

## Qualification Pack



# Assembly Line Operator (Electronics Modules)

QP Code: ELE/Q4301

Version: 4.0

NSQF Level: 3

Electronics Sector Skills Council of India || 155, 2nd Floor, ESC House Okhla Industrial Area-Phase 3  
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## Qualification Pack

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### ELE/Q4301: Assembly Line Operator (Electronics Modules)

#### Brief Job Description

The individual at work is responsible for assembling the different modules in the IT hardware to complete the product. The individual receives different electronic and electromechanical modules, fits and assembles them together. The operator may assemble multiple modules and/or products by following operating procedures for different models.

#### Personal Attributes

The job requires the individual to work in a sitting or standing position for long hours on the assembly line. The individual must be able to handle tools and equipment with precision and safely

#### Applicable National Occupational Standards (NOS)

##### Compulsory NOS:

1. [ELE/N4301: Perform Kitting of modules for assembling](#)
2. [ELE/N4302: Assemble modules to complete equipment](#)
3. [DGT/VSQ/N0101: Employability Skills \(30 Hours\)](#)

#### Qualification Pack (QP) Parameters

|                                      |                                  |
|--------------------------------------|----------------------------------|
| <b>Sector</b>                        | Electronics                      |
| <b>Sub-Sector</b>                    | Electronics Manufacturing System |
| <b>Occupation</b>                    | Assembly-EMS                     |
| <b>Country</b>                       | India                            |
| <b>NSQF Level</b>                    | 3                                |
| <b>Credits</b>                       | 13                               |
| <b>Aligned to NCO/ISCO/ISIC Code</b> | NCO-2015/7422.1901               |

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|                                                           |                                                                                                                                                                                                                                                                                                                                              |
|-----------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Minimum Educational Qualification &amp; Experience</b> | 10th grade pass (10th grade or equivalent) with NA of experience<br>OR<br>8th Class pass (8th grade ) with 3 Years of experience Relevant Experience in Electronics Manufacturing Services<br>OR<br>Previous relevant Qualification of NSQF Level 2.5 with 1.5 years of experience Relevant Experience in Electronics Manufacturing Services |
| <b>Minimum Level of Education for Training in School</b>  | 8th Class                                                                                                                                                                                                                                                                                                                                    |
| <b>Pre-Requisite License or Training</b>                  | NA                                                                                                                                                                                                                                                                                                                                           |
| <b>Minimum Job Entry Age</b>                              | 16 Years                                                                                                                                                                                                                                                                                                                                     |
| <b>Last Reviewed On</b>                                   | NA                                                                                                                                                                                                                                                                                                                                           |
| <b>Next Review Date</b>                                   | 07/10/2028                                                                                                                                                                                                                                                                                                                                   |
| <b>NSQC Approval Date</b>                                 | 07/10/2025                                                                                                                                                                                                                                                                                                                                   |
| <b>Version</b>                                            | 4.0                                                                                                                                                                                                                                                                                                                                          |
| <b>Reference code on NQR</b>                              | QG-03-EH-044872025-V2-ESSCI                                                                                                                                                                                                                                                                                                                  |
| <b>NQR Version</b>                                        | 2                                                                                                                                                                                                                                                                                                                                            |

### Remarks:

NA

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### ELE/N4301: Perform Kitting of modules for assembling

#### Description

This NOS unit is about receiving the components, modules, accessories and PCBs, and arranging for ease of assembling the product

#### Scope

The scope covers the following :

- Introduction and Understanding work requirement
- Receiving the components and modules
- Assembling the component
- Kitting the components and modules
- Assembling components
- Interacting with superior

#### Elements and Performance Criteria

##### *Introduction and Understanding work requirement*

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

- PC1.** Describe the role and responsibilities of an Assembly Line Operator – IT Hardware; explain the process of receiving, fitting, and assembling electronic and electromechanical modules into complete products by following standard operating procedures for various models.
- PC2.** the daily targets on number of assemblies to be made and product and model for which the day work is assigned to
- PC3.** the components and modules according to the bill of materials (BOM)

##### *Receiving the components and modules*

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

- PC4.** receive the electrical and electronic components
- PC5.** receive the connectors, wires, cables and modules
- PC6.** receive other accessories such as labels, cabinet, machine traveller sheet, etc., used in assembling process
- PC7.** follow standard operating procedure while handling hardware modules such as handling PCB with ESD standards
- PC8.** document the number of components and modules received from the stores and take sign off from stores department
- PC9.** enter the inventory details in the internal process system as per company requirement example: SAP (ERP system)
- PC10.** accurately read the bill of materials for the product
- PC11.** maintain accurate documentation on the module and components received

##### *Assembling the component*

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

- PC12.** fix appropriately the components in the right slots without any error

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- PC13.** handle the components appropriately without any damage
- PC14.** use and handle specific precision tools to mount the components / module without physical damage
- PC15.** document all the components fixed in the standard procedure

