QUALIFICATIONS PACK –
OCCUPATIONAL STANDARDS FOR ELECTRONICS INDUSTRY

Contents

What are Occupational Standards(OS)?

- OS describe what individuals need to do, know and understand in order to carry out a particular job role or function
- OS are performance standards that individuals must achieve when carrying out functions in the workplace, together with specifications of the underpinning knowledge and understanding

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Introduction

Qualifications Pack- Security Surveillance and Access Control Supervisor

SECTOR: ELECTRONICS

SUB-SECTOR: IT HARDWARE

OCCUPATION: AFTER SALES SERVICE

REFERENCE ID: ELE/Q4611

ALIGNED TO: NCO-2004/ NIL

Security Surveillance and Access Control Supervisor: The Security Surveillance and Access Control Supervisor manages the technicians to service the customer problems in time.

Brief Job Description: The individual at work is responsible for supervising technicians engaged in installion and maintenance of CCTV, access control system at the customer's premises. The individual undertakes customer care, inventory control and manpower management.

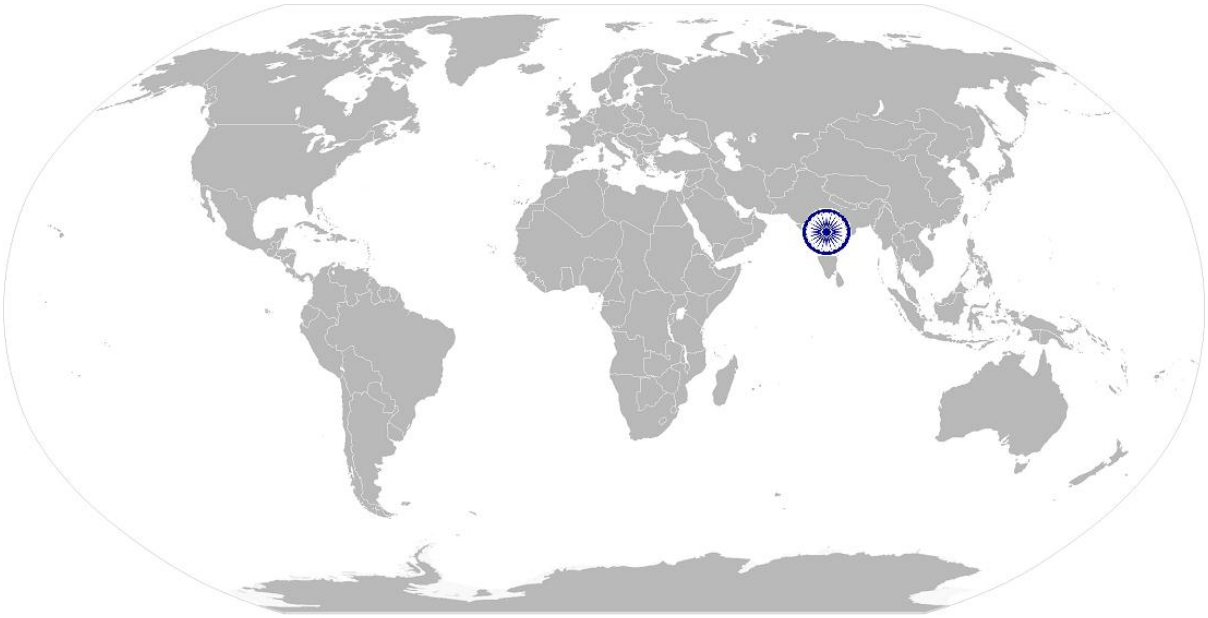
Personal Attributes: The job requires the individual to have: attention to details, patience, ability to listen, logical thinking and customer orientation. The individual must work on desk with different types of equipment.

