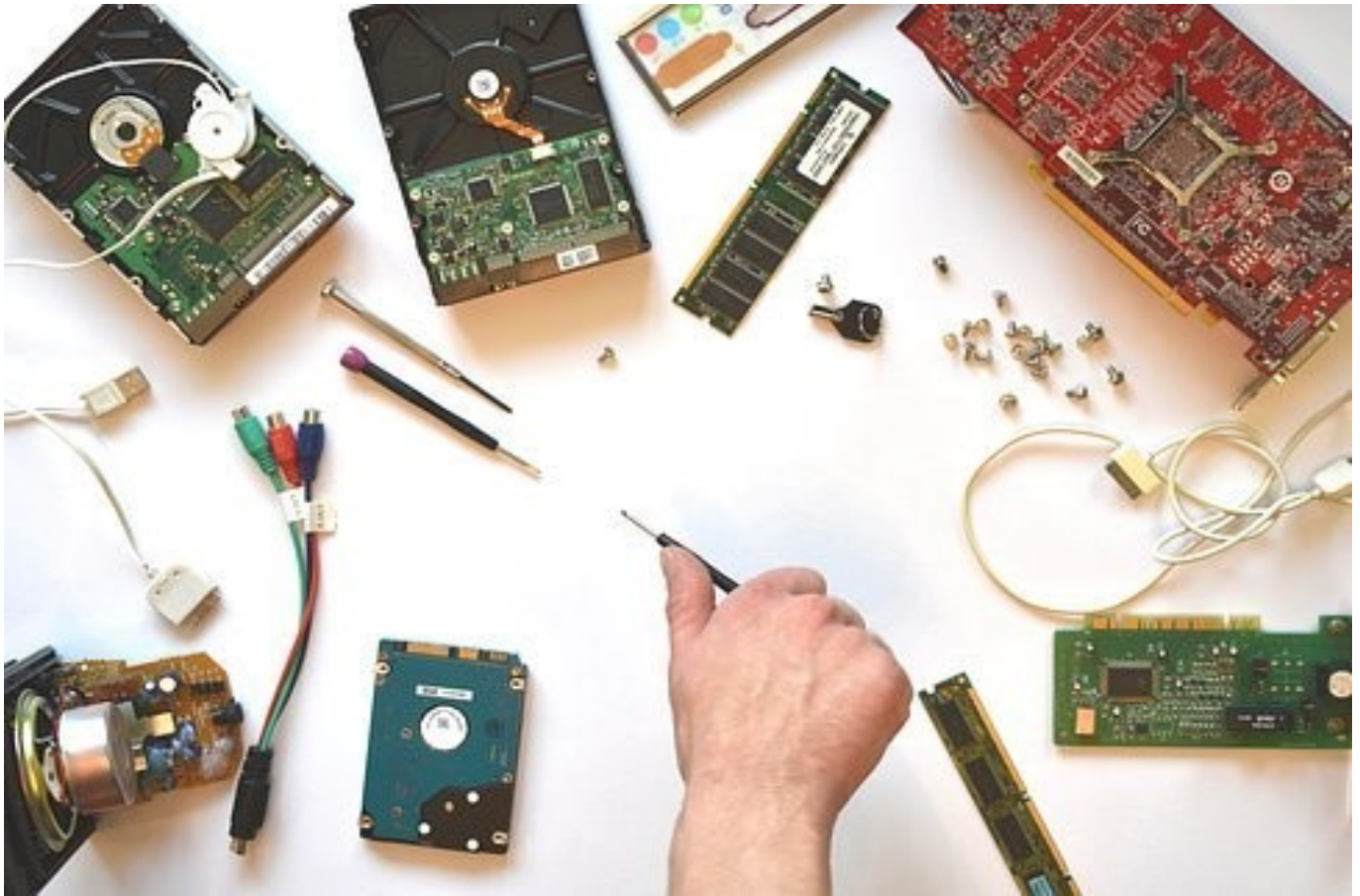


## Qualification Pack



# Service Engineer-IT Hardware

QP Code: ELE/Q4607

Version: 3.0

NSQF Level: 5

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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## Qualification Pack

### ELE/Q4607: Service Engineer-IT Hardware

#### Brief Job Description

The individual is responsible for attending to problems in IT hardware and related software systems problem either as a dedicated engineer at the customer premises (Facility Management) or remotely (Managed Services).