### *Kitting the components and modules*

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

- PC16.** understand all the modules required for assembling such as metal case for boxing, power supply, mother boards, other PCBs, displays, drivers, power supply, controllers, trays, fusers
- PC17.** segregate the components, modules, box and accessories
- PC18.** put them in different bins for assembling of an entire unit
- PC19.** understand any specific instruction that need to be followed for assembling as per operating manual and circuit diagram or kitting sheet
- PC20.** check for any possible mix up between different kitting requirements
- PC21.** understand the handling procedure of different components and modules
- PC22.** take anti-static precautions before work and wear ESD wrist straps or aprons
- PC23.** ensure that the number of modules or accessories are appropriately stocked
- PC24.** record all the components and modules in the machine traveller sheet for tracking
- PC25.** correctly identify all the modules and place them appropriately
- PC26.** understand and arrange accurate number of modules and accessories required for one product
- PC27.** avoid any mismatch and wrong count of modules during kitting

### *Assembling components*

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

- PC28.** fix the processor appropriately on the sockets
- PC29.** fix the RAM on in the sockets in motherboard
- PC30.** fix other necessary modules such as video cards in their respective slots on the motherboard
- PC31.** mount the cooling fan above the processor as per standard operating procedure (use thermal paste if required)
- PC32.** assemble print head, components such as wire house, armature, bobbin
- PC33.** stick necessary labels in appropriate places such as stickers of OEM, Manufacturer brand, product labels and product identification serial number labels
- PC34.** use specified precision tools for assembling the components in the module
- PC35.** document the process on machine traveller sheet after completion of each work for inspection
- PC36.** enter the completed work in company's internal system
- PC37.** effectively use appropriate tools to address specific issues
- PC38.** follow standard safety procedures in handling hazardous tools
- PC39.** maintain the tools appropriately to reduce damage or repair
- PC40.** maintain zero-material defect during material handling by following standard operating procedure

### *Interacting with superior*

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

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- PC41.** understand the work requirement from superior, periodically
- PC42.** report to superior on the work completed
- PC43.** seek assistance from superior on specific module assembling and handling
- PC44.** escalate the issues and problems that cannot be handled
- PC45.** document the work completed on the company ERP software for tracking and future references
- PC46.** achieve 100% on time completion of kitting as per productivity and assembling target
- PC47.** carry out daily schedule as per instructions
- PC48.** find technical solutions on specific issues
- PC49.** report work status and prepare required documentation as per company standards

## Knowledge and Understanding (KU)

The individual on the job needs to know and understand:

- KU1.** Knowledge of the role and responsibilities of an Assembly Line Operator for IT hardware, including receiving, fitting, and assembling electronic/electromechanical modules.
- KU2.** Understanding of daily productivity targets, product models, and the number of assemblies to be completed.
- KU3.** Familiarity with the Bill of Materials (BOM) and identification of components, modules, and accessories required for assembly.
- KU4.** Knowledge of standard operating procedures (SOP) for handling hardware components, including ESD safety standards for sensitive electronics like PCB, RAM, and processors.
- KU5.** Understanding of kitting procedures, segregating components, and preparing modules for assembly according to assembly instructions or manuals.

## Generic Skills (GS)

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

- GS1.** Ability to read and interpret BOMs, assembly instructions, circuit diagrams, and kitting sheets accurately.
- GS2.** Skill in handling electronic components, modules, and accessories with care to prevent physical or electrostatic damage.
- GS3.** Proficiency in using precision tools, soldering equipment, and assembly devices to mount components accurately.
- GS4.** Ability to segregate, organize, and kit components/modules according to assembly requirements without mismatch.
- GS5.** Competence in assembling hardware modules such as processors, RAM, video cards, cooling fans, print heads, and other components as per SOP.

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### Assessment Criteria

| Assessment Criteria for Outcomes                                                                                                                                                                                                                                                        | Theory Marks | Practical Marks | Project Marks | Viva Marks |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|-----------------|---------------|------------|
| <i>Introduction and Understanding work requirement</i>                                                                                                                                                                                                                                  | -            | 4               | -             | -          |
| <b>PC1.</b> Describe the role and responsibilities of an Assembly Line Operator – IT Hardware; explain the process of receiving, fitting, and assembling electronic and electromechanical modules into complete products by following standard operating procedures for various models. | -            | -               | -             | -          |
| <b>PC2.</b> the daily targets on number of assemblies to be made and product and model for which the day work is assigned to                                                                                                                                                            | -            | -               | -             | -          |
| <b>PC3.</b> the components and modules according to the bill of materials (BOM)                                                                                                                                                                                                         | -            | -               | -             | -          |
| <i>Receiving the components and modules</i>                                                                                                                                                                                                                                             | 7            | 9               | -             | -          |
| <b>PC4.</b> receive the electrical and electronic components                                                                                                                                                                                                                            | -            | -               | -             | -          |
| <b>PC5.</b> receive the connectors, wires, cables and modules                                                                                                                                                                                                                           | -            | -               | -             | -          |
| <b>PC6.</b> receive other accessories such as labels, cabinet, machine traveller sheet, etc., used in assembling process                                                                                                                                                                | -            | -               | -             | -          |
| <b>PC7.</b> follow standard operating procedure while handling hardware modules such as handling PCB with ESD standards                                                                                                                                                                 | -            | -               | -             | -          |
| <b>PC8.</b> document the number of components and modules received from the stores and take sign off from stores department                                                                                                                                                             | -            | -               | -             | -          |
| <b>PC9.</b> enter the inventory details in the internal process system as per company requirement example: SAP (ERP system)                                                                                                                                                             | -            | -               | -             | -          |
| <b>PC10.</b> accurately read the bill of materials for the product                                                                                                                                                                                                                      | -            | -               | -             | -          |
| <b>PC11.</b> maintain accurate documentation on the module and components received                                                                                                                                                                                                      | -            | -               | -             | -          |

