

QUALIFICATIONS PACK - NATIONAL OCCUPATIONAL STANDARDS FOR IT-BPM INDUSTRY

What are National Occupational Standards(NOS)?

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

Contact Us:
IT-ITeS SSC NASSCOM
Plot No-7,8,9 & 10,
Sector 126,Noida,UP,
Noida -201303
Phone No:0120-4990172

E-mail: ssc@nasscom.in



Contents

1. Introduction and Contacts.....P.1
2. Qualifications Pack.....P.2
3. Glossary of Key TermsP.3
4. NOS Units.....P.5
5. Annexure: Nomenclature for QP & NOS.....P.37
6. Assessment Criteria.....P.39

Introduction

Qualifications Pack – IoT-Control Room Operator

SECTOR: IT-ITeS

SUB-SECTOR: Future Skills

OCCUPATION: Internet of Things

REFERENCE ID: SSC/Q8209

ALIGNED TO: NCO-2015/NIL

Brief Job Role Description: Individuals at this job are responsible for supporting command control centre operations and overseeing the day-to-day activities of IoT solutions. They are also responsible for ensuring regular software and firmware updates for devices.

Personal Attributes: IoT – Control Room Operators must inculcate strong work ethic, maintain a healthy working environment and provide data and information in standard formats



Job Details	Qualifications Pack Code	SSC/Q8209		
	Job Role	IoT - Control Room Operator This job role is applicable both in national and international scenarios		
	Credits (NSQF)	TBD	Version number	1.0
	Sector	IT-ITes	Drafted on	18/02/2019
	Sub-sector	Future Skills	Last reviewed on	11/03/2019
	Occupation	Internet of Things	Next review date	31/12/2020
	NSQC Clearance on	22/08/2019		

Job Role	IoT - Control Room Operator (Command and Control Operator)
Description	Individuals at this job are responsible for supporting command control centre operations and overseeing the day-to-day activities of IoT solutions. They are also responsible for ensuring regular software and firmware updates for devices.
NSQF Level	5
Minimum Educational Qualifications*	ITI / ITC/ Diploma / Bachelor's Degree in Engineering / Technology / Statistics / Mathematics / Computer Science
Maximum Educational Qualifications*	Not Applicable
Prerequisite License or Training (Mandatory)	Not Applicable
Minimum Job Entry Age	19 years (Recommended)
Experience	0-2 years
Applicable National Occupational Standards (NOS)	Compulsory: <ol style="list-style-type: none"> SSC/N8235 Manage IoT devices and ensure regular software and firmware updates SSC/N8236 Support command control centre operations and oversee day-to-day activities of IoT solutions SSC/N8238 Create technical documents and manuals SSC/N9003 Maintain a healthy, safe and secure working environment SSC/N9004 Provide data/information in standard formats SSC/N9013 Inculcate strong work ethic in line with organizational code of conduct
Performance Criteria	As described in the relevant NOS units

Definitions

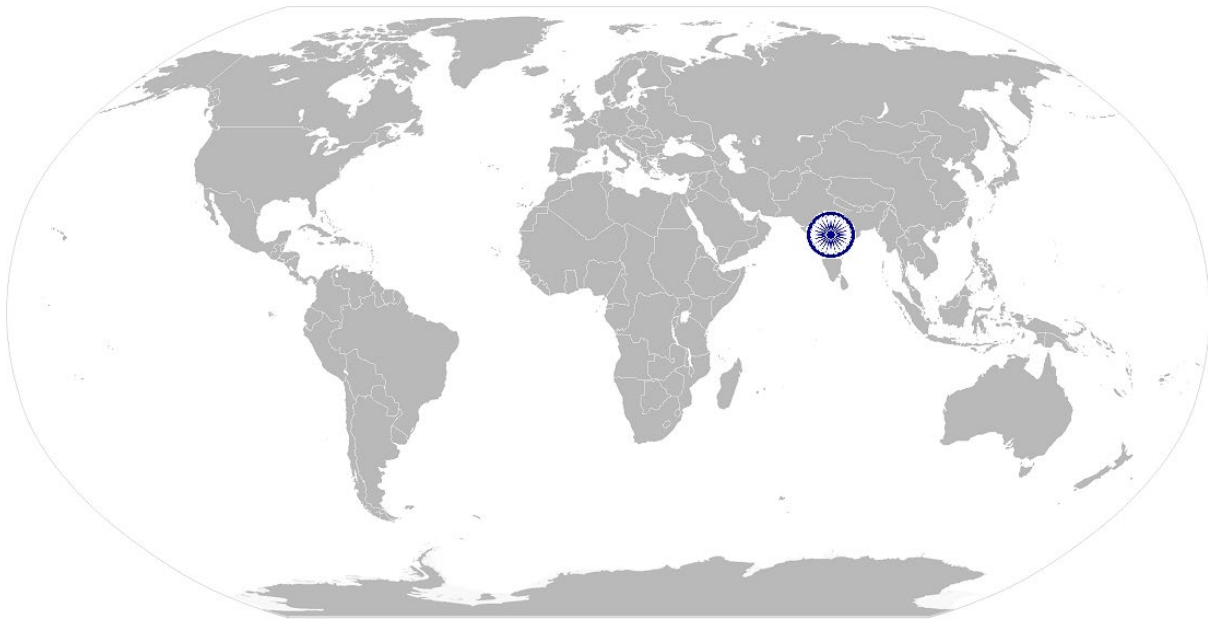
Keywords /Terms	Description
Sector	Sector is a conglomeration of different business operations having similar business and interests. It may also be defined as a distinct subset of the economy whose components share similar characteristics and interests.
Sub-sector	Sub-sector is derived from a further 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.
Job Role	Job role defines a unique set of tasks 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 (NOS)	NOS are occupational standards which apply uniquely in the Indian context.
Qualifications Pack (QP)	QP comprises the set of OSs, together with the educational, training and other criteria required to perform a job role. A QP is assigned a unique qualifications pack code.
Electives	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.
Options	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.
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 need 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.

Acronyms

Keywords /Terms	Description
NOS	National Occupational Standard(s)
NSQF	National Skills Qualifications Framework
QP	Qualifications Pack
IT-ITeS	Information Technology – Information Technology enabled Services
SPD	Software Product Development
ERD	Engineering and R&D
ITS	Information Technology Services
BPM	Business Process Management



National Occupational Standard



Overview

This unit is about installing patches and updates to solution software and firmware.



SSC/N8235

Manage IoT devices and ensure regular software and firmware updates

Unit Code	SSC/N8235
Unit Title (Task)	Manage IoT devices and ensure regular software and firmware updates
Description	This unit is about installing patches and updates to solution software and firmware.
NSQF Level	5
Scope	<p>This unit/task covers the following:</p> <ul style="list-style-type: none"> Patches and Updates Over The Air Updates
Performance Criteria (PC) w.r.t. the Scope	
Element	Performance Criteria
Patches and Updates	<p>To be competent, the user/individual on the job must be able to:</p> <p>PC1. perform timely installation of patches and updates of solution software and firmware</p> <p>PC2. perform over-the-air updates of devices</p>
Over The Air Updates	<p>PC3. initialize files and tools required for over the air update process</p> <p>PC4. perform encryption of files to secure over the air update process</p> <p>PC5. distribute files to intended target devices</p> <p>PC6. perform the update process for target devices</p> <p>PC7. perform post-update activities such as activating updated code</p> <p>PC8. verification that system is functioning as per specifications</p>
Knowledge and Understanding (K)	
A. Organizational Context (Knowledge of the company/ organization and its processes)	<p>The user/individual on the job needs to know and understand:</p> <p>KA1. organizational policies, procedures and guidelines which relate to performing software and firmware updates</p> <p>KA2. organizational policies and procedures for sharing data</p> <p>KA3. the range of standard templates and tools available and how to use them</p>
B. Technical Knowledge	<p>The user/individual on the job needs to know and understand:</p> <p>KB1. broad knowledge of the overall iot solution and how the components interact with each other</p> <p>KB2. how to perform over the air updates</p> <p>KB3. how to encrypt and decrypt patches</p>
Skills (S)	
A. Core / Generic	The user/individual on the job needs to know and understand how to:

SSC/N8235

Manage IoT devices and ensure regular software and firmware updates

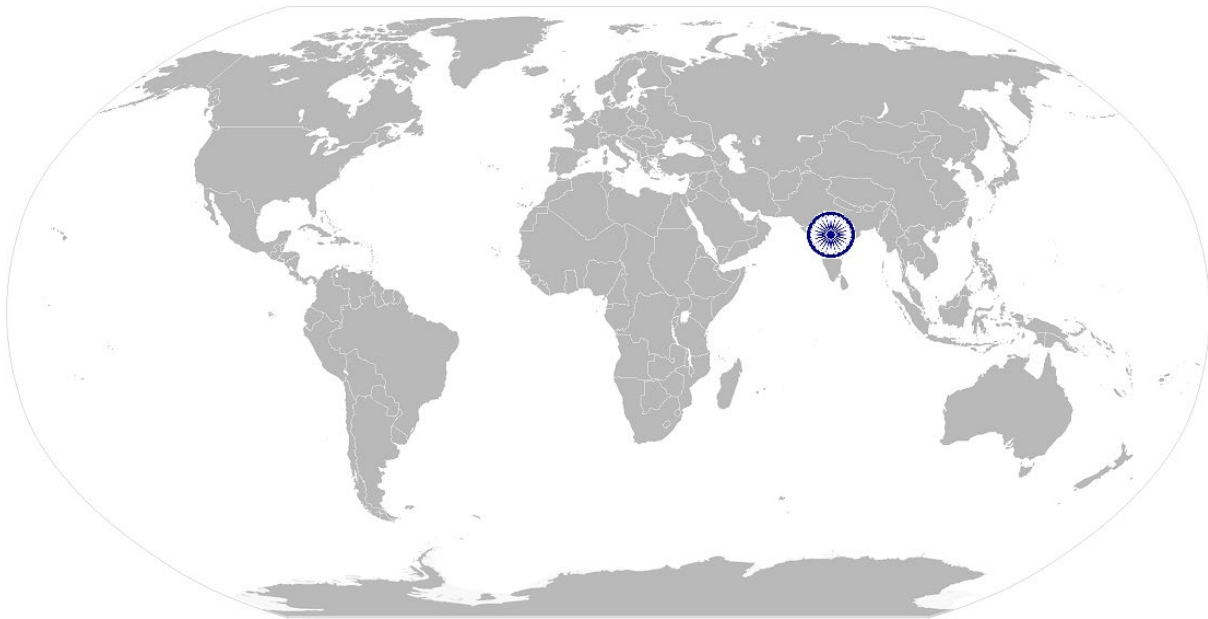
Skills	<p>Writing Skills</p> <p>SA1. complete accurate well written work with attention to detail</p> <p>Reading Skills</p> <p>SA2. follow instructions, guidelines, procedures, rules and service level agreements</p> <p>Listening and Speaking Skills</p> <p>SA3. ask for clarification and advice from appropriate people</p> <p>SA4. listen effectively and orally communicate information accurately</p> <p>Decision Making</p> <p>SA5. follow rule-based decision making processes</p> <p>Plan and Organize</p> <p>SA6. plan and organize your own work to achieve targets and deadlines</p> <p>Problem Solving</p> <p>SA7. refer anomalies to the supervisor</p> <p>SA8. apply problem-solving approaches in different situations</p> <p>Analytical Thinking</p> <p>SA9. pass on relevant information to others</p> <p>Critical Thinking</p> <p>SA10. apply balanced judgments to different situations</p> <p>Attention to Detail</p> <p>SA11. apply good attention to detail</p> <p>SA12. check your work is complete and free from errors</p> <p>Team Working</p> <p>SA13. work effectively in a team environment</p> <p>SA14. contribute to the quality of team working</p>
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SSC/N8235

Manage IoT devices and ensure regular software and firmware updates

NOS Version Control

NOS Code	SSC/N8235		
Credits (NSQF)	TBD	Version number	1.0
Industry	IT-ITeS	Drafted on	18/02/2019
Industry Sub-sector	Future Skills	Last reviewed on	11/03/2019
Occupation	Internet of Things	Next review date	31/12/2020



SSC/N8236

Support command control centre operations and oversee day-to-day activities of IoT solutions

National Occupational Standard



Overview

This unit is about overseeing day-to-day operations of the IoT solution components such as security monitoring, remote diagnosis and repair and round the clock support services.



SSC/N8236

Support command control centre operations and oversee day-to-day activities of IoT solutions

National Occupational Standard

Unit Code	SSC/N8236
Unit Title (Task)	Support command control centre operations and oversee day-to-day activities of IoT solutions
Description	This unit is about overseeing day-to-day operations of the IoT solution components such as security monitoring, remote diagnosis and repair and round the clock support services.
NSQF Level	5
Scope	<p>This unit/task covers the following:</p> <ul style="list-style-type: none"> • Device Interfacing • Security Monitoring • Anomaly Detection • Remote Diagnosis and Repair • Service Reliability • Report Generation
Performance Criteria (PC) w.r.t. the Scope	
Element	Performance Criteria
Device Interfacing	<p>To be competent, the user/individual on the job must be able to:</p> <p>PC1. interface all physical devices with central command centre</p>
Security Monitoring	<p>PC2. monitor unauthorized access attempts to iot devices, customer data, and backend systems</p> <p>PC3. monitor security breaches from external threats</p> <p>PC4. manage controls for device and user authentication and fraud detection</p>
Anomaly Detection	<p>PC5. continuously monitor device usage and performance</p> <p>PC6. detect and respond to unusual device behaviour in near real-time</p> <p>PC7. report abnormal behaviour to relevant stakeholders</p>
Remote Diagnosis and Repair	<p>PC8. perform remote diagnosis of iot assets using technologies such as AR/VR</p> <p>PC9. perform remote repair of iot assets using technologies such as ar/vr</p>
Service Reliability	<p>PC10. manage event and ticket management related activities</p> <p>PC11. ensure round the clock service reliability</p>
Report Generation	<p>PC12. prepare reports based on data and insights generated</p> <p>PC13. share reports and insights with relevant stakeholders</p>
Knowledge and Understanding (K)	



SSC/N8236

Support command control centre operations and oversee day-to-day activities of IoT solutions

A. Organizational Context (Knowledge of the company/ organization and its processes)	<p>The user/individual on the job needs to know and understand:</p> <p>KA1. organizational policies, procedures and guidelines which relate to monitoring, diagnosing and repairing devices</p> <p>KA2. organizational policies and procedures for sharing data</p> <p>KA3. the range of standard templates and tools available and how to use them</p>
B. Technical Knowledge	<p>The user/individual on the job needs to know and understand:</p> <p>KB1. broad knowledge of the overall iot solution and how the components interact with each other</p> <p>KB2. how to commission and decommission devices</p> <p>KB3. how to identify anomalies</p> <p>KB4. how to perform remote repair services</p> <p>KB5. how to ensure security of iot assets</p> <p>KB6. how to prepare reports to document performance of iot assets</p>
Skills (S)	
A. Core / Generic Skills	<p>The user/individual on the job needs to know and understand how to:</p> <p>Writing Skills</p> <p>SA1. complete accurate well written work with attention to detail</p> <p>Reading Skills</p> <p>SA2. follow instructions, guidelines, procedures, rules and service level agreements</p> <p>Listening and Speaking Skills</p> <p>SA3. ask for clarification and advice from appropriate people</p> <p>SA4. listen effectively and orally communicate information accurately</p>
B. Professional Skills	<p>Decision Making</p> <p>SA5. follow rule-based decision making processes</p> <p>Plan and Organize</p>

SSC/N8236

Support command control centre operations and oversee day-to-day activities of IoT solutions

SA6. plan and organize your own work to achieve targets and deadlines

Problem Solving

SA7. refer anomalies to the supervisor

SA8. apply problem-solving approaches in different situations

Analytical Thinking

SA9. pass on relevant information to others

Critical Thinking

SA10. apply balanced judgments to different situations

Attention to Detail

SA11. apply good attention to detail

SA12. check your work is complete and free from errors

Team Working

SA13. work effectively in a team environment

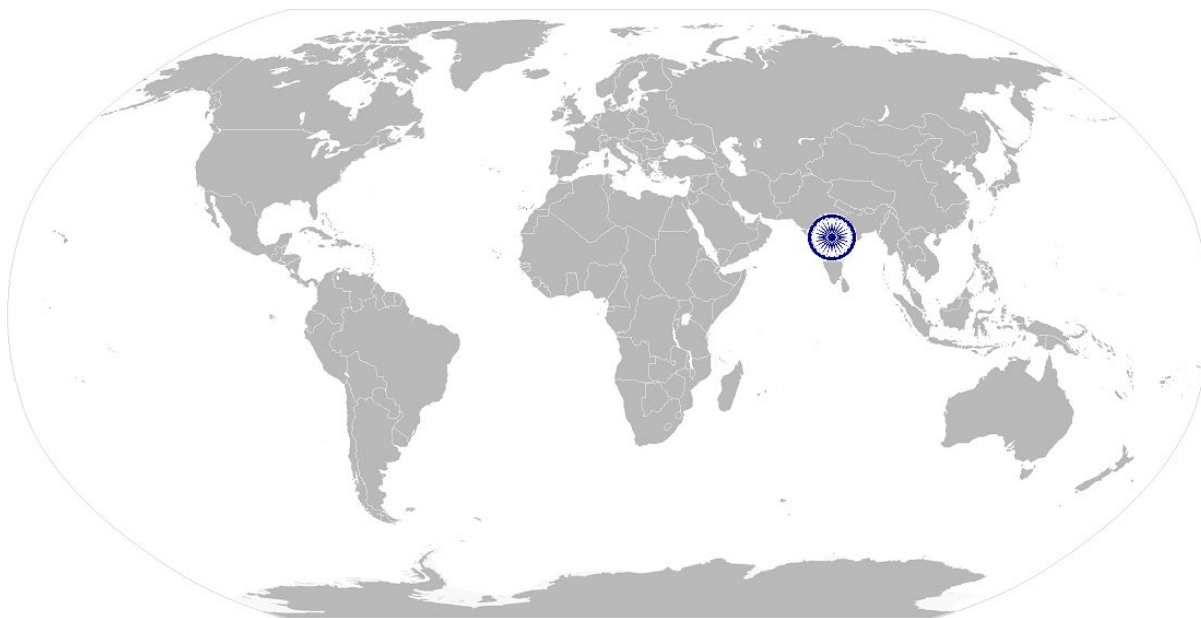
SA14. contribute to the quality of team working