#### Personal Attributes

The job requires the individual to have the ability to work on multiple IT products, use tools, be alert, analytical and provide round the clock service.

#### Applicable National Occupational Standards (NOS)

##### Compulsory NOS:

1. [ELE/N4614: Manage customer IT hardware at facility](#)
2. [ELE/N4615: Manage customer system remotely](#)
3. [ELE/N1002: Apply health and safety practices at the workplace](#)
4. [DGT/VSQ/N0102: Employability Skills \(60 Hours\)](#)

#### Qualification Pack (QP) Parameters

<b>Sector</b>	Electronics
<b>Sub-Sector</b>	Consumer Electronics & IT Hardware
<b>Occupation</b>	After Sales Service
<b>Country</b>	India
<b>NSQF Level</b>	5
<b>Credits</b>	26
<b>Aligned to NCO/ISCO/ISIC Code</b>	NCO-2015/3512.0501

### Qualification Pack

<b>Minimum Educational Qualification &amp; Experience</b>	<p>Diploma (After 10 (Electronics/Electrical/Mechanical)) with 1 Year of experience Relevant Experience</p> <p>OR</p> <p>12th grade pass with 1 year NTC/ NAC with 1 Year of experience Relevant Experience</p> <p>OR</p> <p>12th grade Pass with 2 Years of experience Relevant Experience</p> <p>OR</p> <p>Previous relevant Qualification of NSQF Level (4) with 3 Years of experience Relevant Experience</p> <p>OR</p> <p>10th grade pass with 4 Years of experience Relevant Experience</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>	27/01/2025
<b>NSQC Approval Date</b>	27/01/2022
<b>Version</b>	3.0
<b>Reference code on NQR</b>	QG-05-EH-01343-2023-V1.1-ESSC
<b>NQR Version</b>	1.0

#### Remarks:

NA

## Qualification Pack

### ELE/N4614: Manage customer IT hardware at facility

#### Description

This unit is about working as a systems engineer at customers facility and ensuring less than 1% downtime of IT Hardware systems and associated software by monitoring, troubleshooting and replacing faulty modules

#### Scope

The scope covers the following :

- This unit/task covers the following:
- Maintain IT hardware and related software system
- Manage assets and warranty issues
- Monitor IT hardware system
- Maintain records of schedules
- Interact with customer and superior

#### Elements and Performance Criteria

##### *Maintain IT hardware and related software system*

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

- PC1.** identify work requirement as per customer's record
- PC2.** assess the various work processes and IT hardware in use such as end user computing (EUC) at customer's facility
- PC3.** troubleshoot software related problems and if needed, install standard and prescribed software on the system
- PC4.** identify and replace faulty module in the IT hardware system
- PC5.** maintain stock of spares for regularly occurring problems at the recommended level for customer visits
- PC6.** escalate problems, requiring external support, to vendor or superior

##### *Manage assets and warranty issues*

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

- PC7.** prepare a list of each IT hardware in use for warranty related details, including serial number
- PC8.** maintain records of date of purchase and warranty as well as any annual maintenance schedule
- PC9.** assess the age or condition of assets and their maintenance schedule based on criticality or redundancy
- PC10.** update records of assets not in use or issued to customers employees or returned

##### *Monitor IT hardware system*

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

- PC11.** identify and download software/recommended tools for monitoring specific systems
- PC12.** identify new versions of applications in use and update as per customer's policy

## Qualification Pack

**PC13.** manage security and access controls on end-user computing equipment

**PC14.** monitor servers, storage and networks for smooth work flow

**PC15.** maintain assets by keeping track of the appropriate temperature and dust environment

*Maintain records of schedules*

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

**PC16.** update records of daily activity including scheduled/unscheduled maintenance, warranty, software updates and expiry dates

**PC17.** maintain passwords and other security keys or changes there-in, problem incidence, criticality, response time, down time and problem escalation details