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| Assessment Criteria for Outcomes                                                                                                                                                                    | Theory Marks | Practical Marks | Project Marks | Viva Marks |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|-----------------|---------------|------------|
| <i>Assembling the component</i>                                                                                                                                                                     | <b>3</b>     | <b>8</b>        | -             | -          |
| <b>PC12.</b> fix appropriately the components in the right slots without any error                                                                                                                  | -            | -               | -             | -          |
| <b>PC13.</b> handle the components appropriately without any damage                                                                                                                                 | -            | -               | -             | -          |
| <b>PC14.</b> use and handle specific precision tools to mount the components / module without physical damage                                                                                       | -            | -               | -             | -          |
| <b>PC15.</b> document all the components fixed in the standard procedure                                                                                                                            | -            | -               | -             | -          |
| <i>Kitting the components and modules</i>                                                                                                                                                           | <b>12</b>    | <b>15</b>       | -             | -          |
| <b>PC16.</b> understand all the modules required for assembling such as metal case for boxing, power supply, mother boards, other PCBs, displays, drivers, power supply, controllers, trays, fusers | -            | -               | -             | -          |
| <b>PC17.</b> segregate the components, modules, box and accessories                                                                                                                                 | -            | -               | -             | -          |
| <b>PC18.</b> put them in different bins for assembling of an entire unit                                                                                                                            | -            | -               | -             | -          |
| <b>PC19.</b> understand any specific instruction that need to be followed for assembling as per operating manual and circuit diagram or kitting sheet                                               | -            | -               | -             | -          |
| <b>PC20.</b> check for any possible mix up between different kitting requirements                                                                                                                   | -            | -               | -             | -          |
| <b>PC21.</b> understand the handling procedure of different components and modules                                                                                                                  | -            | -               | -             | -          |
| <b>PC22.</b> take anti-static precautions before work and wear ESD wrist straps or aprons                                                                                                           | -            | -               | -             | -          |
| <b>PC23.</b> ensure that the number of modules or accessories are appropriately stocked                                                                                                             | -            | -               | -             | -          |
| <b>PC24.</b> record all the components and modules in the machine traveller sheet for tracking                                                                                                      | -            | -               | -             | -          |

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| Assessment Criteria for Outcomes                                                                                                                                      | Theory Marks | Practical Marks | Project Marks | Viva Marks |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|-----------------|---------------|------------|
| <b>PC25.</b> correctly identify all the modules and place them appropriately                                                                                          | -            | -               | -             | -          |
| <b>PC26.</b> understand and arrange accurate number of modules and accessories required for one product                                                               | -            | -               | -             | -          |
| <b>PC27.</b> avoid any mismatch and wrong count of modules during kitting                                                                                             | -            | -               | -             | -          |
| <i>Assembling components</i>                                                                                                                                          | <b>13</b>    | <b>14</b>       | -             | -          |
| <b>PC28.</b> fix the processor appropriately on the sockets                                                                                                           | -            | -               | -             | -          |
| <b>PC29.</b> fix the RAM on in the sockets in motherboard                                                                                                             | -            | -               | -             | -          |
| <b>PC30.</b> fix other necessary modules such as video cards in their respective slots on the motherboard                                                             | -            | -               | -             | -          |
| <b>PC31.</b> mount the cooling fan above the processor as per standard operating procedure (use thermal paste if required)                                            | -            | -               | -             | -          |
| <b>PC32.</b> assemble print head, components such as wire house, armature, bobbin                                                                                     | -            | -               | -             | -          |
| <b>PC33.</b> stick necessary labels in appropriate places such as stickers of OEM, Manufacturer brand, product labels and product identification serial number labels | -            | -               | -             | -          |
| <b>PC34.</b> use specified precision tools for assembling the components in the module                                                                                | -            | -               | -             | -          |
| <b>PC35.</b> document the process on machine traveller sheet after completion of each work for inspection                                                             | -            | -               | -             | -          |
| <b>PC36.</b> enter the completed work in company's internal system                                                                                                    | -            | -               | -             | -          |
| <b>PC37.</b> effectively use appropriate tools to address specific issues                                                                                             | -            | -               | -             | -          |
| <b>PC38.</b> follow standard safety procedures in handling hazardous tools                                                                                            | -            | -               | -             | -          |