SSC/N8236

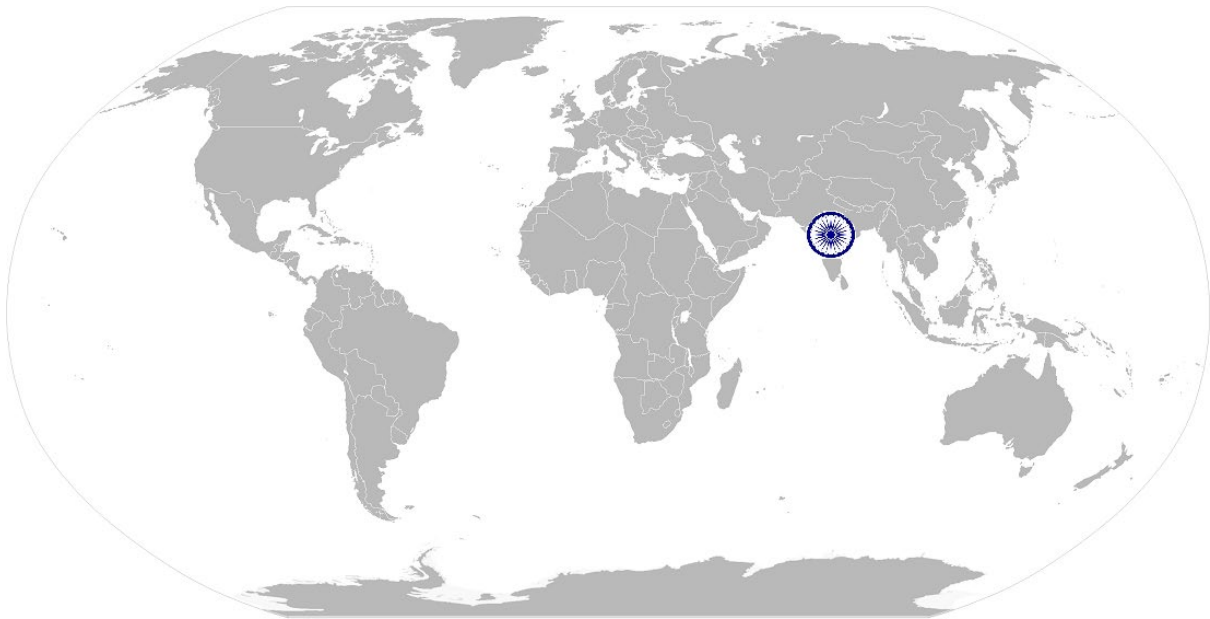
Support command control centre operations and oversee day-to-day activities of IoT solutions

NOS Version Control

NOS Code	SSC/N8236		
Credits (NSQF)	TBD	Version number	1.0
Industry	IT-ITeS	Drafted on	18/02/2019
Industry Sub-sector	Future Skills	Last reviewed on	11/03/2019
Occupation	Internet of Things	Next review date	31/12/2020



National Occupational Standard



Overview

This unit is about creating various types of technical documents and manuals including online configuration manuals, user helps, solution information, installation guides, etc.



SSC/N8238

Create technical documents and manuals

Unit Code	SSC/N8238
Unit Title (Task)	Create technical documents and manuals
Description	This unit is about creating various types of technical documents and manuals including online configuration manuals, user helps, solution information, installation guides, etc.
NSQF Level	6
Scope	This unit/task covers the following: <ul style="list-style-type: none"> Planning Drafting Publishing
Performance Criteria (PC) w.r.t. the Scope	
Element	Performance Criteria
Planning	<p>To be competent, the individual working on the job must be able to:</p> <p>PC1. identify the purpose and the scope of the activity for which technical documentation is to be produced</p> <p>PC2. obtain information for the technical document from relevant sources and stakeholders</p>
Drafting	<p>PC3. draft technical document ensuring that content is concise, complete and easy to consume</p> <p>PC4. review technical document content with relevant stakeholders and document owners</p> <p>PC5. ensure that technical document is formatted and designed as per specifications</p>
Publishing	<p>PC6. transfer technical document to relevant stakeholders for sign-off and publishing</p> <p>PC7. continuously review and update technical document</p>
Knowledge and Understanding (K)	
A. Organizational Context (Knowledge of the company/ organization and its processes)	<p>The individual on the job needs to know and understand:</p> <p>KA1. organizational policies, procedures and guidelines which relate to drafting and publishing technical documentation</p> <p>KA2. organizational policies and procedures for sharing data</p> <p>KA3. the range of standard templates and tools available and how to use them</p>

SSC/N8238

Create technical documents and manuals

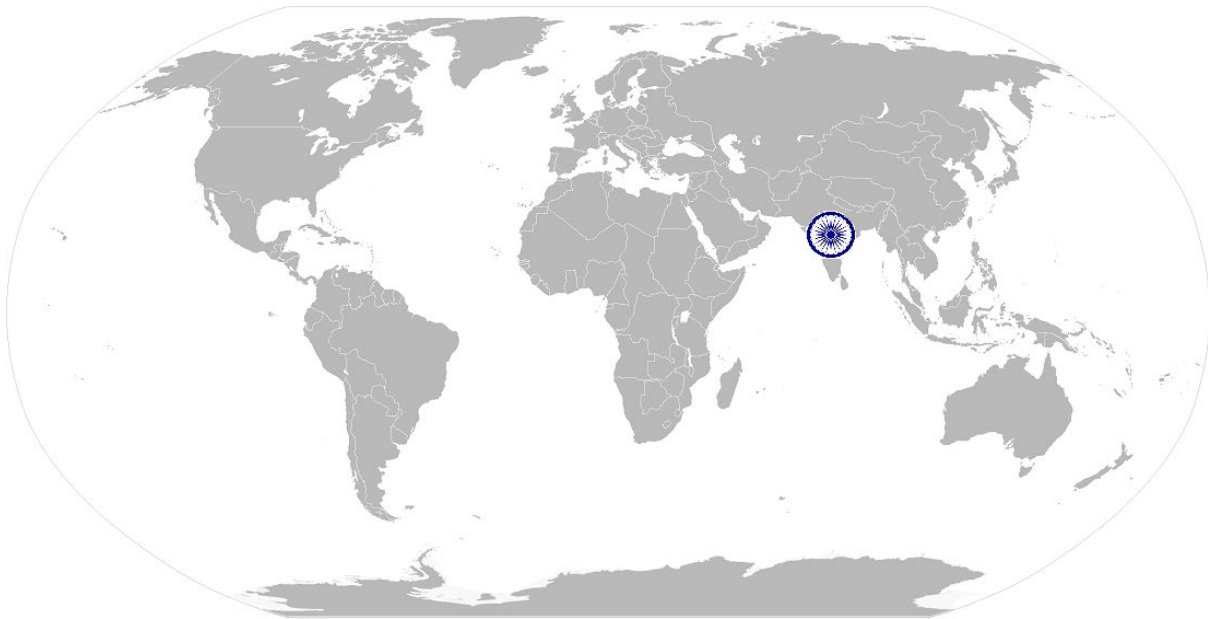
B. Technical Knowledge	<p>The individual on the job needs to know and understand:</p> <p>KB1. knowledge of the solution for which documentation is to be created</p> <p>KB2. how to create clear and concise content</p> <p>KB3. how to format and align document</p>
Skills (S)	
A. Core / Generic Skills	<p>The user/individual on the job needs to know and understand how to:</p> <p>Writing Skills</p> <p>SA1. complete accurate well written work with attention to detail</p> <p>Reading Skills</p> <p>SA2. follow instructions, guidelines, procedures, rules and service level agreements</p> <p>Listening and Speaking Skills</p> <p>SA3. ask for clarification and advice from appropriate people</p> <p>SA4. listen effectively and orally communicate information accurately</p> <p>Decision Making</p> <p>SA5. follow rule-based decision making processes</p> <p>Plan and Organize</p> <p>SA6. plan and organize your own work to achieve targets and deadlines</p> <p>Problem Solving</p> <p>SA7. refer anomalies to the supervisor</p> <p>SA8. apply problem-solving approaches in different situations</p> <p>Analytical Thinking</p> <p>SA9. pass on relevant information to others</p> <p>Critical Thinking</p> <p>SA10. apply balanced judgments to different situations</p> <p>Attention to Detail</p> <p>SA11. apply good attention to detail</p> <p>SA12. check your work is complete and free from errors</p> <p>Team Working</p>