*Interact with customer and superior*

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

**PC18.** coordinate with customer to ensure minimum downtime of systems and least interruption of work processes

**PC19.** communicate with superior about non-routine or difficult problems, work completions, contractual matters and in case of customer dissatisfaction

**PC20.** provide details to customer on precautions to be taken in order to avoid recurrence of problem

**PC21.** inform customer about product, contractual issues such as warranty, cost of service and module replacement

## Knowledge and Understanding (KU)

The individual on the job needs to know and understand:

**KU1.** company's policies on: customer care, annual maintenance contracts, warranty

**KU2.** different types of IT hardware and their module wise constitution

**KU3.** dismantling and assembling of hardware equipment

**KU4.** vendor and incident management, including valid contract and deliverables

**KU5.** different EUC, server, storage, networking, communication products

**KU6.** company's documentation policy, including vendor's and customer's service level agreement (SLA)

**KU7.** changes in technology of products and redundancy

**KU8.** hardware maintenance

**KU9.** asset tracking and records maintenance

**KU10.** software such as Linux, MS Exchange, Auto CAD

**KU11.** preloaded and new software as well as version update

**KU12.** tools used for monitoring and assessing system health

**KU13.** organisation's culture and typical customer profile

**KU14.** service level contract

**KU15.** IPR restrictions imposed by the customer

## Generic Skills (GS)



## Qualification Pack

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

- GS1.** read contract, warranties, product and module serial numbers and interpret details such as make, date, availability
- GS2.** identify basic IT troubleshooting requirement
- GS3.** determine when to escalate issues to vendor or superior
- GS4.** communicate with vendor, customer and superior through all means, including telephone, face to face, email etc.
- GS5.** seek inputs from customer to assess the problems
- GS6.** use approved sites to download software
- GS7.** maintain good rapport with customers
- GS8.** read matter related to intellectual property (IPR)
- GS9.** read contract and respond to communication from customer as well as customer's employees
- GS10.** interpret importance of personal grooming, proper etiquettes, patience, being courteous
- GS11.** communicate in local or English language
- GS12.** decide whether interaction of customer with superior is necessary or not
- GS13.** suggest customer on possible solutions

## Qualification Pack

### Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<i>Maintain IT hardware and related software system</i>	<b>14</b>	<b>11</b>	-	<b>2</b>
<b>PC1.</b> identify work requirement as per customer's record	3	2	-	1
<b>PC2.</b> assess the various work processes and IT hardware in use such as end user computing (EUC) at customer's facility	3	3	-	-
<b>PC3.</b> troubleshoot software related problems and if needed, install standard and prescribed software on the system	2	2	-	-
<b>PC4.</b> identify and replace faulty module in the IT hardware system	2	1	-	1
<b>PC5.</b> maintain stock of spares for regularly occurring problems at the recommended level for customer visits	2	1	-	-
<b>PC6.</b> escalate problems, requiring external support, to vendor or superior	2	2	-	-
<i>Manage assets and warranty issues</i>	<b>8</b>	<b>7</b>	-	<b>1</b>
<b>PC7.</b> prepare a list of each IT hardware in use for warranty related details, including serial number	2	2	-	1
<b>PC8.</b> maintain records of date of purchase and warranty as well as any annual maintenance schedule	2	1	-	-
<b>PC9.</b> assess the age or condition of assets and their maintenance schedule based on criticality or redundancy	2	2	-	-
<b>PC10.</b> update records of assets not in use or issued to customers employees or returned	2	2	-	-
<i>Monitor IT hardware system</i>	<b>12</b>	<b>11</b>	-	<b>1</b>
<b>PC11.</b> identify and download software/recommended tools for monitoring specific systems	4	4	-	-