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| Assessment Criteria for Outcomes                                                                              | Theory Marks | Practical Marks | Project Marks | Viva Marks |
|---------------------------------------------------------------------------------------------------------------|--------------|-----------------|---------------|------------|
| <b>PC39.</b> maintain the tools appropriately to reduce damage or repair                                      | -            | -               | -             | -          |
| <b>PC40.</b> maintain zero-material defect during material handling by following standard operating procedure | -            | -               | -             | -          |
| <i>Interacting with superior</i>                                                                              | <b>5</b>     | <b>10</b>       | -             | -          |
| <b>PC41.</b> understand the work requirement from superior, periodically                                      | -            | -               | -             | -          |
| <b>PC42.</b> report to superior on the work completed                                                         | -            | -               | -             | -          |
| <b>PC43.</b> seek assistance from superior on specific module assembling and handling                         | -            | -               | -             | -          |
| <b>PC44.</b> escalate the issues and problems that cannot be handled                                          | -            | -               | -             | -          |
| <b>PC45.</b> document the work completed on the company ERP software for tracking and future references       | -            | -               | -             | -          |
| <b>PC46.</b> achieve 100% on time completion of kitting as per productivity and assembling target             | -            | -               | -             | -          |
| <b>PC47.</b> carry out daily schedule as per instructions                                                     | -            | -               | -             | -          |
| <b>PC48.</b> find technical solutions on specific issues                                                      | -            | -               | -             | -          |
| <b>PC49.</b> report work status and prepare required documentation as per company standards                   | -            | -               | -             | -          |
| <b>NOS Total</b>                                                                                              | <b>40</b>    | <b>60</b>       | -             | -          |

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### National Occupational Standards (NOS) Parameters

|                            |                                           |
|----------------------------|-------------------------------------------|
| <b>NOS Code</b>            | ELE/N4301                                 |
| <b>NOS Name</b>            | Perform Kitting of modules for assembling |
| <b>Sector</b>              | Electronics                               |
| <b>Sub-Sector</b>          | Consumer Electronics & IT Hardware        |
| <b>Occupation</b>          | Assembly-EMS                              |
| <b>NSQF Level</b>          | 3                                         |
| <b>Credits</b>             | 5                                         |
| <b>Version</b>             | 2.0                                       |
| <b>Last Reviewed Date</b>  | 07/10/2025                                |
| <b>Next Review Date</b>    | 07/10/2028                                |
| <b>NSQC Clearance Date</b> | 07/10/2025                                |

## Qualification Pack

### ELE/N4302: Assemble modules to complete equipment

#### Description

This NOS unit is about assembling the various modules and box assembly to complete the hardware product

#### Scope

The scope covers the following :

- Understanding work requirement
- Receiving modules to be assembled
- Assembling of modules
- Completing box assembly
- Interacting with superior
- Achieving productivity and quality standards

#### Elements and Performance Criteria

##### *Understanding work requirement*

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

- PC1.** understand the daily targets on number of assemblies to be made
- PC2.** understand the product and model for which the days work is assigned to

##### *Receiving modules to be assembled*

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

- PC3.** ensure all the modules required for assembling is available in the kit
- PC4.** read the machine traveller sheet and ensure that the components in mother board are fixed
- PC5.** understand any specific instructions for handling modules or on assembling the equipment
- PC6.** take anti static precautions before work and wear ESD wrist straps or aprons
- PC7.** follow standard operating procedure while handling hardware modules such as handling PCB with ESD standards
- PC8.** understand the time requirement to assemble different modules in an assembly line
- PC9.** Use digital inventory systems and automated storage solutions to accurately kit components for assembly enter the details in the internal process system as per company requirement example: SAP(ERP system)

##### *Assembling of modules*

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

- PC10.** follow the sequence for assembling for example: In CPU assembling for desktop, motherboard, SMPS, Hard disk, Drivers, Wire connectors are assembled sequentially
- PC11.** follow the standard assembling procedure for specific models of equipment
- PC12.** ensure the module mounting, fitting, screws, wire connection are firm and is proper to meet the fitness requirement
- PC13.** mount LED display and PCB wherever required in the casing

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- PC14.** place stickers and labels wherever applicable as per the product specification
- PC15.** ensure that all labels are appropriately placed and none is left
- PC16.** document after assembling of each Module by mentioning the work done in the machine traveller sheet
- PC17.** use the using electric tools, smart workstations for assemble the equipment
- PC18.** assemble the components within the specified time in the moving assembly
- PC19.** assemble all the modules firmly without damage
- PC20.** ensure the wire connections are appropriate and not wrongly connected
- PC21.** ensure that assembling is proper and no fall or movement of modules
- PC22.** ensure no module and accessories are missed out in assembling