SSC/N8238

Create technical documents and manuals

	SA13. work effectively in a team environment SA14. contribute to the quality of team working
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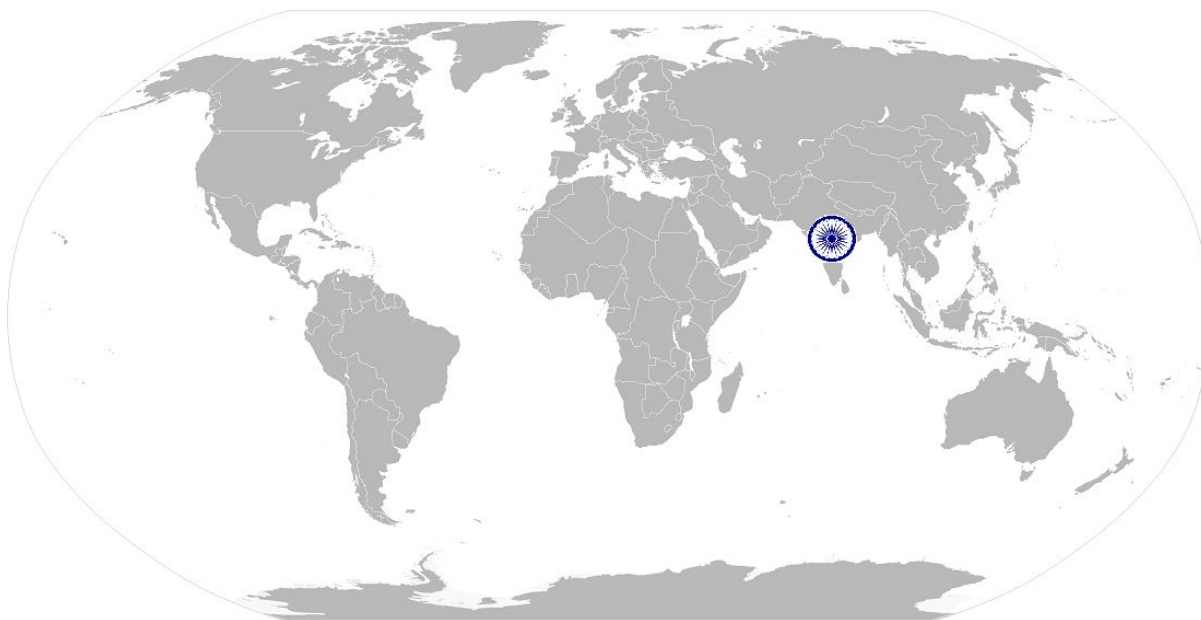


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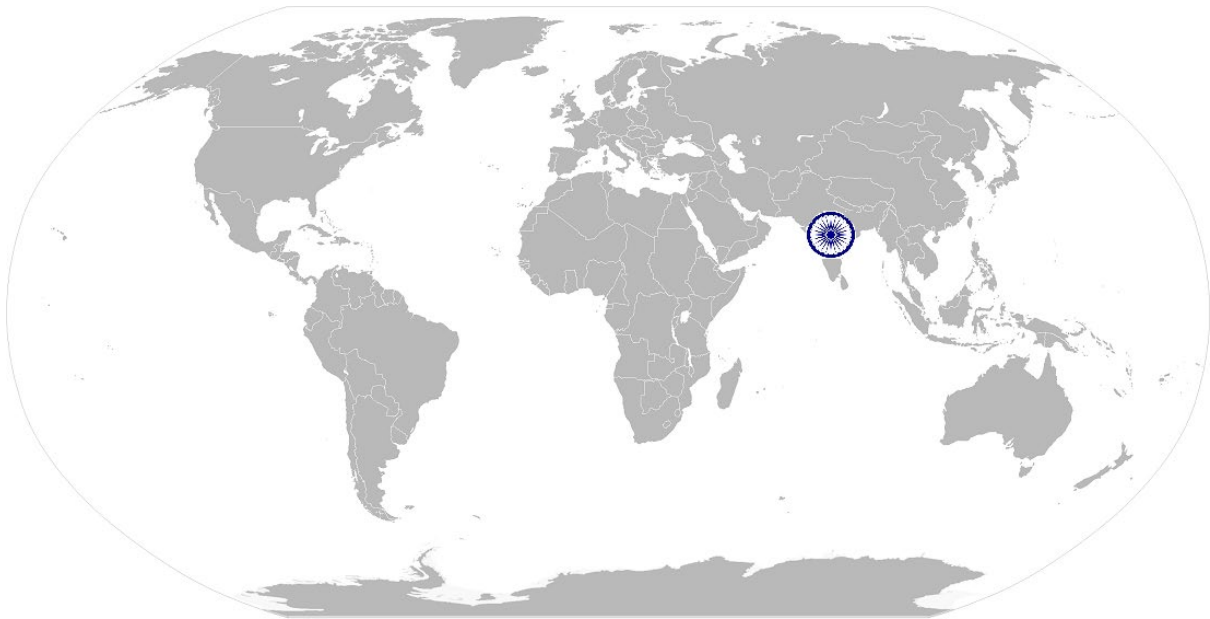
Create technical documents and manuals

NOS Version Control

NOS Code	SSC/N8238		
Credits (NSQF)	TBD	Version number	1.0
Industry	IT-ITeS	Drafted on	18/02/2019
Industry Sub-sector	Future Skills	Last reviewed on	11/03/2019
Occupation	Internet of Things	Next review date	31/12/2020



National Occupational Standard



Overview

This unit is about monitoring your working environment and making sure it meets requirements for health, safety and security.

SSC/N9003

Maintain a healthy, safe and secure working environment

National Occupational Standard

Unit Code	SSC/N9003
Unit Title (Task)	Maintain a healthy, safe and secure working environment
Description	This unit is about monitoring your working environment and making sure it meets requirements for health, safety and security.
NSQF Level	6
Scope	<p>This unit/task covers the following:</p> <ul style="list-style-type: none"> • Ensure compliance • Follow safety procedures <p>Emergency Procedures Illness, accidents, fires, other reasons to evacuate the premises, breaches of security</p>
Performance Criteria (PC) w.r.t. the Scope	
Element	Performance Criteria
Ensure compliance	<p>To be competent, the individual working on the job must be able to:</p> <p>PC1. comply with your organization's current health, safety and security policies and procedures</p> <p>PC2. report any identified breaches in health, safety, and security policies and procedures to the designated person</p> <p>PC3. identify and correct any hazards that you can deal with safely, competently and within the limits of your authority</p> <p>PC4. report any hazards that you are not competent to deal with to the relevant person in line with organizational procedures and warn other people who may be affected</p>
Follow safety procedures	<p>PC5. follow your organization's emergency procedures promptly, calmly, and efficiently</p> <p>PC6. identify and recommend opportunities for improving health, safety, and security to the designated person</p> <p>PC7. complete any health and safety records legibly and accurately</p>
Knowledge and Understanding (K)	
A. Organizational Context (Knowledge of the company/ organization and its	<p>The individual on the job needs to know and understand:</p> <p>KA1. legislative requirements and organization's procedures for health, safety and security and your role and responsibilities in relation to this</p> <p>KA2. what is meant by a hazard, including the different types of health and safety hazards that can be found in the workplace</p>

