplace according to POSH Act

### *Financial and Legal Literacy*

To be competent, the user/individual on the job must be able to:

- PC16.** select financial institutions, products and services as per requirement
- PC17.** carry out offline and online financial transactions, safely and securely
- PC18.** identify common components of salary and compute income, expenses, taxes, investments etc
- PC19.** identify relevant rights and laws and use legal aids to fight against legal exploitation

### *Essential Digital Skills*

To be competent, the user/individual on the job must be able to:

- PC20.** operate digital devices and carry out basic internet operations securely and safely
- PC21.** use e- mail and social media platforms and virtual collaboration tools to work effectively
- PC22.** use basic features of word processor, spreadsheets, and presentations

### *Entrepreneurship*

To be competent, the user/individual on the job must be able to:

- PC23.** identify different types of Entrepreneurship and Enterprises and assess opportunities for potential business through research
- PC24.** develop a business plan and a work model, considering the 4Ps of Marketing Product, Price, Place and Promotion
- PC25.** identify sources of funding, anticipate, and mitigate any financial/ legal hurdles for the potential business opportunity

### *Customer Service*

To be competent, the user/individual on the job must be able to:

- PC26.** identify different types of customers
- PC27.** identify and respond to customer requests and needs in a professional manner.

## Qualification Pack

**PC28.** follow appropriate hygiene and grooming standards

*Getting ready for apprenticeship & Jobs*

To be competent, the user/individual on the job must be able to:

**PC29.** create a professional Curriculum vitae (Résumé)

**PC30.** search for suitable jobs using reliable offline and online sources such as Employment exchange, recruitment agencies, newspapers etc. and job portals, respectively

**PC31.** apply to identified job openings using offline /online methods as per requirement

**PC32.** answer questions politely, with clarity and confidence, during recruitment and selection

**PC33.** identify apprenticeship opportunities and register for it as per guidelines and requirements

## Knowledge and Understanding (KU)

The individual on the job needs to know and understand:

**KU1.** need for employability skills and different learning and employability related portals

**KU2.** various constitutional and personal values

**KU3.** different environmentally sustainable practices and their importance

**KU4.** Twenty first (21st) century skills and their importance

**KU5.** how to use English language for effective verbal (face to face and telephonic) and written communication in formal and informal set up

**KU6.** importance of career development and setting long- and short-term goals

**KU7.** about effective communication

**KU8.** POSH Act

**KU9.** Gender sensitivity and inclusivity

**KU10.** different types of financial institutes, products, and services

**KU11.** how to compute income and expenditure

**KU12.** importance of maintaining safety and security in offline and online financial transactions

**KU13.** different legal rights and laws

**KU14.** different types of digital devices and the procedure to operate them safely and securely

**KU15.** how to create and operate an e- mail account and use applications such as word processors, spreadsheets etc.

**KU16.** how to identify business opportunities

**KU17.** types and needs of customers

**KU18.** how to apply for a job and prepare for an interview

**KU19.** apprenticeship scheme and the process of registering on apprenticeship portal

## Generic Skills (GS)

User/individual on the job needs to know how to:

**GS1.** read and write different types of documents/instructions/correspondence

**GS2.** communicate effectively using appropriate language in formal and informal settings



## Qualification Pack

- GS3.** behave politely and appropriately with all
- GS4.** how to work in a virtual mode
- GS5.** perform calculations efficiently
- GS6.** solve problems effectively
- GS7.** pay attention to details
- GS8.** manage time efficiently
- GS9.** maintain hygiene and sanitization to avoid infection

## Qualification Pack

### Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<i>Introduction to Employability Skills</i>	<b>1</b>	<b>1</b>	-	-
<b>PC1.</b> identify employability skills required for jobs in various industries	-	-	-	-
<b>PC2.</b> identify and explore learning and employability portals	-	-	-	-
<i>Constitutional values – Citizenship</i>	<b>1</b>	<b>1</b>	-	-
<b>PC3.</b> recognize the significance of constitutional values, including civic rights and duties, citizenship, responsibility towards society etc. and personal values and ethics such as honesty, integrity, caring and respecting others, etc.	-	-	-	-
<b>PC4.</b> follow environmentally sustainable practices	-	-	-	-
<i>Becoming a Professional in the 21st Century</i>	<b>2</b>	<b>4</b>	-	-
<b>PC5.</b> recognize the significance of 21st Century Skills for employment	-	-	-	-
<b>PC6.</b> practice the 21st Century Skills such as Self-Awareness, Behaviour Skills, time management, critical and adaptive thinking, problem-solving, creative thinking, social and cultural awareness, emotional awareness, learning to learn for continuous learning etc. in personal and professional life	-	-	-	-
<i>Basic English Skills</i>	<b>2</b>	<b>3</b>	-	-
<b>PC7.</b> use basic English for everyday conversation in different contexts, in person and over the telephone	-	-	-	-
<b>PC8.</b> read and understand routine information, notes, instructions, mails, letters etc. written in English	-	-	-	-
<b>PC9.</b> write short messages, notes, letters, e-mails etc. in English	-	-	-	-
<i>Career Development &amp; Goal Setting</i>	<b>1</b>	<b>2</b>	-	-