### *Completing box assembly*

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

- PC23.** ensure all the inner modules (inside the casing) are assembled appropriately
- PC24.** fit the frame or casing forming the outer cover for the equipment (usually made of steel, aluminium, plastic)
- PC25.** fix them using screws and ensure firm closure of the case
- PC26.** place labels and stickers of OEM and the manufacturer in the specified places in outer casing
- PC27.** check for any loose bolts or improper assembling
- PC28.** complete the assembling and document them in machine traveller sheet
- PC29.** pass the equipment to next section after ensuring the assembly is proper
- PC30.** assemble the box as specified within the specified time
- PC31.** ensure all labels are appropriately placed and none are missed out
- PC32.** check for complete assembly of all modules
- PC33.** use tools as per standard operating procedure and avoid damage
- PC34.** prevent any accidents while handling hazardous tools
- PC35.** use appropriate tools for specific rework activity and achieve the results
- PC36.** maintain zero-material defect During material handling by following standard operating procedure

### *Interacting with superior*

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

- PC37.** understand the work requirement from superior, periodically
- PC38.** report to superior on the work completed
- PC39.** seek assistance from superior on specific module assembling and handling
- PC40.** escalate the issues and problems that cannot be handled
- PC41.** document the work completed on the company ERP software for tracking and future references

### *Achieving productivity and quality standards*

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

- PC42.** achieve 100% on the daily target of number of assembled product
- PC43.** meet the target of quality as per Service Level Agreement (SLA) and avoid rework
- PC44.** rework within the turnaround time (TAT) and deliver them

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### Knowledge and Understanding (KU)

The individual on the job needs to know and understand:

- KU1.** Understanding daily production targets, product models, and time requirements for assembling different modules in an assembly-line environment.
- KU2.** Knowledge of module availability, kitting standards, and verification through machine traveler sheets.
- KU3.** Familiarity with handling instructions, safety standards, and ESD precautions for sensitive hardware components like PCBs and motherboard modules.
- KU4.** Understanding of SOPs for mounting, cabling, labeling, and securing modules to meet fitment and design requirements.
- KU5.** Knowledge of standard sequences in assembling desktops, servers, and related IT hardware products.

### Generic Skills (GS)

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

- GS1.** Ability to interpret production work orders, assembly line tasks, and BOM/component details.
- GS2.** Skill in assembling components in the correct sequence with precision and within allotted time.
- GS3.** Competence in using precision tools, electric screwdrivers, and automated assembly equipment safely.
- GS4.** Skill in completing module assembly without errors such as loose connections, missing accessories, or misplaced labels.
- GS5.** Ability to segregate and organize modules, accessories, and casings efficiently to avoid mix-up.

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### Assessment Criteria

| Assessment Criteria for Outcomes                                                                                                                                                                                         | Theory Marks | Practical Marks | Project Marks | Viva Marks |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|-----------------|---------------|------------|
| <i>Understanding work requirement</i>                                                                                                                                                                                    | 2            | 2               | -             | -          |
| <b>PC1.</b> understand the daily targets on number of assemblies to be made                                                                                                                                              | -            | -               | -             | -          |
| <b>PC2.</b> understand the product and model for which the days work is assigned to                                                                                                                                      | -            | -               | -             | -          |
| <i>Receiving modules to be assembled</i>                                                                                                                                                                                 | 7            | 7               | -             | -          |
| <b>PC3.</b> ensure all the modules required for assembling is available in the kit                                                                                                                                       | -            | -               | -             | -          |
| <b>PC4.</b> read the machine traveller sheet and ensure that the components in mother board are fixed                                                                                                                    | -            | -               | -             | -          |
| <b>PC5.</b> understand any specific instructions for handling modules or on assembling the equipment                                                                                                                     | -            | -               | -             | -          |
| <b>PC6.</b> take anti static precautions before work and wear ESD wrist straps or aprons                                                                                                                                 | -            | -               | -             | -          |
| <b>PC7.</b> follow standard operating procedure while handling hardware modules such as handling PCB with ESD standards                                                                                                  | -            | -               | -             | -          |
| <b>PC8.</b> understand the time requirement to assemble different modules in an assembly line                                                                                                                            | -            | -               | -             | -          |
| <b>PC9.</b> Use digital inventory systems and automated storage solutions to accurately kit components for assembly enter the details in the internal process system as per company requirement example: SAP(ERP system) | -            | -               | -             | -          |
| <i>Assembling of modules</i>                                                                                                                                                                                             | 12           | 26              | -             | -          |
| <b>PC10.</b> follow the sequence for assembling for example: In CPU assembling for desktop, motherboard, SMPS, Hard disk, Drivers, Wire connectors are assembled sequentially                                            | -            | -               | -             | -          |
| <b>PC11.</b> follow the standard assembling procedure for specific models of equipment                                                                                                                                   | -            | -               | -             | -          |