Job Details

Qualifications Pack Code	ELE/Q4611		
Job Role	Security Surveillance and Access Control Supervisor		
Credits(NVEQF/NVQF/NSQF) [*OPTIONAL*]	TBD	Version number	1.0
Sector	Electronics	Drafted on	4/11/14
Sub-sector	IT Hardware	Last reviewed on	24/10/14
Occupation	After Sales Service	Next review date	24/10/15

Job Role	Security Surveillance and Access Control Supervisor
Role Description	Responsible for supervising technicians engaged in installion and maintenance of CCTV, access control system at the customer's premises. The individual undertakes customer care, inventory control and manpower management
NVEQF/NVQF level	5
Minimum Educational Qualifications	Graduate
Maximum Educational Qualifications	
Training	Not applicable
Experience	Not Applicable
Applicable National Occupational Standards (NOS)	**Compulsory:** 1. ELE/N4610 Install the CCTV camera 2. ELE/N4611 Setup the CCTV surveillance system 3. ELE/N4617 Install the access control system 4. ELE/N9997 Supervise Field Service Technician **Optional:** Not applicable
Performance Criteria	As described in the relevant OS units

National Occupational Standard



Overview

This unit is about interacting with customers and understanding their requirements or problems faced with the smartphone. It includes front end repairing where disassembling of hardware is not required.

National Occupational Standard

Unit Code	ELE /N4610
Unit Title (Task)	Install the CCTV camera
Description	This unit is about installing the CCTV camera at customer's premises as per customer's preference and connecting the camera to the system through cables
Scope	This unit/ task covers the following: • Procure the hardware required for installation • Test the hardware before installation • Connect the cables • Install and setup the camera • Use appropriate tools and equipments for installation • Achieve productivity and quality standards

Performance Criteria(PC) w.r.t. the Scope	
Element	**Performance Criteria**
Procuring CCTV hardware	To be competent, the user/ individual must be able to: PC1. procure the hardware required for CCTV system installation PC2. ensure that all the hardware matches the customer requirement, agreed features and specifications PC3. understand the warranty associated with the hardware product PC4. and related documents for the hardware equipments
Testing hardware before installation	To be competent, the user/ individual must be able to: PC5. check the hardware equipments before taking to the installation site PC6. replace the hardware if there is any issue or malfunction is found while testing PC7. check for critical equipment such as camera, recorder w.r.t quality and output PC8. ensure all the tools, equipments, utilities are available in good to enable installing in single visit
Connecting cables	To be competent, the user/ individual must be able to: PC9. lay the cables in the building or site to connect the camera and system PC10. ensure adequate length of co-axial and other cables are available for installation PC11. use BNC connectors for joining cables and crimp them PC12. use power cable of specified thickness to connect CCTV system with power supply PC13. connect all the cables from multiple cameras to the CCTV system area
Setting up the camera	To be competent, the user/ individual must be able to: PC14. mount the CCTV camera so as to cover maximum area PC15. decide whether the camera requires any enclosure to protect from dust, vandalism and climatic conditions PC16. use stable mounting structure and ensure that is not disturbed by wind or

	rain which would affect the video quality PC17. decide on the height of camera installation according to the end purpose (for example: if the visitor entering the premise is to be monitored, camera should not be placed too high and their face would not be captured) PC18. set up the type of camera such as pan, tilt, zoom unit as per customer requirement PC19. set camera controls PC20. connect the power and video output cable to the camera
Using tools and equipments	To be competent, the user/ individual must be able to: PC21. use tools such as diagonal cutters, screwdrivers, crimp tools, knife for cabling and camera mounting PC22. follow standard operating procedure of tools and equipments and avoid any hazard PC23. follow the installation manual for specific hardware product PC24. use recommended tools for specific equipment to avoid damage PC25. follow standard safety procedures while installing
	To be competent, the user/ individual must be able to: PC26. ensure that only quality hardware products are procured complying to industry and quality standards PC27. ensure product installation and user manual is available which should be given to the user or customer PC28. ensure that there are no cable joins, sharp bends during cabling PC29. ensure weather proof (UV proof) cable are used in outdoors PC30. ensure that cabling is sturdy, protected and does not disturb the ambience of building PC31. ensure that cameras are protected from light while installing in outdoor PC32. ensure the intended area is covered during movement in case of tilt or pan type of camera PC33. assess power requirement of camera and use required power supply and cable PC34. educate customer on use of cameras for desired monitoring and warranty period and annual maintenance requirement PC35. ensure zero-material damage while handling the equipment during installation process PC36. install target number of CCTVs as per company's policy
Knowledge and Understanding (K)	
A. Organizational Context (Knowledge of the company / organization and its processes)	The individual on the job needs to know and understand: KA1. company's policies on: incentives, delivery standards, and personnel management KA2. company's sales and after sales support policy KA3. importance of the individual's role in the workflow KA4. reporting structure KA5. company's policy on product's warranty and other terms and conditions KA6. company's line of business and product portfolio KA7. company's customer support and service policy
B. Technical Knowledge	The individual on the job needs to know and understand: KB1. basic electronics involved in the hardware

