



# DevOps Engineer

QP Code: SSC/Q8112

Version: 2.0

NSQF Level: 6

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## SSC/Q8112: DevOps Engineer

### Brief Job Description

Individuals at this job are responsible for managing production systems. S/he works with software developers, IT operations teams and other staff to oversee code release and deployment.

### Personal Attributes

An AI - Devops Engineer needs to be well organized and have excellent communication skills to be a bridge between siloed teams and work towards a common goal. S/he also needs to be flexible to work for long hours to ensure continuity in operations.

### Applicable National Occupational Standards (NOS)

#### Compulsory NOS:

1. [SSC/N8120: Develop tools, processes and mechanisms for continuous integration and delivery](#)
2. [SSC/N9001: Manage your work to meet requirements](#)
3. [SSC/N9002: Work effectively with colleagues](#)
4. [SSC/N9004: Provide data/information in standard formats](#)
5. [SSC/N9006: Build and Maintain relationships in a Workplace](#)
6. [SSC/N9010: Convince others to take appropriate action in different situations](#)
7. [SSC/N9014: Maintain an inclusive, environmentally sustainable workplace](#)

### Qualification Pack (QP) Parameters

<b>Sector</b>	IT-ITeS
<b>Sub-Sector</b>	Future Skills
<b>Occupation</b>	Artificial Intelligence and Big Data Analytics
<b>Country</b>	India
<b>NSQF Level</b>	6
<b>Aligned to NCO/ISCO/ISIC Code</b>	NCO-2015/251.NIL



<b>Minimum Educational Qualification &amp; Experience</b>	Graduate (Engineering/Technology/Statistics/Mathematics/Computer Science) with 2-3 Years of experience Recommended
<b>Minimum Level of Education for Training in School</b>	
<b>Pre-Requisite License or Training</b>	NA
<b>Minimum Job Entry Age</b>	21 Years
<b>Last Reviewed On</b>	14/04/2020
<b>Next Review Date</b>	14/04/2025
<b>Deactivation Date</b>	14/04/2025
<b>NSQC Approval Date</b>	
<b>Version</b>	2.0

## SSC/N8120: Develop tools, processes and mechanisms for continuous integration and delivery

### Description

This unit is about managing the administration of production systems and operations to assist continuous delivery and integration.

### Scope

This unit/task covers the following:

- Deploy production systems
- Monitor performance
- Continuous Delivery Phases: component, subsystem, system, production

### Elements and Performance Criteria

#### *Deploy production systems*

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

- PC1.** define continuous delivery and integration strategies
- PC2.** design and develop staging environments before production
- PC3.** deploy, automate and maintain production systems
- PC4.** evaluate new technology options and vendor products
- PC5.** handle build, release and configuration management of production systems
- PC6.** manage and provision data centers through machine-readable definition files
- PC7.** define and execute continuous testing and automated QA processes

#### *Monitor performance*

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

- PC8.** troubleshoot and solve system issues across platform and application domains
- PC9.** ensure availability, performance and scalability of production systems

### Knowledge and Understanding (KU)

The individual on the job needs to know and understand:

- KU1.** organizational policies, procedures and guidelines which relate to devops
- KU2.** organizational policies and procedures for sharing data
- KU3.** who to involve when managing administration of production systems and operations
- KU4.** different continuous delivery and deployment models
- KU5.** how to design and develop a staging environment
- KU6.** infrastructure as code processes
- KU7.** different configuration management tools such as Puppet, Chef
- KU8.** different continuous integration tools such as Jenkins, Travis CI, Bamboo

- KU9.** different application release automation tools such as BuildMaster, Puppet, FlexDeploy
- KU10.** different build automation tools such as Gradle, Jenkins
- KU11.** different application lifecycle management tools such as GitLab, JIRA
- KU12.** different methodological approaches to testing such as unit and integration testing
- KU13.** different test and QA automation tools such as selenium
- KU14.** how to work on various operating systems such as linux, ubuntu, or windows

### **Generic Skills (GS)**

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

- GS1.** make decisions on suitable courses
- GS2.** plan and organize your own work to achieve targets and deadlines
- GS3.** refer anomalies to the supervisor
- GS4.** check your work is complete and free from errors

## Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<i>Deploy production systems</i>	<b>24</b>	<b>56</b>	-	-
<b>PC1.</b> define continuous delivery and integration strategies	5	10	-	-
<b>PC2.</b> design and develop staging environments before production	3	7	-	-
<b>PC3.</b> deploy, automate and maintain production systems	5	10	-	-
<b>PC4.</b> evaluate new technology options and vendor products	2	3	-	-
<b>PC5.</b> handle build, release and configuration management of production systems	5	10	-	-
<b>PC6.</b> manage and provision data centers through machine-readable definition files	2	8	-	-
<b>PC7.</b> define and execute continuous testing and automated QA processes	2	8	-	-
<i>Monitor performance</i>	<b>6</b>	<b>14</b>	-	-
<b>PC8.</b> troubleshoot and solve system issues across platform and application domains	3	7	-	-
<b>PC9.</b> ensure availability, performance and scalability of production systems	3	7	-	-
<b>NOS Total</b>	<b>30</b>	<b>70</b>	-	-

## National Occupational Standards (NOS) Parameters

<b>NOS Code</b>	SSC/N8120
<b>NOS Name</b>	Develop tools, processes and mechanisms for continuous integration and delivery
<b>Sector</b>	IT-ITeS
<b>Sub-Sector</b>	Future Skills
<b>Occupation</b>	Artificial Intelligence & Big Data Analytics
<b>NSQF Level</b>	7
<b>Credits</b>	TBD
<b>Version</b>	1.0
<b>Last Reviewed Date</b>	17/10/2018
<b>Next Review Date</b>	11/03/2020
<b>NSQF Clearance Date</b>	22/08/2019



## SSC/N9001: Manage your work to meet requirements

### Description

This unit is about planning and organizing your work in order to complete it to the required standards on time.