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| Assessment Criteria for Outcomes                                                                                                 | Theory Marks | Practical Marks | Project Marks | Viva Marks |
|----------------------------------------------------------------------------------------------------------------------------------|--------------|-----------------|---------------|------------|
| <b>PC12.</b> ensure the module mounting, fitting, screws, wire connection are firm and is proper to meet the fitness requirement | -            | -               | -             | -          |
| <b>PC13.</b> mount LED display and PCB wherever required in the casing                                                           | -            | -               | -             | -          |
| <b>PC14.</b> place stickers and labels wherever applicable as per the product specification                                      | -            | -               | -             | -          |
| <b>PC15.</b> ensure that all labels are appropriately placed and none is left                                                    | -            | -               | -             | -          |
| <b>PC16.</b> document after assembling of each Module by mentioning the work done in the machine traveller sheet                 | -            | -               | -             | -          |
| <b>PC17.</b> use the using electric tools, smart workstations for assemble the equipment                                         | -            | -               | -             | -          |
| <b>PC18.</b> assemble the components within the specified time in the moving assembly                                            | -            | -               | -             | -          |
| <b>PC19.</b> assemble all the modules firmly without damage                                                                      | -            | -               | -             | -          |
| <b>PC20.</b> ensure the wire connections are appropriate and not wrongly connected                                               | -            | -               | -             | -          |
| <b>PC21.</b> ensure that assembling is proper and no fall or movement of modules                                                 | -            | -               | -             | -          |
| <b>PC22.</b> ensure no module and accessories are missed out in assembling                                                       | -            | -               | -             | -          |
| <i>Completing box assembly</i>                                                                                                   | <b>11</b>    | <b>17</b>       | -             | -          |
| <b>PC23.</b> ensure all the inner modules (inside the casing) are assembled appropriately                                        | -            | -               | -             | -          |
| <b>PC24.</b> fit the frame or casing forming the outer cover for the equipment (usually made of steel, aluminium, plastic)       | -            | -               | -             | -          |
| <b>PC25.</b> fix them using screws and ensure firm closure of the case                                                           | -            | -               | -             | -          |

## Qualification Pack

| Assessment Criteria for Outcomes                                                                              | Theory Marks | Practical Marks | Project Marks | Viva Marks |
|---------------------------------------------------------------------------------------------------------------|--------------|-----------------|---------------|------------|
| <b>PC26.</b> place labels and stickers of OEM and the manufacturer in the specified places in outer casing    | -            | -               | -             | -          |
| <b>PC27.</b> check for any loose bolts or improper assembling                                                 | -            | -               | -             | -          |
| <b>PC28.</b> complete the assembling and document them in machine traveller sheet                             | -            | -               | -             | -          |
| <b>PC29.</b> pass the equipment to next section after ensuring the assembly is proper                         | -            | -               | -             | -          |
| <b>PC30.</b> assemble the box as specified within the specified time                                          | -            | -               | -             | -          |
| <b>PC31.</b> ensure all labels are appropriately placed and none are missed out                               | -            | -               | -             | -          |
| <b>PC32.</b> check for complete assembly of all modules                                                       | -            | -               | -             | -          |
| <b>PC33.</b> use tools as per standard operating procedure and avoid damage                                   | -            | -               | -             | -          |
| <b>PC34.</b> prevent any accidents while handling hazardous tools                                             | -            | -               | -             | -          |
| <b>PC35.</b> use appropriate tools for specific rework activity and achieve the results                       | -            | -               | -             | -          |
| <b>PC36.</b> maintain zero-material defect During material handling by following standard operating procedure | -            | -               | -             | -          |
| <i>Interacting with superior</i>                                                                              | <b>5</b>     | <b>5</b>        | -             | -          |
| <b>PC37.</b> understand the work requirement from superior, periodically                                      | -            | -               | -             | -          |
| <b>PC38.</b> report to superior on the work completed                                                         | -            | -               | -             | -          |
| <b>PC39.</b> seek assistance from superior on specific module assembling and handling                         | -            | -               | -             | -          |
| <b>PC40.</b> escalate the issues and problems that cannot be handled                                          | -            | -               | -             | -          |

### Qualification Pack

| Assessment Criteria for Outcomes                                                                        | Theory Marks | Practical Marks | Project Marks | Viva Marks |
|---------------------------------------------------------------------------------------------------------|--------------|-----------------|---------------|------------|
| <b>PC41.</b> document the work completed on the company ERP software for tracking and future references | -            | -               | -             | -          |
| <i>Achieving productivity and quality standards</i>                                                     | <b>3</b>     | <b>3</b>        | -             | -          |
| <b>PC42.</b> achieve 100% on the daily target of number of assembled product                            | -            | -               | -             | -          |
| <b>PC43.</b> meet the target of quality as per Service Level Agreement (SLA) and avoid rework           | -            | -               | -             | -          |
| <b>PC44.</b> rework within the turnaround time (TAT) and deliver them                                   | -            | -               | -             | -          |
| <b>NOS Total</b>                                                                                        | <b>40</b>    | <b>60</b>       | -             | -          |