### Qualification Pack

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<b>PC12.</b> identify new versions of applications in use and update as per customer's policy	2	1	-	1
<b>PC13.</b> manage security and access controls on end-user computing equipment	2	2	-	-
<b>PC14.</b> monitor servers, storage and networks for smooth work flow	2	2	-	-
<b>PC15.</b> maintain assets by keeping track of the appropriate temperature and dust environment	2	2	-	-
<i>Maintain records of schedules</i>	<b>2</b>	<b>2</b>	-	<b>1</b>
<b>PC16.</b> update records of daily activity including scheduled/unscheduled maintenance, warranty, software updates and expiry dates	1	1	-	-
<b>PC17.</b> maintain passwords and other security keys or changes there-in, problem incidence, criticality, response time, down time and problem escalation details	1	1	-	1
<i>Interact with customer and superior</i>	<b>14</b>	<b>9</b>	-	<b>5</b>
<b>PC18.</b> coordinate with customer to ensure minimum downtime of systems and least interruption of work processes	4	2	-	2
<b>PC19.</b> communicate with superior about non-routine or difficult problems, work completions, contractual matters and in case of customer dissatisfaction	2	1	-	-
<b>PC20.</b> provide details to customer on precautions to be taken in order to avoid recurrence of problem	4	3	-	2
<b>PC21.</b> inform customer about product, contractual issues such as warranty, cost of service and module replacement	4	3	-	1
<b>NOS Total</b>	<b>50</b>	<b>40</b>	-	<b>10</b>



## Qualification Pack

### National Occupational Standards (NOS) Parameters

<b>NOS Code</b>	ELE/N4614
<b>NOS Name</b>	Manage customer IT hardware at facility
<b>Sector</b>	Electronics
<b>Sub-Sector</b>	Consumer Electronics & IT Hardware
<b>Occupation</b>	After Sales Support
<b>NSQF Level</b>	5
<b>Credits</b>	TBD
<b>Version</b>	2.0
<b>Last Reviewed Date</b>	27/01/2022
<b>Next Review Date</b>	27/01/2025
<b>NSQC Clearance Date</b>	27/01/2022



## Qualification Pack

### ELE/N4615: Manage customer system remotely

#### Description

This NOS unit is about monitoring customers critical hardware systems remotely.

#### Scope

The scope covers the following :

- Monitor systems remotely
- Manage errors and problems
- Interact with customer, vendor and superior

#### Elements and Performance Criteria

##### *Monitor systems remotely*

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

- PC1.** use monitoring tools to keep watch on critical hardware either 24x7 or as as per contract
- PC2.** monitor EUC, server and storage administration, network operations and online systems
- PC3.** link the monitoring system to regional hub
- PC4.** develop new or refine existing monitoring tools
- PC5.** configure systems manually or automatically

##### *Manage errors and problems*

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

- PC6.** comply with processes for problem incidence, response time and escalation time
- PC7.** identify problem areas in real time and troubleshoot
- PC8.** use statistical tools to develop intelligence and spot potential areas of disruptions
- PC9.** record downtime details

##### *Interact with customer, vendor and superior*

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

- PC10.** prepare action plan and share with customer and/or vendor
- PC11.** attend customer's IT meetings
- PC12.** inform customer regarding precautions to avoid recurrence of problem
- PC13.** provide details to customer about product, contractual issues such as warranty, cost of service and module replacement

#### Knowledge and Understanding (KU)

The individual on the job needs to know and understand:

- KU1.** different types of IT hardware and their remote monitoring tools
- KU2.** different EUC, server, storage, networking and communication products
- KU3.** electronics and electro-mechanical modules and their functions

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- KU4.** preloaded and new software as well as version update
- KU5.** changes in technology of products and redundancy
- KU6.** statistical tools for monitoring and reporting
- KU7.** company's documentation policy and reporting structure
- KU8.** asset tracking and records maintenance
- KU9.** company's policies on customer care, annual maintenance contracts, warranty
- KU10.** vendor and incident management
- KU11.** company's code of conduct and delivery standards

## Generic Skills (GS)

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

- GS1.** read product and module serial numbers and interpret details such as make, date, availability
- GS2.** read contract and respond to communication from customer's employees
- GS3.** escalate problems in time and as per criticality of work process
- GS4.** maintain 100% records of activity
- GS5.** achieve downtime of less than 1% or as contracted
- GS6.** use email to communicate with vendor, customer and superior
- GS7.** manage vendors and negotiate vendor contract deliverables
- GS8.** provide consultancy to customer's senior management
- GS9.** communicate in local / English language
- GS10.** decide on the spot on whether interaction of customer with superior is necessary or not
- GS11.** determine when to escalate issues to vendor or superior
- GS12.** maintain a rapport with customers
- GS13.** suggest customer on possible solutions