SSC/N9003

Maintain a healthy, safe and secure working environment

processes)	<p>KA3. how and when to report hazards</p> <p>KA4. limits of your responsibility for dealing with hazards</p> <p>KA5. your organization's emergency procedures for different emergency situations and the importance of following these</p> <p>KA6. the importance of maintaining high standards of health, safety and security</p> <p>KA7. implications that any non-compliance with health, safety and security may have on individuals and the organization</p>
B. Technical Knowledge	<p>The individual on the job needs to know and understand:</p> <p>KB1. different types of breaches in health, safety and security and how and when to report these</p> <p>KB2. evacuation procedures for workers and visitors</p> <p>KB3. how to summon medical assistance and the emergency services, where necessary</p> <p>KB4. how to use the health, safety and accident reporting procedures and the importance of these</p> <p>KB5. government agencies in the areas of safety, health and security and their norms and services</p> <p>KB6. how to identify and refer anomalies in data</p> <p>KB7. how to help reach agreements with colleagues</p> <p>KB8. how to keep up to date with changes, procedures and practices in your role</p>
Skills (S)	
A. Core / Generic Skills	<p>The user/individual on the job needs to know and understand how to:</p> <p>Writing Skills</p> <p>SA1. complete accurate well written work with attention to detail</p> <p>Reading Skills</p> <p>SA2. follow instructions, guidelines, procedures, rules and service level agreements</p> <p>Listening and Speaking Skills</p> <p>SA3. listen effectively and orally communicate information accurately</p> <p>Decision Making</p> <p>SA4. make decisions on suitable courses</p>

SSC/N9003

Maintain a healthy, safe and secure working environment

Plan and Organize

SA5. plan and organize your own work to meet health, safety and security requirements

Customer Centricity

SA6. build and maintain positive and effective relationships with customers

Problem Solving

SA7. apply problem solving approaches in different situations

Analytical Thinking

SA8. analyze data and activities

Critical Thinking

SA9. apply balanced judgments to different situations

Attention to Detail

SA10. check your work is complete and free from errors

SA11. get your work checked by others

Team Working

SA12. work effectively in a team environment

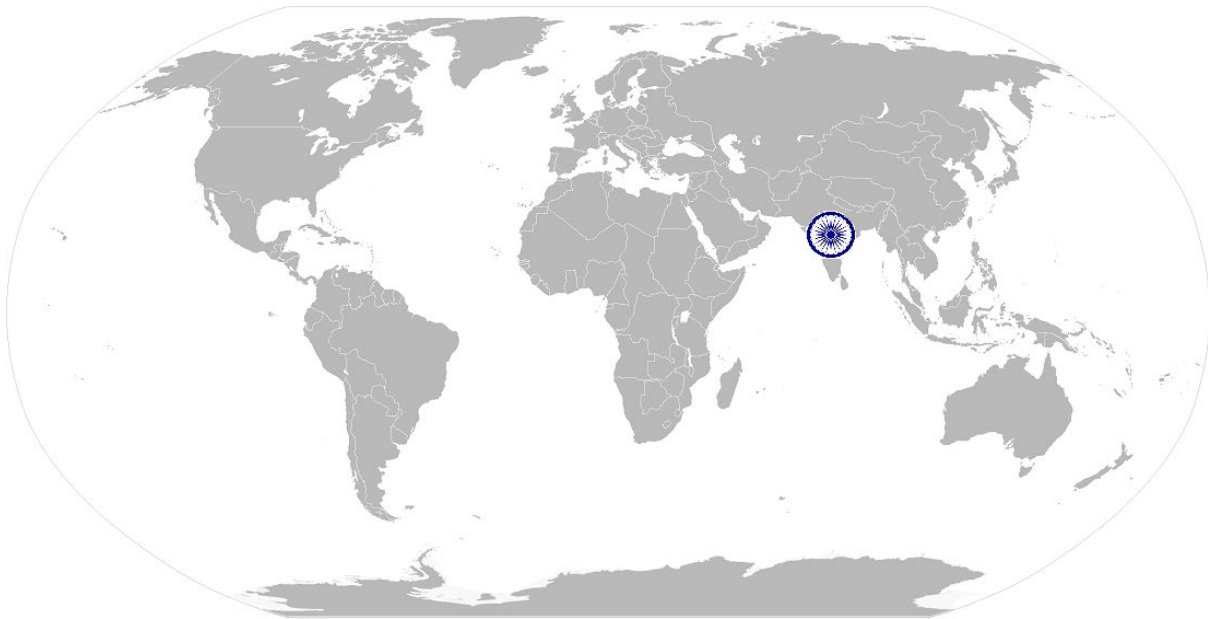


SSC/N9003

Maintain a healthy, safe and secure working environment

NOS Version Control

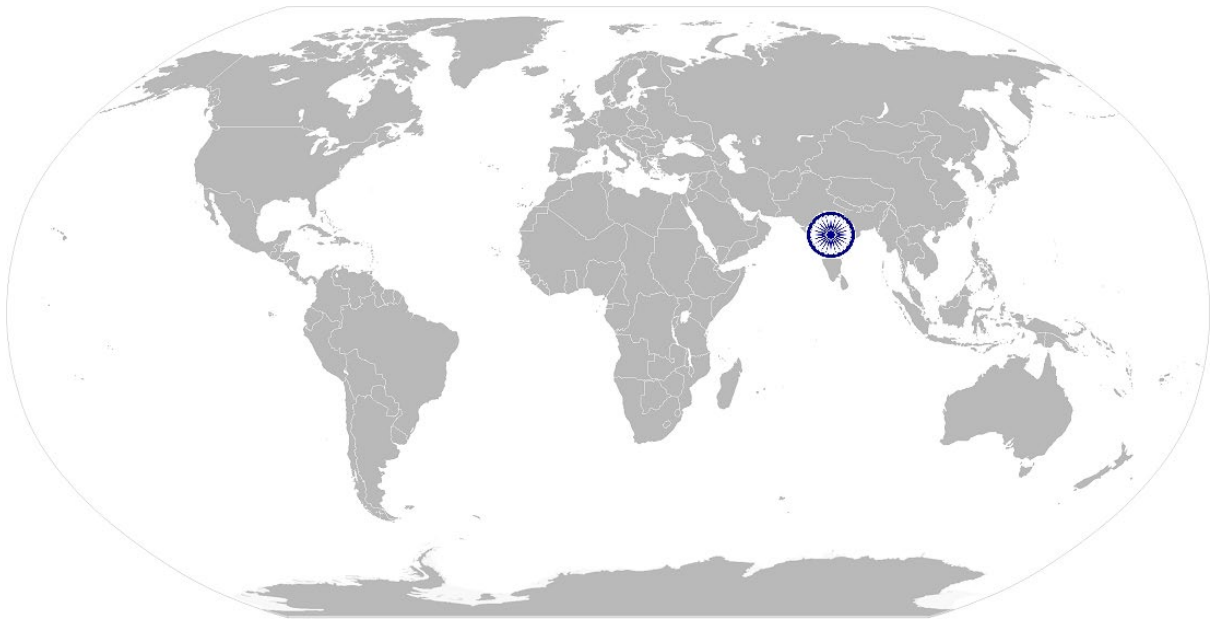
NOS Code	SSC/N9003		
Credits (NSQF)	TBD	Version number	1.0
Industry	IT-ITeS	Drafted on	18/02/2019
Industry Sub-sector	Future Skills	Last reviewed on	11/03/2019
Occupation	Internet of Things	Next review date	31/12/2020



SSC/N9004

Provide data/information in standard formats

National Occupational Standard



Overview


This unit is about providing specified data/information related to your work in templates or other standard formats.



SSC/N9004

Provide data/information in standard formats

National Occupational Standard

Unit Code	SSC/N9004
Unit Title (Task)	Provide data/information in standard formats
Description	This unit is about providing specified data/information related to your work in templates or other standard formats.
NSQF Level	6
Scope	<p>This unit/task covers the following:</p> <ul style="list-style-type: none"> Obtain information Analyze and report information <p>Data / Information Quantitative, Qualitative</p> <p>Sources Within your organization, outside your organization</p> <p>Formats Paper-based, electronic</p> 
Performance Criteria (PC) w.r.t. the Scope	
Element	Performance Criteria
Obtain information	<p>To be competent, the individual working on the job must be able to:</p> <p>PC1. establish and agree with appropriate people the data/information you need to provide, the formats in which you need to provide it, and when you need to provide it</p> <p>PC2. obtain the data/information from reliable sources</p> <p>PC3. check that the data/information is accurate, complete and up-to-date</p> <p>PC4. obtain advice or guidance from appropriate people where there are problems with the data/information</p>
Analyze and report information	<p>PC5. carry out rule-based analysis of the data/information, if required</p> <p>PC6. insert the data/information into the agreed formats</p> <p>PC7. check the accuracy of your work, involving colleagues where required</p> <p>PC8. report any unresolved anomalies in the data/information to appropriate people</p> <p>PC9. provide complete, accurate and up-to-date data/information to the appropriate people in the required formats on time</p>
Knowledge and Understanding (K)	