## Qualification Pack

### National Occupational Standards (NOS) Parameters

|                            |                                        |
|----------------------------|----------------------------------------|
| <b>NOS Code</b>            | ELE/N4302                              |
| <b>NOS Name</b>            | Assemble modules to complete equipment |
| <b>Sector</b>              | Electronics                            |
| <b>Sub-Sector</b>          | Consumer Electronics & IT Hardware     |
| <b>Occupation</b>          | Assembly-EMS                           |
| <b>NSQF Level</b>          | 3                                      |
| <b>Credits</b>             | 7                                      |
| <b>Version</b>             | 2.0                                    |
| <b>Last Reviewed Date</b>  | 07/10/2025                             |
| <b>Next Review Date</b>    | 07/10/2028                             |
| <b>NSQC Clearance Date</b> | 07/10/2025                             |

## Qualification Pack

### DGT/VSQ/N0101: Employability Skills (30 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
- 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.** understand the significance of employability skills in meeting the job requirements

##### *Constitutional values – Citizenship*

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

**PC2.** identify constitutional values, civic rights, duties, personal values and ethics and environmentally sustainable practices

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

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

**PC3.** explain 21st Century Skills such as Self-Awareness, Behavior Skills, Positive attitude, self-motivation, problem-solving, creative thinking, time management, social and cultural awareness, emotional awareness, continuous learning mindset etc.

##### *Basic English Skills*

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

**PC4.** speak with others using some basic English phrases or sentences

##### *Communication Skills*

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

**PC5.** follow good manners while communicating with others

**PC6.** work with others in a team

## Qualification Pack

### *Diversity & Inclusion*

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

**PC7.** communicate and behave appropriately with all genders and PwD

**PC8.** report any issues related to sexual harassment

### *Financial and Legal Literacy*

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

**PC9.** use various financial products and services safely and securely

**PC10.** calculate income, expenses, savings etc.

**PC11.** approach the concerned authorities for any exploitation as per legal rights and laws

### *Essential Digital Skills*

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

**PC12.** operate digital devices and use its features and applications securely and safely

**PC13.** use internet and social media platforms securely and safely

### *Entrepreneurship*

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

**PC14.** identify and assess opportunities for potential business

**PC15.** identify sources for arranging money and associated financial and legal challenges

### *Customer Service*

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

**PC16.** identify different types of customers

**PC17.** identify customer needs and address them appropriately

**PC18.** follow appropriate hygiene and grooming standards

### *Getting ready for apprenticeship & Jobs*

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

**PC19.** create a basic biodata

**PC20.** search for suitable jobs and apply

**PC21.** identify and register apprenticeship opportunities as per requirement

## Knowledge and Understanding (KU)

The individual on the job needs to know and understand:

**KU1.** need for employability skills

**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 basic spoken English language

**KU6.** Do and dont of effective communication

**KU7.** inclusivity and its importance

**KU8.** different types of disabilities and appropriate communication and behaviour towards PwD

**KU9.** different types of financial products and services

## Qualification Pack

- KU10.** how to compute income and expenses
- KU11.** importance of maintaining safety and security in financial transactions
- KU12.** different legal rights and laws
- KU13.** how to operate digital devices and applications safely and securely
- KU14.** ways to identify business opportunities
- KU15.** types of customers and their needs
- KU16.** how to apply for a job and prepare for an interview
- KU17.** apprenticeship scheme and the process of registering on apprenticeship portal