	KB2. basic electrical and wiring KB3. different types of electronic surveillance products and functionalities KB4. functions of electrical and mechanical parts or modules KB5. typical customer profile KB6. elements of CCTV systems such as camera, DVR, monitor KB7. company's portfolio of products and that of competitors KB8. installation procedures given in the manuals KB9. specification and the procedures to be followed for setting up the system KB10. different type of cables used for data transmission and power transmission KB11. power requirement of different CCTV related equipment KB12. video recording of footage – analog and digital KB13. different types of camera available in the market KB14. camera specifications such as focus, lens type, zoom KB15. controls of different options in camera such as rotation, speed of movement in pan / tilt camera KB16. voltage and power requirement for different hardware devices KB17. how to operate the system and other hardware KB18. safety rules, policies and procedures KB19. quality standards to be followed
Skills (S) [Optional]	
A. Core Skills/ Generic Skills	**Reading and writing skills** The user/individual on the job needs to know and understand how: SA1. to document the completed work SA2. to note the installation completed SA3. to read the standard operating procedures for different equipment
	Teamwork and multitasking The user/individual on the job needs to know and understand how: SA4. to share work load as required SA5. to achieve the targets given on installations
B. Professional Skills	**Hardware and electrical skills** The user/individual on the job needs to know and understand how to: SB1. operate hardware equipment in CCTV system SB2. different types of cables that are required to integrate CCTV system SB3. voltage requirement and other specification on CCTV hardware
	Using tools and equipment The user/individual on the job needs to know and understand how: SB4. to operate tools such as diagonal cutter, screwdrivers, crimping tools for cabling and mounting of camera SB5. to use other specific devices for installation of camera
	Reflective thinking The user/individual on the job needs to know and understand how: SB6. to improve work processes SB7. to reduce repetition of errors

	Critical thinking
	The user/individual on the job needs to know and understand how: SB8. to spot process disruptions and delays SB9. to report on any customer concerns to superiors without delay

NOS Version Control

NOS Code	**ELE/N4610**		
Credits(NVEQF/NVQF/NSQF) [*OPTIONAL*]	**TBD**	**Version number**	**1.0**
Industry	**Electronics**	**Drafted on**	**18/01/14**
Industry Sub-sector	**IT Hardware**	**Last reviewed on**	**24/03/14**
		Next review date	**24/04/15**

National Occupational Standard

Unit Code	**ELE /N4611**
Unit Title (Task)	**Setup the CCTV surveillance system**
Description	This unit is about connecting the CCTV camera to the recorder and setting up the CCTV monitoring system for viewing and recording images as per customer's requirement.
Scope	This unit/ task covers the following: • Connect CCTV camera and DVR with the system • Setup the CCTV system • Ensure system functioning and perform a demo • Complete the installation task and report • Interact with customer • Interact with superior • Achieve productivity and quality as per company's norms

Performance Criteria(PC) w.r.t. the Scope	
Element	**Performance Criteria**
Connecting CCTV camera and DVR with the system	To be competent, the user/ individual must be able to: PC1. procure and place the Digital Video Recorder (DVR) in an appropriate place as per customer's requirement PC2. connect all the cameras installed to the DVR PC3. ensure that all cameras are connected to the DVR and the wiring is appropriate PC4. connect the monitor (TV / PC) with the video output connection in the DVR PC5. connect speakers, if required, for audio output to DVR PC6. connect the camera optional controls (tilt / pan / zoom) to DVR PC7. use DVR link option to connect with other DVR in the network PC8. connect the DVR to router, if required, to enable remote monitoring
Setting up CCTV system	To be competent, the user/ individual must be able to: PC9. connect the power supply of DVR, monitor, speakers to set up the system PC10. install the appropriate software for IP network or remote monitoring PC11. enter the appropriate IP address to receive the video signals through IP network / internet PC12. connect all equipments and switch on to start the video capture
Checking functioning of CCTV system	To be competent, the user/ individual must be able to: PC13. perform a demo of CCTV system operation with the customer PC14. ensure that all the controls in the system are properly working PC15. ensure that pan, tilt, zoom options of the camera are working PC16. monitor and switch to multiple camera installed and connected in the system PC17. perform viewing, recording and replaying the video captured in the system as per customer requirement