## Qualification Pack

### Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<i>Monitor systems remotely</i>	<b>16</b>	<b>14</b>	-	<b>2</b>
<b>PC1.</b> use monitoring tools to keep watch on critical hardware either 24x7 or as as per contract	4	3	-	-
<b>PC2.</b> monitor EUC, server and storage administration, network operations and online systems	3	3	-	1
<b>PC3.</b> link the monitoring system to regional hub	3	2	-	1
<b>PC4.</b> develop new or refine existing monitoring tools	3	3	-	-
<b>PC5.</b> configure systems manually or automatically	3	3	-	-
<i>Manage errors and problems</i>	<b>15</b>	<b>12</b>	-	<b>3</b>
<b>PC6.</b> comply with processes for problem incidence, response time and escalation time	3	3	-	-
<b>PC7.</b> identify problem areas in real time and troubleshoot	3	3	-	1
<b>PC8.</b> use statistical tools to develop intelligence and spot potential areas of disruptions	3	2	-	1
<b>PC9.</b> record downtime details	6	4	-	1
<i>Interact with customer, vendor and superior</i>	<b>19</b>	<b>14</b>	-	<b>5</b>
<b>PC10.</b> prepare action plan and share with customer and/or vendor	6	4	-	1
<b>PC11.</b> attend customer's IT meetings	5	4	-	1
<b>PC12.</b> inform customer regarding precautions to avoid recurrence of problem	4	3	-	2
<b>PC13.</b> provide details to customer about product, contractual issues such as warranty, cost of service and module replacement	4	3	-	1



### Qualification Pack

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
NOS Total	50	40	-	10



## Qualification Pack

### National Occupational Standards (NOS) Parameters

<b>NOS Code</b>	ELE/N4615
<b>NOS Name</b>	Manage customer system remotely
<b>Sector</b>	Electronics
<b>Sub-Sector</b>	Consumer Electronics & IT Hardware
<b>Occupation</b>	After Sales Support
<b>NSQF Level</b>	5
<b>Credits</b>	TBD
<b>Version</b>	2.0
<b>Last Reviewed Date</b>	27/01/2022
<b>Next Review Date</b>	27/01/2025
<b>NSQC Clearance Date</b>	27/01/2022

## Qualification Pack

### ELE/N1002: Apply health and safety practices at the workplace

#### Description

This OS unit is about knowledge and practices relating to health, safety and security that candidates need to use in the workplace.

#### Scope

The scope covers the following :

- Deal with workplace hazards
- Apply fire safety practices
- Follow emergencies, rescue and first-aid procedures
- Effective waste management/recycling practices

#### Elements and Performance Criteria

##### *Deal with workplace hazards*

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

- PC1.** identify job-site hazards and possible causes of accident in the workplace
- PC2.** perform work complying to organizational safe working practices and observing hazard signs displayed on containers, equipment and in various work areas such as inside buildings, in open areas and public spaces, etc.
- PC3.** use appropriate personal protective equipment (PPE) for specific tasks and work conditions, contaminant (concentration w.r.t air) requirements and severity of hazard while conforming to the Indian/International standards
- PC4.** follow standard safety procedures while handling tool/ ,equipment, hazardous substances and while working in hazardous environments
- PC5.** dispose electronic waste (such as toxins; metals such as lead, cadmium, barium; flame retardant plastics, welding slag etc.) as per industry approved techniques
- PC6.** avoid damage of components due to negligence in electrostatic discharge (ESD) procedures
- PC7.** locate general health and safety equipment in the workplace such as fire extinguishers; first aid equipment; safety instruments, clothing and installations (fire exits, exhaust fans)
- PC8.** maintain appropriate posture while handling heavy objects
- PC9.** apply good housekeeping practices at all times