SSC/N9004

Provide data/information in standard formats

<p>A. Organizational Context (Knowledge of the company/ organization and its processes)</p>	<p>The individual on the job needs to know and understand:</p> <ul style="list-style-type: none"> KA1. your organization's procedures and guidelines for providing data/information in standard formats and your role and responsibilities in relation to this KA2. the knowledge management culture of your organization KA3. your organization's policies and procedures for recording and sharing information and the importance of complying with these KA4. the importance of validating data/information before use and how to do this KA5. procedures for updating data in appropriate formats and with proper validation KA6. the purpose of the crm database KA7. how to use the crm database to record and extract information KA8. the importance of having your data/information reviewed by others KA9. the scope of any data/information requirements including the level of detail required KA10. the importance of keeping within the scope of work and adhering to timescales
<p>B. Technical Knowledge</p>	<p>The individual on the job needs to know and understand:</p> <ul style="list-style-type: none"> KB1. data/information you may need to provide including the sources and how to do this KB2. templates and formats used for data/information including their purpose and how to use these KB3. different techniques used to obtain data/information and how to apply these KB4. how to carry out rule-based analysis on the data/information KB5. typical anomalies that may occur in data/information KB6. who to go to in the event of inaccurate data/information and how to report this KB7. how to use information technology effectively to input and/or extract data accurately KB8. how to validate and update data KB9. how to identify and refer anomalies in data KB10. how to store and retrieve information KB11. how to share information using standard formats and templates KB12. how to keep up to date with changes, procedures and practices in your role

SSC/N9004

Provide data/information in standard formats

Skills (S)	
A. Core / Generic Skills	<p>The user/individual on the job needs to know and understand how to:</p> <p>Writing Skills</p> <p>SA1. complete accurate well written work with attention to detail</p> <p>Reading Skills</p> <p>SA2. follow instructions, guidelines, procedures, rules and service level agreements</p> <p>Listening and Speaking Skills</p> <p>SA3. listen effectively and orally communicate information accurately</p>
	<p>B. Professional Skills</p> <p>Decision Making</p> <p>SA4. follow rule-based decision making processes</p> <p>SA5. make decisions on suitable courses</p> <p>Plan and Organize</p> <p>SA6. plan and organize your own work to achieve targets and deadlines</p> <p>Customer Centricity</p> <p>SA7. check that your own and/or your peers' work meets customer requirements</p> <p>SA8. meet and exceed customer expectations</p> <p>Problem Solving</p> <p>SA9. apply problem solving approaches in different situations</p> <p>Analytical Thinking</p> <p>SA10. configure data and disseminate relevant information to others</p> <p>Critical Thinking</p> <p>SA11. apply balanced judgments to different situations</p> <p>Attention to Detail</p> <p>SA12. check your work is complete and free from errors</p> <p>SA13. get your work checked by others</p>



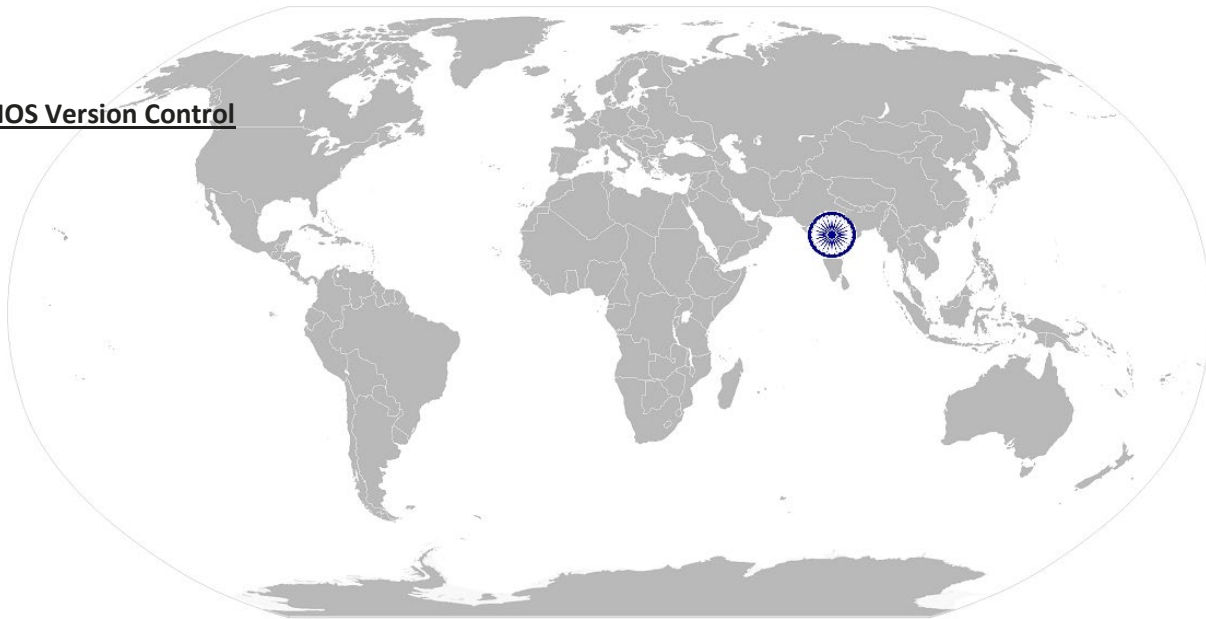
SSC/N9004

Provide data/information in standard formats

	Team Working SA14. work effectively in a team environment
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NOS Code	SSC/N9004		
Credits (NSQF)	TBD	Version number	1.0
Industry	IT-ITes	Drafted on	18/02/2019
Industry Sub-sector	Future Skills	Last reviewed on	11/03/2019
Occupation	Internet of Things	Next review date	31/12/2020

NOS Version Control



SSC/N9013

Inculcate strong work ethic in line with organizational code of conduct

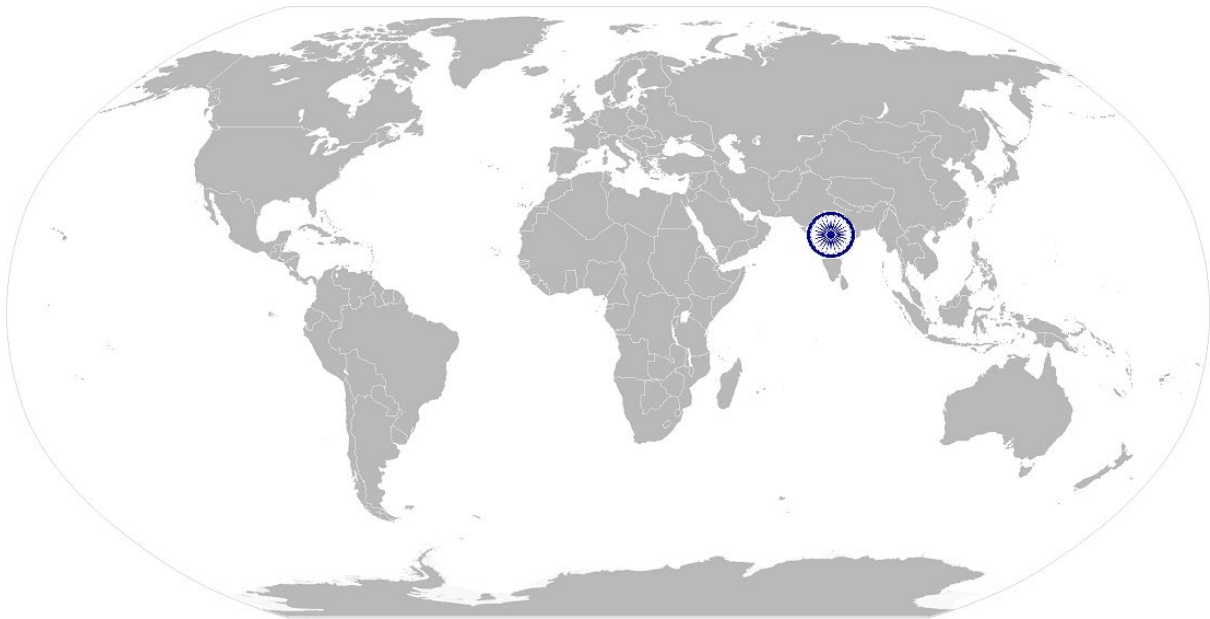


SSC/N9013

Inculcate strong work ethic in line with organizational code of conduct

Overview

This unit is about adopting a positive attitude towards work while following organizational code of conduct.