	PC18. take corrective action and fix the issues such as no video, lack of clarity in the system when found PC19. perform remote monitoring and controls associated if it is opted by customer
Interacting with customer	To be competent, the user/ individual must be able to: PC20. inform customer on adequate information about hardware device or software PC21. instruct customer on use of and procedures to be followed for operating the system or hardware
Reporting to superior	To be competent, the user/ individual must be able to: PC22. receive the work order from the superior PC23. report on the work load and completion status PC24. escalate the problems that cannot be resolved at field level with reason PC25. submit the feedback form on customer satisfaction level with respect to the installation PC26. accurately report work status through proper documentation as per company's standards
Achieving productivity and quality standards	To be competent, the user/ individual must be able to: PC27. ensure that there is no problem after installing the CCTV system and the output video is per customer's expectation PC28. confirm acceptance on installing any hardware or software in the system PC29. inform customer about warranty and other terms and conditions on the hardware equipment PC30. provide relevant documents to customers on completion of installation PC31. achieve 100% satisfaction with customer on installation service PC32. achieve 100% on time completion of field installation with reference to agreed target and time or reasons for not meeting target
Knowledge and Understanding (K)	
A. Organizational Context (Knowledge of the company / organization and its processes)	The individual on the job needs to know and understand: KA1. company's policies on: incentives, delivery standards, and personnel management KA2. company's sales and after sales support policy KA3. importance of the individual's role in the workflow KA4. reporting structure KA5. company's policy on product's warranty and other terms and conditions KA6. company's line of business and product portfolio
B. Technical Knowledge	The individual on the job needs to know and understand: KB1. different types of electronic surveillance products and functionalities KB2. functions of electrical and mechanical parts/ modules KB3. specification and the procedures to be followed for setting up the system KB4. different type of cables used for data transmission and power transmission KB5. power requirement of different CCTV related equipment KB6. video recording of footage – analog and digital KB7. different types of camera available in the market KB8. camera specifications such as focus, lens type, zoom KB9. controls of different options in camera such as rotation, speed of movement in pan / tilt camera KB10. voltage and power requirement for different hardware devices

	KB11. integration of hardware to setup the system KB12. parameters and specification for different types of system integration KB13. accessing image from remote locations KB14. CCTV monitoring and control over IP network / Internet KB15. IP technology and networking principles KB16. basics of networking KB17. video recording technologies KB18. controls in digital video recorder and their usage KB19. how to operate the system and other hardware KB20. safety rules, policies and procedures KB21. quality standards to be followed
Skills (S) [Optional]	
A. Core Skills/ Generic Skills	**Reading and writing skills**
	The user/individual on the job needs to know and understand how: SA1. to read job sheet and/or complaints registered at customer care SA2. to document the completed work SA3. to note customer complaints and solution provided SA4. to read the standard operating procedure manual for different equipment
	Teamwork and multitasking
	The user/individual on the job needs to know and understand how: SA5. to share work load as required SA6. to achieve the target
B. Professional Skills	**Hardware and software operating skills**
	The user/individual on the job needs to know and understand how to: SB1. operate computer and laptop SB2. operate CCTV related hardware equipments , their controls and specifications SB3. complete operational controls in Digital Video Recorder (DVR) SB4. networking and software involved set up CCTV system in a network SB5. configure different settings and installations of hardware and software as per customer requirement
	Using tools and machines
	The user/individual on the job needs to know and understand how to: SB6. to operate tools such as diagonal cutter, screwdrivers, crimping tools for cabling and mounting of camera SB7. to use other specific devices for installation of camera SB8. to use tools for integrating the systems
	Reflective thinking
	The user/individual on the job needs to know and understand how to: SB9. improve work processes SB10. reduce errors on field and repeat trips

	Critical thinking
	The user/individual on the job needs to know and understand how to: SB11. spot process disruptions and delays SB12. report on any issues raised by customers to superiors without delay

NOS Version Control

NOS Code	**ELE/N4611**		
Credits(NVEQF/NVQF/NSQF) [*OPTIONAL*]	**TBD**	**Version number**	**1.0**
Industry	**Electronics**	**Drafted on**	**18/01/14**
Industry Sub-sector	**IT Hardware**	**Last reviewed on**	**24/03/14**
		Next review date	**24/04/15**