##### *Apply fire safety practices*

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

- PC10.** take preventive measures to prevent fire hazards
- PC11.**
  - use appropriate fire extinguishers for different types of fires
  - Types of fires: Class A: e.g. ordinary solid combustibles, such as wood, paper, cloth, plastic, charcoal, etc.; Class B: flammable liquids and gases, such as gasoline, propane, diesel fuel, tar, cooking oil, and similar substances; Class C: e.g. electrical equipment such as appliances, wiring, breaker panels, etc. (These categories of fires become Class A, B, and D fires when the electrical equipment that initiated the fire is no l
- PC12.** exhibit rescue and first-aid techniques in case of fire or electrocution



## Qualification Pack

### *Follow emergencies, rescue and first-aid procedures*

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

- PC13.** administer appropriate first aid to victims in case of bleeding, burns, choking, electric shock, poisoning etc.
- PC14.** administer first aid to victims in case of a heart attack or cardiac arrest due to electric shock,
- PC15.** participate regularly in emergency procedures such as raising alarm, safe/efficient, evacuation, correct means of taking shelter and escaping, correct assembly point, roll call, correct return to work
- PC16.** use correct method to move injured people and others during an emergency

### *Effective waste management/recycling practices*

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

- PC17.** identify recyclable and non-recyclable, and hazardous waste generated
- PC18.** segregate waste into different categories
- PC19.** ensure disposal of non-recyclable waste appropriately
- PC20.** deposit non-recyclable and reusable material at identified location
- PC21.** follow processes specified for disposal of hazardous waste

## Knowledge and Understanding (KU)

The individual on the job needs to know and understand:

- KU1.** importance of working in clean and safe work environment following safety practices and procedures
- KU2.** health and safety roles and responsibilities of relevant personnel within and outside the organisation
- KU3.** key internal and external sources of health and safety information
- KU4.** basic knowledge of electronic devices and related health risks
- KU5.** meaning of hazards and risks
- KU6.** various types of health and safety hazards commonly present in the work environment such as physical hazards, electrical hazards, chemical hazards, fire hazards, equipment related hazards, health hazards, etc.
- KU7.** methods of accident prevention
- KU8.** importance of using protective clothing/equipment while working
- KU9.** general principles for identifying and controlling health and safety risks
- KU10.** main hazards and preventive as well as control measures while working with different types of equipment
- KU11.** importance of carrying out electrical and non-electrical isolation to prevent hazards from loss of machine/system/process control
- KU12.** main hazards and preventive as well as control measures when working with electrical systems or using electrical equipment
- KU13.** forms and classifications of hazardous substances
- KU14.** safe working practices while working at various hazardous sites
- KU15.** prevention and control measures to reduce risks from exposure to hazardous substances

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- KU16.** health effects associated with exposure to noise and vibration and the appropriate control measures
- KU17.** precautionary activities to prevent the fire accident
- KU18.** various causes of fire such as heating of metal, spontaneous ignition, sparking, electrical eating, loose fires (smoking, welding, etc.) chemical fires etc.
- KU19.** techniques of using the different fire extinguishers
- KU20.** different methods and material to extinguish fires
- KU21.** different materials used for extinguishing fire such as sand, water, foam, CO<sub>2</sub>, dry powder
- KU22.** rescue techniques used during a fire hazard
- KU23.** various types of safety signs and their meaning
- KU24.** basic first aid treatment relevant to the common work place injuries e.g. shock, electrical shock, bleeding, breaks to bones, minor burns, resuscitation, poisoning, eye injuries
- KU25.** contents of written accident report
- KU26.** potential injuries and ill health associated with incorrect handling of tools and equipment
- KU27.** safe lifting and carrying practices
- KU28.** potential impact to a person who is moved incorrectly
- KU29.** personal safety, health and dignity issues relating to the movement of a person by others
- KU30.** ESD measures and 5S
- KU31.** efficient utilization and management of material and water
- KU32.** ways to recognize common electrical problems and practices of conserving electricity
- KU33.** usage of different colours of dustbins, categorization of waste into dry, wet, recyclable, nonrecyclable and items of single-use plastics
- KU34.** organization's procedure for minimizing waste
- KU35.** waste management and methods of waste disposal
- KU36.** common sources of pollution and ways to minimize it
- KU37.** names, contact information and location of people responsible for health and safety in the workplace
- KU38.** location of documents and equipment for health and safety compliance/practices in the workplace
- KU39.** safety notices, signs and instructions at workplace