SSC/N9013

Inculcate strong work ethic in line with organizational code of conduct

National Occupational Standard

Unit Code	SSC/N9013
Unit Title (Task)	Inculcate strong work ethic in line with organizational code of conduct
Description	This unit is about adopting a positive attitude towards work while following organizational code of conduct.
NSQF Level	5
Scope	<p>This unit/task covers the following:</p> <ul style="list-style-type: none"> • Code of Conduct • Work Ethic
Performance Criteria (PC) w.r.t. the Scope	
Element	Performance Criteria
Code of Conduct	<p>To be competent, the individual working on the job must be able to:</p> <p>PC1. treat your colleagues with respect</p> <p>PC2. work in line with your company's guidelines and policies</p> <p>PC3. follow dress code as defined by the organization</p> <p>PC4. do not disclose company's confidential data outside the organization</p> <p>PC5. be sensitive and respectful to other cultures in your workspace</p> <p>PC6. refrain from using your position in the organization to gain personal benefits</p> <p>PC7. utilize company's resources efficiently</p> <p>PC8. refrain from getting into a conflict of interest scenario</p> <p>PC9. adopt meritocratic approaches towards work and refrain from nepotism or favouritism</p> <p>PC10. treat fellow colleagues equally</p> <p>PC11. keep your immediate area clean and tidy</p>
Work Ethic	<p>PC12. utilise your time efficiently</p> <p>PC13. take ownership for the activities assigned to you</p> <p>PC14. adapt to changes in work plans and be flexible without compromising on delivery quality</p> <p>PC15. assess the broader picture while performing the activities assigned to you</p> <p>PC16. meet deadlines without giving up quality</p> <p>PC17. consistently report on time to work</p> <p>PC18. analyse and review your work on a regular basis to increase your performance</p> <p>PC19. be cooperative with other employees</p> <p>PC20. prudently take risks where required</p> <p>PC21. have an open mindset to new ideas from others</p>



SSC/N9013

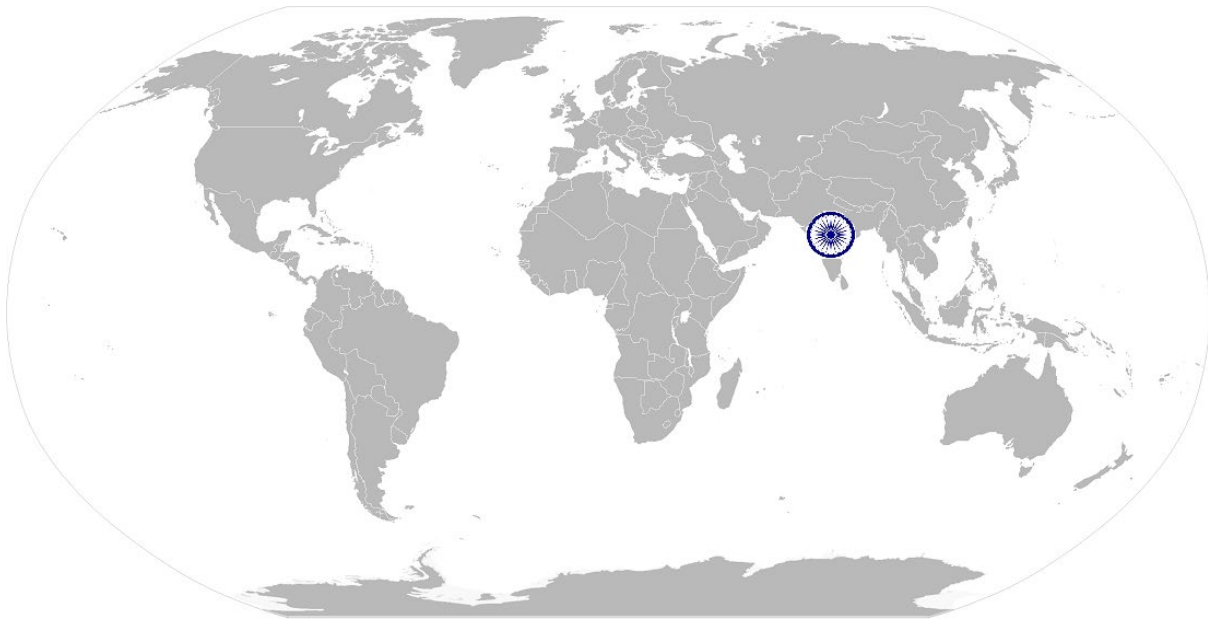
Inculcate strong work ethic in line with organizational code of conduct

Knowledge and Understanding (K)	
A. Organizational Context (Knowledge of the company/ organization and its processes)	<p>The individual on the job needs to know and understand:</p> <p>KA1. knowledge of companies policies and internal regulations</p> <p>KA2. knowledge of local issues where the organization is based in</p> <p>KA3. knowledge of the external environment of the organization, including geopolitical and industry issues</p> <p>KA4. awareness of organizational culture</p>
B. Technical Knowledge	<p>The individual on the job needs to know and understand:</p> <p>KB1. how to identify and refer anomalies in data</p> <p>KB2. how to help reach agreements with colleagues</p> <p>KB3. how to keep up to date with changes, procedures and practices in your role</p>
Skills (S)	
A. Core / Generic Skills	<p>The user/individual on the job needs to know and understand how to:</p> <p>Writing Skills</p> <p>SA1. complete accurate well written work with attention to detail</p> <p>Reading Skills</p> <p>SA2. follow instructions, guidelines, procedures, rules and service level agreements</p> <p>Listening and Speaking Skills</p> <p>SA3. listen effectively and orally communicate information accurately</p> <p>Decision Making</p> <p>SA4. make decisions on suitable courses</p> <p>Plan and Organize</p> <p>SA5. plan and organize your own work to meet health, safety and security requirements</p> <p>Customer Centricity</p> <p>SA6. build and maintain positive and effective relationships with customers</p> <p>Problem Solving</p> <p>SA7. apply problem solving approaches in different situations</p> <p>Analytical Thinking</p> <p>SA8. analyze data and activities</p>

SSC/N9013

Inculcate strong work ethic in line with organizational code of conduct

	<p>Critical Thinking SA9. apply balanced judgments to different situations</p> <p>Attention to Detail SA10. check your work is complete and free from errors SA11. get your work checked by others</p> <p>Team Working SA12. work effectively in a team environment</p>
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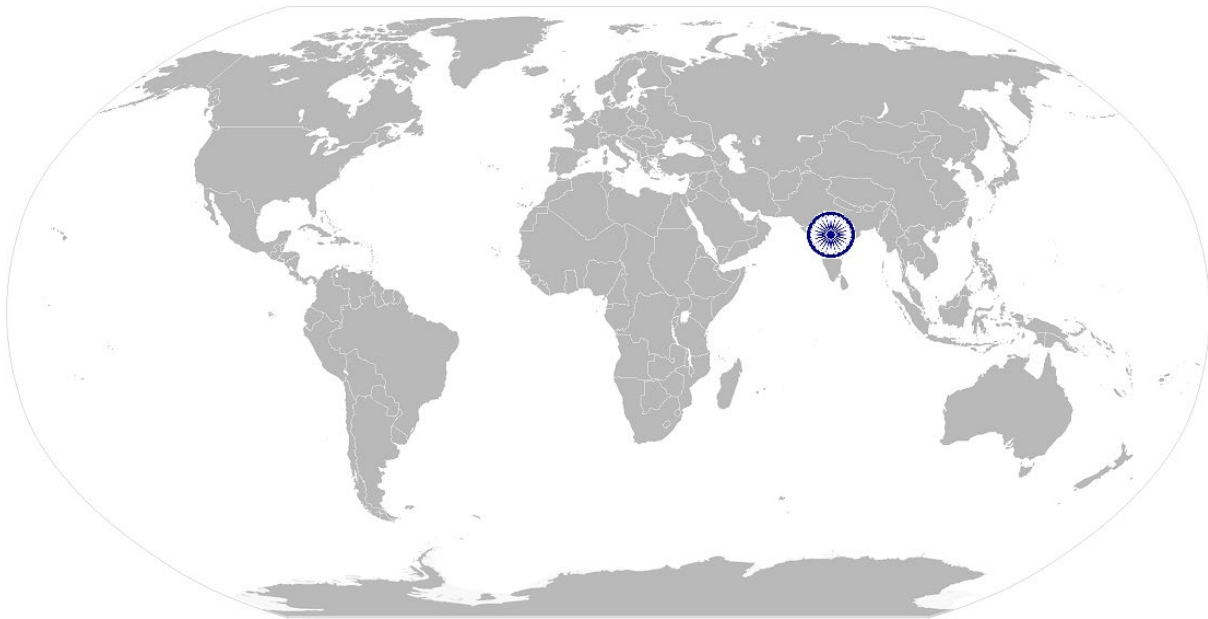