### Qualification Pack

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<b>PC10.</b> understand the difference between job and career	-	-	-	-
<b>PC11.</b> prepare a career development plan with short- and long-term goals, based on aptitude	-	-	-	-
<i>Communication Skills</i>	<b>2</b>	<b>2</b>	-	-
<b>PC12.</b> follow verbal and non-verbal communication etiquette and active listening techniques in various settings	-	-	-	-
<b>PC13.</b> work collaboratively with others in a team	-	-	-	-
<i>Diversity &amp; Inclusion</i>	<b>1</b>	<b>2</b>	-	-
<b>PC14.</b> communicate and behave appropriately with all genders and PwD	-	-	-	-
<b>PC15.</b> escalate any issues related to sexual harassment at workplace according to POSH Act	-	-	-	-
<i>Financial and Legal Literacy</i>	<b>2</b>	<b>3</b>	-	-
<b>PC16.</b> select financial institutions, products and services as per requirement	-	-	-	-
<b>PC17.</b> carry out offline and online financial transactions, safely and securely	-	-	-	-
<b>PC18.</b> identify common components of salary and compute income, expenses, taxes, investments etc	-	-	-	-
<b>PC19.</b> identify relevant rights and laws and use legal aids to fight against legal exploitation	-	-	-	-
<i>Essential Digital Skills</i>	<b>3</b>	<b>4</b>	-	-
<b>PC20.</b> operate digital devices and carry out basic internet operations securely and safely	-	-	-	-
<b>PC21.</b> use e- mail and social media platforms and virtual collaboration tools to work effectively	-	-	-	-
<b>PC22.</b> use basic features of word processor, spreadsheets, and presentations	-	-	-	-



### Qualification Pack

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<i>Entrepreneurship</i>	<b>2</b>	<b>3</b>	-	-
<b>PC23.</b> identify different types of Entrepreneurship and Enterprises and assess opportunities for potential business through research	-	-	-	-
<b>PC24.</b> develop a business plan and a work model, considering the 4Ps of Marketing Product, Price, Place and Promotion	-	-	-	-
<b>PC25.</b> identify sources of funding, anticipate, and mitigate any financial/ legal hurdles for the potential business opportunity	-	-	-	-
<i>Customer Service</i>	<b>1</b>	<b>2</b>	-	-
<b>PC26.</b> identify different types of customers	-	-	-	-
<b>PC27.</b> identify and respond to customer requests and needs in a professional manner.	-	-	-	-
<b>PC28.</b> follow appropriate hygiene and grooming standards	-	-	-	-
<i>Getting ready for apprenticeship &amp; Jobs</i>	<b>2</b>	<b>3</b>	-	-
<b>PC29.</b> create a professional Curriculum vitae (Résumé)	-	-	-	-
<b>PC30.</b> search for suitable jobs using reliable offline and online sources such as Employment exchange, recruitment agencies, newspapers etc. and job portals, respectively	-	-	-	-
<b>PC31.</b> apply to identified job openings using offline /online methods as per requirement	-	-	-	-
<b>PC32.</b> answer questions politely, with clarity and confidence, during recruitment and selection	-	-	-	-
<b>PC33.</b> identify apprenticeship opportunities and register for it as per guidelines and requirements	-	-	-	-
<b>NOS Total</b>	<b>20</b>	<b>30</b>	-	-

## Qualification Pack

### National Occupational Standards (NOS) Parameters

<b>NOS Code</b>	DGT/VSQ/N0102
<b>NOS Name</b>	Employability Skills (60 Hours)
<b>Sector</b>	Cross Sectoral
<b>Sub-Sector</b>	Professional Skills
<b>Occupation</b>	Employability
<b>NSQF Level</b>	4
<b>Credits</b>	2
<b>Version</b>	1.0
<b>Last Reviewed Date</b>	08/05/2025
<b>Next Review Date</b>	31/10/2025
<b>NSQC Clearance Date</b>	08/05/2025

## Assessment Guidelines and Assessment Weightage

### Assessment Guidelines

1. Criteria for assessment for each Qualification Pack will be created by the Sector Skill Council. Each Element/ Performance Criteria (PC) will be assigned marks proportional to its importance in NOS. SSC will also lay down proportion of marks for Theory and Skills Practical for each Element/ PC.
2. The assessment for the theory part will be based on knowledge bank of questions created by the SSC.
3. Assessment will be conducted for all compulsory NOS, and where applicable, on the selected elective/option NOS/set of NOS.
4. Individual assessment agencies will create unique question papers for theory part for each candidate at each examination/training center (as per assessment criteria below).
5. Individual assessment agencies will create unique evaluations for skill practical for every student at each examination/ training center based on these criteria.
6. To pass the Qualification Pack assessment, every trainee should score the Recommended Pass % aggregate for the QP.
7. In case of unsuccessful completion, the trainee may seek reassessment on the Qualification Pack.

## Qualification Pack

**Minimum Aggregate Passing % at QP Level : 70**

(Please note: Every Trainee should score a minimum aggregate passing percentage as specified above, to successfully clear the Qualification Pack assessment.)

## Assessment Weightage

Compulsory NOS

National Occupational Standards	Theory Marks	Practical Marks	Project Marks	Viva Marks	Total Marks	Weightage
ELE/N7106.Manage the tendering, sub-contracting and planning processes for MEP projects	30	40	-	30	100	30
ELE/N7107.Manage the MEP project execution, commissioning, testing and handover processes	30	40	-	30	100	25
ELE/N7108.Carry out internal organizational - level responsibilities	30	40	-	30	100	25
DGT/VSQ/N0102.Employability Skills (60 Hours)	20	30	-	-	50	20
<b>Total</b>	<b>110</b>	<b>150</b>	<b>-</b>	<b>90</b>	<b>350</b>	<b>100</b>

## Qualification Pack

### Acronyms

<b>NOS</b>	National Occupational Standard(s)
<b>NSQF</b>	National Skills Qualifications Framework
<b>QP</b>	Qualifications Pack
<b>TVET</b>	Technical and Vocational Education and Training

## Qualification Pack

### Glossary

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

## Qualification Pack

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