## Generic Skills (GS)

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

- GS1.** interpret general health and safety guidelines labels, charts, signages
- GS2.** read operation manuals
- GS3.** write health and safety compliance report
- GS4.** write an accident/incident report in local language or English
- GS5.** provide an emergency or safety incident brief to seniors or relevant authorities in a calm, clear and to-the-point manner
- GS6.** communicate general health and safety guidelines to colleagues/co-workers



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- GS7.** communicate appropriately with co-workers in order to clarify instructions and other issues
- GS8.** act in case of any potential hazards observed in the work place
- GS9.** plan and organize their own work schedule, work area, tools, equipment in compliance with organizational policies for health, safety and security
- GS10.** take adequate measures to ensure the safety of clients and visitors at the workplace
- GS11.** identify immediate or temporary solutions to resolve delays
- GS12.** evaluate the work area for health and safety risks or hazards
- GS13.** use cause and effect relations to anticipate potential issues, problems and their solution in the work area related to safety
- GS14.** recognise emergency and potential emergency situations
- GS15.** protect self and others from a health and safety risk or hazard
- GS16.** communicate and collaborate to incorporate sustainable practices (greening) in workplace processes
- GS17.** record data on waste disposal at workplace

## Qualification Pack

### Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<i>Deal with workplace hazards</i>	<b>20</b>	<b>31</b>	-	-
<b>PC1.</b> identify job-site hazards and possible causes of accident in the workplace	2	3	-	-
<b>PC2.</b> perform work complying to organizational safe working practices and observing hazard signs displayed on containers, equipment and in various work areas such as inside buildings, in open areas and public spaces, etc.	3	4	-	-
<b>PC3.</b> use appropriate personal protective equipment (PPE) for specific tasks and work conditions, contaminant (concentration w.r.t air) requirements and severity of hazard while conforming to the Indian/International standards	3	4	-	-
<b>PC4.</b> follow standard safety procedures while handling tool/ ,equipment, hazardous substances and while working in hazardous environments	3	4	-	-
<b>PC5.</b> dispose electronic waste (such as toxins; metals such as lead, cadmium, barium; flame retardant plastics, welding slag etc.) as per industry approved techniques	2	4	-	-
<b>PC6.</b> avoid damage of components due to negligence in electrostatic discharge (ESD) procedures	2	3	-	-
<b>PC7.</b> locate general health and safety equipment in the workplace such as fire extinguishers; first aid equipment; safety instruments, clothing and installations (fire exits, exhaust fans)	2	3	-	-
<b>PC8.</b> maintain appropriate posture while handling heavy objects	1	3	-	-
<b>PC9.</b> apply good housekeeping practices at all times	2	3	-	-
<i>Apply fire safety practices</i>	<b>4</b>	<b>9</b>	-	-
<b>PC10.</b> take preventive measures to prevent fire hazards	2	3	-	-

### Qualification Pack

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<p><b>PC11.</b></p> <ul style="list-style-type: none"> <li>• use appropriate fire extinguishers for different types of fires</li> <li>• Types of fires: Class A: e.g. ordinary solid combustibles, such as wood, paper, cloth, plastic, charcoal, etc.; Class B: flammable liquids and gases, such as gasoline, propane, diesel fuel, tar, cooking oil, and similar substances; Class C: e.g. electrical equipment such as appliances, wiring, breaker panels, etc. (These categories of fires become Class A, B, and D fires when the electrical equipment that initiated the fire is no l</li> </ul>	1	3	-	-
<p><b>PC12.</b> exhibit rescue and first-aid techniques in case of fire or electrocution</p>	1	3	-	-
<p><i>Follow emergencies, rescue and first-aid procedures</i></p>	<b>6</b>	<b>13</b>	-	-
<p><b>PC13.</b> administer appropriate first aid to victims in case of bleeding, burns, choking, electric shock, poisoning etc.</p>	1	3	-	-
<p><b>PC14.</b> administer first aid to victims in case of a heart attack or cardiac arrest due to electric shock,</p>	1	2	-	-
<p><b>PC15.</b> participate regularly in emergency procedures such as raising alarm, safe/efficient, evacuation, correct means of taking shelter and escaping, correct assembly point, roll call, correct return to work</p>	2	4	-	-
<p><b>PC16.</b> use correct method to move injured people and others during an emergency</p>	2	4	-	-
<p><i>Effective waste management/recycling practices</i></p>	<b>5</b>	<b>12</b>	-	-
<p><b>PC17.</b> identify recyclable and non-recyclable, and hazardous waste generated</p>	1	3	-	-
<p><b>PC18.</b> segregate waste into different categories</p>	1	2	-	-
<p><b>PC19.</b> ensure disposal of non-recyclable waste appropriately</p>	1	2	-	-
<p><b>PC20.</b> deposit non-recyclable and reusable material at identified location</p>	1	3	-	-