SSC/N9013

Inculcate strong work ethic in line with organizational code of conduct

NOS Version Control

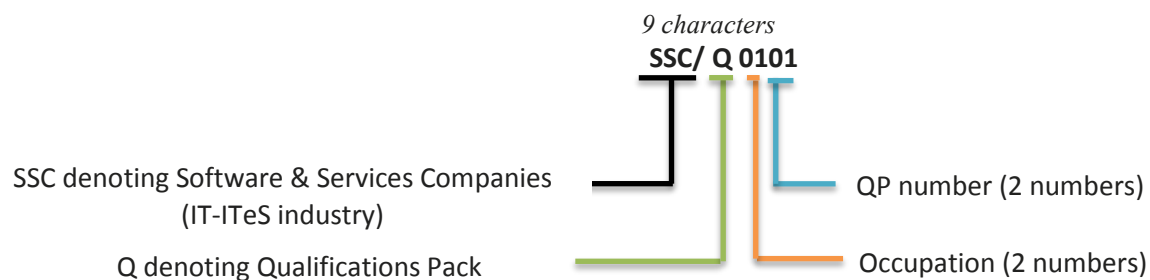
NOS Code	SSC/N9013		
Credits (NSQF)	TBD	Version number	1.0
Industry	IT-ITeS	Drafted on	18/02/2019
Industry Sub-sector	Future Skills	Last reviewed on	11/03/2019
Occupation	Internet of Things	Next review date	31/12/2020



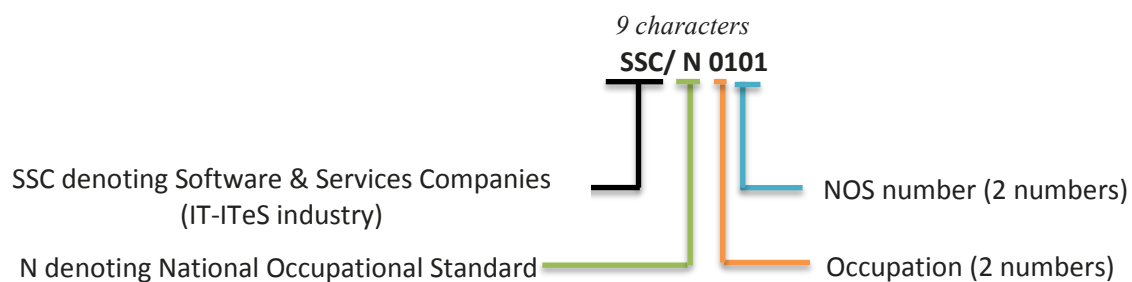
Annexure

Nomenclature for QP and NOS

Qualifications Pack



National Occupational Standard



[Back to top...](#)

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

Sequence	Description	Example
Three letters	Industry name (Software & Services Companies)	SSC
Slash	/	/
Next letter	Whether QP or NOS	N
Next two numbers	Occupation code	01
Next two numbers	OS number	01

Criteria For Assessment Of Trainees

Job Role IoT-Control Room Operator

Qualification Pack SSC/Q8209

Sector Skill Council IT-ITes

Guidelines for Assessment

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 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 this criterion.
6. To pass a QP, a trainee should score an average of 70% across generic NOS' and a minimum of 70% for each technical NOS
7. In case of *unsuccessful completion*, the trainee may seek reassessment on the Qualification Pack.

Compulsory NOS				Marks Allocation	
Total Marks: 700					
Assessment outcomes	Assessment Criteria for outcomes	Total Marks	Out Of	Theory	Skills Practical
1. SSC/N8235 Manage IoT devices and ensure regular software and firmware updates	PC1. Perform timely installation of patches and updates of solution software and firmware	100	15	4.5	10.5
	PC2. Perform over-the-air updates of devices		15	4.5	10.5
	PC3. Initialize files and tools required for Over the Air update process		10	3	7
	PC4. Perform encryption of files to secure Over the Air update process		5	1.5	3.5
	PC5. Distribute files to intended target devices		15	4.5	10.5
	PC6. Perform the update process for target devices		15	4.5	10.5
	PC7. Perform post-update activities such as activating updated code		10	3	7
	PC8. Verification that system is functioning as per specifications		15	4.5	10.5

	Total		100	30	70
2. SSC/N8236 Support command control centre operations and oversee day-to- day activities of IoT solutions	PC1. Interface all physical devices with central command centre	100	15	4.5	10.5
	PC2. Monitor unauthorized access attempts to IoT devices, customer data, and backend systems		15	4.5	10.5
	PC3. Monitor security breaches from external threats		5	1.5	3.5
	PC4. Manage controls for device and user authentication and fraud detection		5	1.5	3.5
	PC5. Continuously monitor device usage and performance		15	4.5	10.5
	PC6. Detect and respond to unusual device behaviour in near real-time		5	1.5	3.5
	PC7. Report abnormal behaviour to relevant stakeholders		5	1.5	3.5
	PC8. Perform remote diagnosis of IoT assets using technologies such as AR/VR		5	1.5	3.5
	PC9. Perform remote repair of IoT assets using technologies such as AR/VR		5	1.5	3.5
	PC10. Manage event and ticket management related activities		10	3	7
	PC11. Ensure round the clock service reliability		5	1.5	3.5
	PC12. Prepare reports based on data and insights generated		5	1.5	3.5
	PC13. Share reports and insights with relevant stakeholders		5	1.5	3.5
	Total		100	30	70
2. SSC/N8238 Create technical documents and manuals	PC1. Identify the purpose and the scope of the activity for which technical documentation is to be produced	100	20	6	14
	PC2. Obtain information for the technical document from relevant sources and stakeholders		15	4.5	10.5
	PC3. Draft technical document ensuring that content is concise, complete and easy to consume		15	4.5	10.5
	PC4. Review technical document content with relevant stakeholders and document owners		10	3	7
	PC5. Ensure that technical document is formatted and designed as per specifications		10	3	7
	PC6. Transfer technical document to relevant stakeholders for sign-off and publishing		10	3	7

	PC7. Continuously review and update technical document		20	6	14
	Total		100	30	70
4. SSC/N9003 Maintain a healthy, safe and secure working environment	PC1. Comply with your organization's current health, safety and security policies and procedures	100	20	10	10
	PC2. Report any identified breaches in health, safety, and security policies and procedures to the designated person		10	0	10
	PC3. Identify and correct any hazards that you can deal with safely, competently and within the limits of your authority		20	10	10
	PC4. Report any hazards that you are not competent to deal with to the relevant person in line with organizational procedures and warn other people who may be affected		10	0	10
	PC5. Follow your organization's emergency procedures promptly, calmly, and efficiently		20	10	10
	PC6. Identify and recommend opportunities for improving health, safety, and security to the designated person		10	0	10
	PC7. Complete any health and safety records legibly and accurately		10	0	10
	Total		100	30	70
6. SSC/N9004 Provide data/information in standard formats	PC1. Establish and agree with appropriate people the data/information you need to provide, the formats in which you need to provide it, and when you need to provide it	100	12.5	12.5	0
	PC2. Obtain the data/information from reliable sources		12.5	0	12.5
	PC3. Check that the data/information is accurate, complete and up-to-date		12.5	6.25	6.25
	PC4. Obtain advice or guidance from appropriate people where there are problems with the data/information		6.25	0	6.25
	PC5. Carry out rule-based analysis of the data/information, if required		25	0	25
	PC6. Insert the data/information into the agreed formats		12.5	0	12.5
	PC7. Check the accuracy of your work, involving colleagues where required		6.25	0	6.25
	PC8. Report any unresolved anomalies in the data/information to appropriate people		6.25	6.25	0

	PC9. Provide complete, accurate and up-to-date data/information to the appropriate people in the required formats on time		6.25	0	6.25
	Total		100	25	75
7. SSC/N9013 Inculcate strong work ethic in line with organizational code of conduct	PC1. Treat your colleagues with respect		4	1	3
	PC2. Work in line with your company's guidelines and policies		9	2	7
	PC3. Follow dress code as defined by the organization		4	1	3
	PC4. Do not disclose company's confidential data outside the organization		10	3	7
	PC5. Be sensitive and respectful to other cultures in your workspace		5	2	3
	PC6. Refrain from using your position in the organization to gain personal benefits		5	2	3
	PC7. Utilize company's resources efficiently		5	2	3
	PC8. Refrain from getting into a conflict of interest scenario		5	2	3
	PC9. Adopt meritocratic approaches towards work and refrain from nepotism or favouritism		3	1	2
	PC10. Treat fellow colleagues equally		5	2	3
	PC11. Keep you immediate area clean and tidy		4	1	3
	PC12. Utilise your time efficiently		4	1	3
	PC13. Take ownership for the activities assigned to you		4	1	3
	PC14. Adapt to changes in work plans and be flexible without compromising on delivery quality		4	1	3
	PC15. Assess the broader picture while performing the activities assigned to you		5	2	3
	PC16. Meet deadlines without giving up quality		4	1	3
	PC17. Consistently report on time to work		4	1	3
	PC18. Analyse and review your work on a regular basis to increase your performance		4	1	3
	PC19. Be cooperative with other employees		4	1	3
	PC20. Prudently take risks where required		4	1	3



	PC21. Have an open mindset to new ideas from others		4	1	3
	Total		100	30	70