National Occupational Standard

Unit Code	ELE /N4617
Unit Title (Task)	**Install the access control system**
Description	This unit is about installing the access control systems at the customer's premises as per customer's preference and connecting it to the system for functioning
Scope	This unit/ task covers the following: • Procure the hardware required for installation • Test the access control hardware before installation • Install the wiring • Install and setup the access controls • Setup the system • Use appropriate tools and equipment for installation

Performance Criteria(PC) w.r.t. the Scope	
Element	**Performance Criteria**
Procuring access controls hardware for installation	To be competent, the user/ individual must be able to: PC37. carry different types of hardware required for access controls system installation, e.g., master controller, door control unit, card reader (RFID card) PC38. ensure that hardware matches the customer requirement and specifications PC39. ensure that industry compliant and quality hardware products are used PC40. check the warranty associated with the hardware product PC41. ensure product user manual is given to the customer PC42. receive invoice and related documents for the hardware equipment
Testing of hardware before installation	To be competent, the user/ individual must be able to: PC43. check the hardware before carrying to the installation site PC44. replace the hardware if there is any issue or malfunction is found while testing PC45. check for critical equipment such as card reader w.r.t quality and output PC46. ensure all the tools, equipment, utilities are available in good to enable installing in single visit
Install the access control equipment	To be competent, the user/ individual must be able to: PC47. place and fix the card reader equipment near the entry and exit points PC48. fix / mount the card reader as per the standard operating procedure without

	damaging the equipment / mounting surface such as wall, furniture, etc. PC49. fix the door control unit to the doors (entry / exit points) PC50. install other hardware such as smart-hub and master controller at the designed location PC51. ensure specific requirement based hardware are matching with client expectation and are installed as per the standard operating procedure
Installing the wiring (cable)	To be competent, the user/ individual must be able to: PC52. understand the type of cable requirement for different types of network type such as USB, twisted pair, etc. PC53. ensure adequate length of cables are available for installation PC54. lay the cables in the building or site connecting the control system and control unit as per the standard operating procedure mentioned in the product manual PC55. ensure that there are no cable joins, sharp bends during cabling PC56. use BNC connectors for joining cables and crimp them PC57. ensure weather proof (UV proof) cable are used in outdoors PC58. use power cable with appropriate thickness PC59. connect all the cables from individual door control units to master controller unit PC60. ensure that cabling is appropriate, protected and does not disturb the ambience of building (interior and exterior)
Install software and set up the system	To be competent, the user/ individual must be able to: PC61. ensure that all cables are devices integrated and connected to a (computer) system PC62. identify the operating system and software requirement for the access control system PC63. install the software as per hardware requirement such as smart manager access PC64. set up the system and perform a demonstration PC65. ensure all data is captured as per customer requirement PC66. fix for any errors (if any) identified during the demo PC67. educate customers about best use of hardware equipment and hardware maintenance PC68. inform customers about warranty coverage details PC69. get sign off from the customers on the work completed and the installation feedback as per organisation requirement
Using tools and equipment	To be competent, the user/ individual must be able to: PC70. use tools such as diagonal cutters, screwdrivers, crimp tools, knife, etc., for wiring and mounting of access control devices PC71. follow standard operating procedure of tools and equipment and avoid any hazard PC72. follow the installation manual for specific hardware product to avoid issue in installations PC73. use recommended tools for specific equipment to avoid damage to the hardware PC74. ensure zero-material damage while handling the equipment during installation process

Knowledge and Understanding (K)	
C. Organizational Context (Knowledge of the company / organization and its processes)	The individual on the job needs to know and understand: KA8. company's policies on: incentives, delivery standards, and personnel management KA9. company's sales and after sales support policy KA10. importance of the individual's role in the workflow KA11. reporting structure KA12. company's policy on product's warranty and other terms and conditions KA13. company's line of business and product portfolio KA14. company's customer support and service policy
D. Technical Knowledge	The individual on the job needs to know and understand: KB20. basic electronics involved in the hardware KB21. basic electrical and wiring techniques KB22. different types of access control products and functionalities KB23. functions of electrical and mechanical parts/ modules KB24. typical customer profile KB25. dismantling and assembling of hardware equipment KB26. access control system concepts such as for master controller, card reader, door control units, smart-hub, etc. KB27. company's portfolio of products and that of competitors KB28. installation procedures given in the manuals KB29. specification and the procedures to be followed for setting up the system KB30. different type of cables used for data transmission and power transmission KB31. power requirement of hardware KB32. different types of access controls hardware available in the market KB33. software requirement associated with access controls KB34. computing system and operating system requirements for access control system installation KB35. voltage and power requirement for different hardware devices KB36. how to operate the system and other hardware KB37. all safety rules, policies and procedures KB38. quality standards to be followed
Skills (S)	
C. Core Skills/ Generic Skills	**Reading and writing skills** The user/individual on the job needs to know and understand how: SA6. to document the completed work SA7. to note the installation completed SA8. to read the standard operating procedures for different equipment