### Qualification Pack

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
PC21. follow processes specified for disposal of hazardous waste	1	2	-	-
<b>NOS Total</b>	<b>35</b>	<b>65</b>	-	-



## Qualification Pack

### National Occupational Standards (NOS) Parameters

<b>NOS Code</b>	ELE/N1002
<b>NOS Name</b>	Apply health and safety practices at the workplace
<b>Sector</b>	Electronics
<b>Sub-Sector</b>	Generic
<b>Occupation</b>	Generic - Health Safety
<b>NSQF Level</b>	4
<b>Credits</b>	TBD
<b>Version</b>	3.0
<b>Last Reviewed Date</b>	24/02/2022
<b>Next Review Date</b>	24/02/2025
<b>NSQC Clearance Date</b>	24/02/2022



## 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:



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- 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.

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**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



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- 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>	25/02/2021
<b>Next Review Date</b>	24/02/2024
<b>NSQC Clearance Date</b>	25/02/2021

## Assessment Guidelines and Assessment Weightage

### Assessment Guidelines

1. Criteria for assessment for each Qualification Pack will be created by the Sector Skill Council. Each 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 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 centre (as per assessment criteria below).
5. Individual assessment agencies will create unique evaluations for skill practical for every student at each examination/training centre based on this criterion.
6. To pass the Qualification Pack, every trainee should score a minimum of 70% of aggregate marks to successfully clear the assessment.
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/N4614.Manage customer IT hardware at facility	50	40	-	10	100	35
ELE/N4615.Manage customer system remotely	50	40	-	10	100	35
ELE/N1002.Apply health and safety practices at the workplace	35	65	-	-	100	15
DGT/VSQ/N0102.Employability Skills (60 Hours)	20	30	-	-	50	15
<b>Total</b>	<b>155</b>	<b>175</b>	<b>-</b>	<b>20</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
<b>QP</b>	Qualification Pack
<b>NSQF</b>	National Skills Qualification Framework
<b>NSQC</b>	National Skills Qualification Committee
<b>NOS</b>	National Occupational Standards
<b>SLA</b>	Service Level Agreement
<b>EUC</b>	End User Computing

## 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.
<b>Declarative Knowledge</b>	Declarative knowledge refers to facts, concepts and principles that need to be known and/or understood in order to accomplish a task or to solve a problem.
<b>Key Learning Outcome</b>	Key learning outcome is the statement of what a learner needs to know, understand and be able to do in order to achieve the terminal outcomes. A set of key learning outcomes will make up the training outcomes. Training outcome is specified in terms of knowledge, understanding (theory) and skills (practical application).
<b>OJT (M)</b>	On-the-job training (Mandatory) trainees are mandated to complete specified hours of training on site
<b>OJT (R)</b>	On-the-job training (Recommended) trainees are recommended the specified hours of training on site
<b>Procedural Knowledge</b>	Procedural knowledge addresses how to do something, or how to perform a task. It is the ability to work, or produce a tangible work output by applying cognitive, affective or psychomotor skills.
<b>Training Outcome</b>	Training outcome is a statement of what a learner will know, understand and be able to do upon the completion of the training.