## Generic Skills (GS)

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

- GS1.** communicate effectively using appropriate language
- GS2.** behave politely and appropriately with all
- GS3.** perform basic calculations
- GS4.** solve problems effectively
- GS5.** be careful and attentive at work
- GS6.** use time effectively
- GS7.** maintain hygiene and sanitisation 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> understand the significance of employability skills in meeting the job requirements                                                                                                                                                                | -            | -               | -             | -          |
| <i>Constitutional values – Citizenship</i>                                                                                                                                                                                                                     | <b>1</b>     | <b>1</b>        | -             | -          |
| <b>PC2.</b> identify constitutional values, civic rights, duties, personal values and ethics and environmentally sustainable practices                                                                                                                         | -            | -               | -             | -          |
| <i>Becoming a Professional in the 21st Century</i>                                                                                                                                                                                                             | <b>1</b>     | <b>3</b>        | -             | -          |
| <b>PC3.</b> explain 21st Century Skills such as Self-Awareness, Behavior Skills, Positive attitude, self-motivation, problem-solving, creative thinking, time management, social and cultural awareness, emotional awareness, continuous learning mindset etc. | -            | -               | -             | -          |
| <i>Basic English Skills</i>                                                                                                                                                                                                                                    | <b>2</b>     | <b>3</b>        | -             | -          |
| <b>PC4.</b> speak with others using some basic English phrases or sentences                                                                                                                                                                                    | -            | -               | -             | -          |
| <i>Communication Skills</i>                                                                                                                                                                                                                                    | <b>1</b>     | <b>1</b>        | -             | -          |
| <b>PC5.</b> follow good manners while communicating with others                                                                                                                                                                                                | -            | -               | -             | -          |
| <b>PC6.</b> work with others in a team                                                                                                                                                                                                                         | -            | -               | -             | -          |
| <i>Diversity &amp; Inclusion</i>                                                                                                                                                                                                                               | <b>1</b>     | <b>1</b>        | -             | -          |
| <b>PC7.</b> communicate and behave appropriately with all genders and PwD                                                                                                                                                                                      | -            | -               | -             | -          |
| <b>PC8.</b> report any issues related to sexual harassment                                                                                                                                                                                                     | -            | -               | -             | -          |
| <i>Financial and Legal Literacy</i>                                                                                                                                                                                                                            | <b>3</b>     | <b>4</b>        | -             | -          |
| <b>PC9.</b> use various financial products and services safely and securely                                                                                                                                                                                    | -            | -               | -             | -          |

## Qualification Pack

| Assessment Criteria for Outcomes                                                                  | Theory Marks | Practical Marks | Project Marks | Viva Marks |
|---------------------------------------------------------------------------------------------------|--------------|-----------------|---------------|------------|
| <b>PC10.</b> calculate income, expenses, savings etc.                                             | -            | -               | -             | -          |
| <b>PC11.</b> approach the concerned authorities for any exploitation as per legal rights and laws | -            | -               | -             | -          |
| <i>Essential Digital Skills</i>                                                                   | <b>4</b>     | <b>6</b>        | -             | -          |
| <b>PC12.</b> operate digital devices and use its features and applications securely and safely    | -            | -               | -             | -          |
| <b>PC13.</b> use internet and social media platforms securely and safely                          | -            | -               | -             | -          |
| <i>Entrepreneurship</i>                                                                           | <b>3</b>     | <b>5</b>        | -             | -          |
| <b>PC14.</b> identify and assess opportunities for potential business                             | -            | -               | -             | -          |
| <b>PC15.</b> identify sources for arranging money and associated financial and legal challenges   | -            | -               | -             | -          |
| <i>Customer Service</i>                                                                           | <b>2</b>     | <b>2</b>        | -             | -          |
| <b>PC16.</b> identify different types of customers                                                | -            | -               | -             | -          |
| <b>PC17.</b> identify customer needs and address them appropriately                               | -            | -               | -             | -          |
| <b>PC18.</b> follow appropriate hygiene and grooming standards                                    | -            | -               | -             | -          |
| <i>Getting ready for apprenticeship &amp; Jobs</i>                                                | <b>1</b>     | <b>3</b>        | -             | -          |
| <b>PC19.</b> create a basic biodata                                                               | -            | -               | -             | -          |
| <b>PC20.</b> search for suitable jobs and apply                                                   | -            | -               | -             | -          |
| <b>PC21.</b> identify and register apprenticeship opportunities as per requirement                | -            | -               | -             | -          |
| <b>NOS Total</b>                                                                                  | <b>20</b>    | <b>30</b>       | -             | -          |

## Qualification Pack

### National Occupational Standards (NOS) Parameters

|                            |                                 |
|----------------------------|---------------------------------|
| <b>NOS Code</b>            | DGT/VSQ/N0101                   |
| <b>NOS Name</b>            | Employability Skills (30 Hours) |
| <b>Sector</b>              | Cross Sectoral                  |
| <b>Sub-Sector</b>          | Professional Skills             |
| <b>Occupation</b>          | Employability                   |
| <b>NSQF Level</b>          | 2                               |
| <b>Credits</b>             | 1                               |
| <b>Version</b>             | 1.0                             |
| <b>Last Reviewed Date</b>  | 07/10/2025                      |
| <b>Next Review Date</b>    | 07/10/2028                      |
| <b>NSQC Clearance Date</b> | 07/10/2025                      |

## 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 : 50**

(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/N4301.Perform Kitting of modules for assembling | 40           | 60              | -             | -          | 100         | 40         |
| ELE/N4302.Assemble modules to complete equipment    | 40           | 60              | -             | -          | 100         | 40         |
| DGT/VSQ/N0101.Employability Skills (30 Hours)       | 20           | 30              | -             | -          | 50          | 20         |
| <b>Total</b>                                        | <b>100</b>   | <b>150</b>      | <b>-</b>      | <b>-</b>   | <b>250</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.                                                                                                                                                          |