	Teamwork and multitasking
	The user/individual on the job needs to know and understand how: SA9. to share work load as required SA10. to achieve the targets given on installations
D. Professional Skills	**Hardware and electrical skills**
	The user/individual on the job needs to know and understand how to: SB10. operate different type of hardware equipment in access control system SB11. different types of cables that are required to integrate access control system SB12. voltage requirement and other specification on access control hardware
	Using tools and equipment
	The user/individual on the job needs to know and understand how: SB13. to operate tools such as diagonal cutter, screwdrivers, crimping tools for cabling and mounting of access control equipment SB14. to use other specific devices for installation of access control system
	Reflective thinking
	The user/individual on the job needs to know and understand how: SB15. to improve work processes SB16. to reduce repetition of errors
	Critical thinking
	The user/individual on the job needs to know and understand how: SB17. to spot process disruptions and delays SB18. to report on any customer concerns to superiors without delay

NOS Version Control

NOS Code	ELE/N4617		
Credits(NVEQF/NVQF/NSQF) [*OPTIONAL*]	TBD	Version number	1.0
Industry	Electronics	Drafted on	18/01/14
Industry Sub-sector	IT Hardware	Last reviewed on	24/03/14
		Next review date	24/03/15

National Occupational Standard

Unit Code	ELE/N9997
Unit Title (Task)	**Supervise field service technician**
Description	This unit is about supervising the on field services of electronic equipment at customer premises and managing the field service technicians. It also includes planning the resources to attend service calls and supervising the performance of technicians in the field.
Scope	This unit/ task covers the following: • Understand and plan as per the work requirement • Describe the work requirement to field technicians • Manage the field technicians • Ensure customer satisfaction on field service • Coordinate with other departments • Document and report service call details • Achieve productivity targets set by the company

Performance Criteria(PC) w.r.t. the Scope	
Element	**Performance Criteria**
Understand and plan as per the work requirement	To be competent, the user/ individual must be able to: PC1. understand the on field service related information from superior PC2. understand the area of operation from the regional / zonal head of services PC3. receive the product configuration details from the product team PC4. discuss with product engineers on clarifications on the product configuration PC5. clarify the component and module requirements for the product PC6. understand the assembling, installation, trouble shooting, perform basic repairs in the electronic equipment PC7. plan with regional / zonal services head on the daily, weekly and monthly field service call target PC8. analyse the trend on service calls received periodically PC9. plan for resource to attend the field service calls as per target and analysis PC10. maintain client (institutional and individual) information in the location
Describe the work requirement to field technicians	To be competent, the user/ individual must be able to: PC11. explain the service technician about the work requirement, location of operation and service level agreement (SLA) details PC12. explain about different product types, configuration and modules in the electronic equipment PC13. train the workers on servicing the equipment including assembling, installation, trouble shooting, repairing the equipment PC14. explain the documentation procedure to be followed by the service technicians during the on field service activity PC15. explain about the quality, turn-around time, standards to be followed during

	servicing PC16. describe importance of customer satisfaction and behave customer friendly during the customer interaction PC17. explain procedures (greeting customers, wearing ESD straps while repair) to be followed in the customer premises
Manage the field technicians	To be competent, the user/ individual must be able to: PC18. define and explain the technician on the calls target and area of operation PC19. allocate work as per the skill and ability of the technician PC20. instruct individual technician about their job responsibility and call target PC21. accompany technicians in the initial service calls and explain the procedures through practical field activity PC22. ensure that the technician is aware about location and client in the area of operation PC23. supervise and monitor the performance of technicians PC24. judge the performance of technician by interacting with the client or through client feedback form PC25. document the performance results of technician
Ensure customer satisfaction on field service	To be competent, the user/ individual must be able to: PC26. ensure quality and standards are met as per company's service policy PC27. ensure that all field calls are successful PC28. ensure that all customers are satisfied with the field services PC29. take necessary steps to address the customer queries and complaints
Coordinate with other departments	To be competent, the user/ individual must be able to: PC30. coordinate with product team to understand on product configuration and technical requirement PC31. coordinate with remote helpdesk team on resolving the issues through call from customer premises PC32. coordinate with materials department to avail spares and materials required for servicing PC33. coordinate with in-house repair and service department on equipment procured from customer premises for level 2 and above repair
Document and report service call details	To be competent, the user/ individual must be able to: PC34. track the number of service calls and the technicians on the field PC35. document the on field services status as per company standards and procedure in ERP PC36. document the number of service calls closed, pending and customer feedback as per company procedure PC37. present the service call report on internal organisational meeting with zonal / regional head and management
Achieve productivity targets set by the company	To be competent, the user/ individual must be able to: PC38. ensure that daily and weekly targets on service calls are met PC39. ensure quality and standards for the services are met as per the organisation requirement PC40. ensure documentation, reporting and performance management process are done periodically as per company procedure PC41. ensure that the services are done as per the company's SLA with the client
Knowledge and Understanding (K)	

A. Organizational Context (Knowledge of the company / organization and its processes)	The individual on the job needs to understand: KA1. company's code of conduct KA2. organisation culture KA3. company's reporting structure KA4. company's documentation policy KA5. company's line of business and product offerings KA6. company's after sale service policy KA7. departments involved with after sale service KA8. company's service level agreement with clients KA9. company's Human Resource and performance evaluation policy KA10. internal process system such as ERP followed in the organisation KA11. quality and standards system followed in the company
B. Technical Knowledge	The individual on the job needs to know and understand: KB39. basic electronics involved in the hardware KB40. different types of electronics hardware products and functionalities KB41. functions of electrical and mechanical parts/ modules KB42. identify different components in the module KB43. the specific function of different modules for a equipment KB44. product configuration KB45. Assembling, installation, basic repair process of electronic equipment KB46. Electrostatic Discharge (ESD) and precautionary steps KB47. quality, standards, processes and systems followed in service and repair KB48. resource (man, power, material) management for after sales on field service KB49. analyse service call reports and decide on resource management KB50. service level agreement with client KB51. area of operation with local connectivity (roads) KB52. client database
Skills (S)	
A. Core Skills/ Generic Skills	**Reading and writing** The individual on the job needs to know and understand how to: SA1. read the product configuration and manuals SA2. read text manuals regarding the equipment and their specification SA3. read the assembling and repair manual of the equipment SA4. document the service calls, it's details and customer feedback forms
B. Professional Skills	**Interpersonal skills** The individual on the job needs to know and understand how to: SB1. develop a rapport with customers and technicians SB2. coordinate with department heads and management SB3. listen carefully and interpret the product details from product engineer **Communication skills** The individual on the job needs to know and understand how to: SB4. seek inputs to assess the queries SB5. explain the work and process requirement to service technicians SB6. present service call report and status during management meetings SB7. communicate in English and local language

	Decision making
	The individual on the job needs to know and understand how to: SB8. plan field service work as per shifts, day, week, etc SB9. plan for material and manpower to attend service calls SB10. assess performance level of technicians
	Behavioural skills
	The individual on the job needs to know and understand how to: SB11. importance of personal grooming SB12. significance of etiquette such as maintaining the appropriate physical distance with customer during conversation, etc SB13. importance of being patient and courteous with all types of customers SB14. being polite and courteous under all circumstances
	System operation skills
	The individual on the job needs to know and understand how to: SB15. operate computer and internet SB16. use and understand Microsoft package SB17. operate company's internal process software such as ERP for recording and documenting the production status

NOS Version Control

NOS Code	ELE/N9997		
Credits(NVEQF/NVQF/NSQF) [*OPTIONAL*]	TBD	Version number	1.0
Industry	Electronics	Drafted on	04/11/14
Industry Sub-sector	Communication & Broadcasting	Last reviewed on	24/10/14
		Next review date	24/10/15

Definitions

Keywords /Terms	Description
Sector	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.
Sub-sector	Sub-sector is derived from a further breakdown based on the characteristics and interests of its components.
Occupation	Occupation is a set of job roles, which perform similar/ related set of functions in an industry.
Function	Function is an activity necessary for achieving the key purpose of the sector, occupation, or an area of work, which can be carried out by a person or a group of persons. Functions are identified through functional analysis and form the basis of OS.
Sub-function	Sub-functions are sub-activities essential to fulfil the achieving the objectives of the function.
Job role	Job role defines a unique set of functions that together form a unique employment opportunity in an organisation.
Occupational Standards (OS)	OS specify the standards of performance an individual must achieve when carrying out a function in the workplace, together with the knowledge and understanding they need to meet that standard consistently. Occupational Standards are applicable both in the Indian and global contexts.
Performance Criteria	Performance criteria are statements that together specify the standard of performance required when carrying out a task.
National Occupational Standards (OS)	NOS are occupational standards which apply uniquely in the Indian context.
Qualifications Pack (QP)	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.
Unit Code	Unit code is a unique identifier for an Occupational Standard, which is denoted by an 'N'
Unit Title	Unit title gives a clear overall statement about what the incumbent should be able to do.
Description	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.
Scope	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.
Knowledge and Understanding	Knowledge and understanding 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.
Organisational Context	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.
Technical Knowledge	Technical knowledge is the specific knowledge needed to accomplish

	specific designated responsibilities.
Core Skills/ Generic Skills	Core skills or generic skills 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.

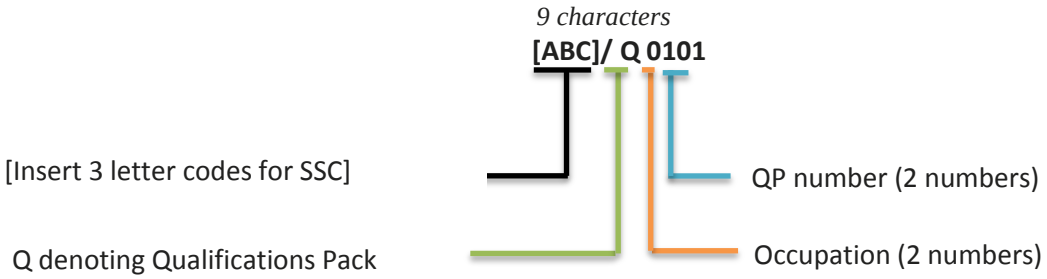
Acronyms

Keywords /Terms	Description
NOS	National Occupational Standard(s)
NVQF	National Vocational Qualifications Framework
NSQF	National Qualifications Framework
NVEQF	National Vocational Education Qualifications Framework
QP	Qualifications Pack

Annexure

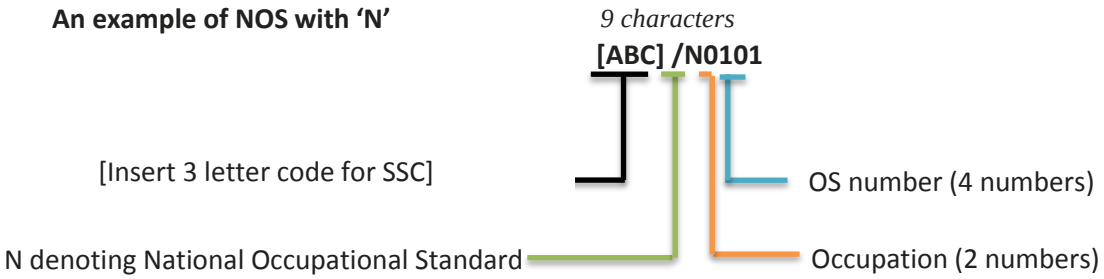
Nomenclature for QP and NOS

Qualifications Pack



Occupational Standard

An example of NOS with 'N'



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The following acronyms/codes have been used in the nomenclature above:

Sub-sector	Range of Occupation numbers
Passive Components	01 - 10
Semiconductors	11 - 20
PCB Manufacturing	21 - 30
Consumer Electronics	31 - 40
IT Hardware	41 - 50
PCB Assembly	51 - 55
Solar Electronics	56 - 60
Strategic Electronics	61 - 65
Automotive Electronics	66 - 70
Industrial Electronics	71 - 75
Medical Electronics	76 - 80
Communication Electronics	81 - 85
PCB Design	86 - 90
LED	91 - 95

Sequence	Description	Example
Three letters	Industry name	ELE
Slash	/	/
Next letter	Whether **Q**P or **N**OS	Q
Next two numbers	Occupation code	01
Next two numbers	OS number	01