### Scope

The scope covers the following :

- Utilise resources
- Ensure compliance

### Elements and Performance Criteria

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

- PC1.** establish and agree your work requirements with appropriate people
- PC2.** keep the immediate work area clean and tidy
- PC3.** utilize time effectively
- PC4.** use resources correctly and efficiently
- PC5.** treat confidential information correctly
- PC6.** work in line with the organization's policies and procedures
- PC7.** work within the limits of the job role
- PC8.** obtain guidance from appropriate people, where necessary
- PC9.** ensure the work meets the agreed requirements

### Knowledge and Understanding (KU)

The individual on the job needs to know and understand:

- KU1.** the priorities for the area of work
- KU2.** role, responsibilities, limits of the responsibilities and whom these must be agreed with, as well as when to involve others
- KU3.** the importance of having a tidy work area and how to do this
- KU4.** how to prioritize your workload according to urgency and importance and the benefits of this
- KU5.** the organizations policies and procedures, especially for dealing with confidential information, and the importance of complying with these
- KU6.** the purpose of keeping others updated with the progress of the work
- KU7.** the purpose and value of being flexible and adapting work plans to reflect change
- KU8.** the importance of completing work accurately and how to do this
- KU9.** appropriate timescales for completing the work and the implications of not meeting these for self and the organization
- KU10.** resources needed for the work and how to obtain and use these

## Generic Skills (GS)

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

- GS1.** read instructions, guidelines, procedures, rules and service level agreements
- GS2.** ask for clarification and advice from line managers
- GS3.** communicate orally with colleagues
- GS4.** make decisions on suitable courses
- GS5.** plan and organize the work to achieve targets and deadlines
- GS6.** agree to objectives and work requirements
- GS7.** deliver consistent and reliable service to customers
- GS8.** check that the work meets customer requirements
- GS9.** refer anomalies to the line manager
- GS10.** seek clarification on problems from others
- GS11.** provide relevant information to others
- GS12.** analyze needs, requirements and dependencies in order to meet the work requirements
- GS13.** apply judgments to different situations
- GS14.** ensure the work is complete and free from errors
- GS15.** get the work checked by peers
- GS16.** work effectively in a team environment
- GS17.** use information technology effectively, to input and/or extract data accurately
- GS18.** identify and refer anomalies in data
- GS19.** store and retrieve information
- GS20.** keep up to date with changes, procedures and practices in the role

## Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
	25	75	-	-
<b>PC1.</b> establish and agree your work requirements with appropriate people	-	6.25	-	-
<b>PC2.</b> keep the immediate work area clean and tidy	6.25	6.25	-	-
<b>PC3.</b> utilize time effectively	6.25	6.25	-	-
<b>PC4.</b> use resources correctly and efficiently	6.25	12.5	-	-
<b>PC5.</b> treat confidential information correctly	-	6.25	-	-
<b>PC6.</b> work in line with the organization's policies and procedures	-	12.5	-	-
<b>PC7.</b> work within the limits of the job role	-	6.25	-	-
<b>PC8.</b> obtain guidance from appropriate people, where necessary	-	6.25	-	-
<b>PC9.</b> ensure the work meets the agreed requirements	6.25	12.5	-	-
<b>NOS Total</b>	<b>25</b>	<b>75</b>	-	-

## National Occupational Standards (NOS) Parameters

<b>NOS Code</b>	SSC/N9001
<b>NOS Name</b>	Manage your work to meet requirements
<b>Sector</b>	IT-ITeS
<b>Sub-Sector</b>	IT Services, Business Process Management, Engineering R&D, Software Product Development, IT Support Services, Software Products, Future Skills
<b>Occupation</b>	Generic
<b>NSQF Level</b>	4
<b>Credits</b>	TBD
<b>Version</b>	2.0
<b>Last Reviewed Date</b>	NA
<b>Next Review Date</b>	31/03/2025
<b>NSQC Clearance Date</b>	

## SSC/N9002: Work effectively with colleagues

### Description

This unit is about working effectively with colleagues, either in your own work group or in other work groups within your organization.

### Scope

The scope covers the following :

- Communicate with colleagues
- Show respect

### Elements and Performance Criteria

#### *Communicate with colleagues*

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

- PC1.** communicate with colleagues clearly, concisely and accurately
- PC2.** work with colleagues to integrate the work effectively with theirs
- PC3.** pass on essential information to colleagues in line with organizational requirements

#### *Show respect*

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

- PC4.** work in ways that show respect for colleagues
- PC5.** carry out commitments one has made to colleagues
- PC6.** identify any problems while working with colleagues and take the initiative to solve these problems
- PC7.** follow the organization's policies and procedures for working with colleagues

### Knowledge and Understanding (KU)

The individual on the job needs to know and understand:

- KU1.** the organization's policies and procedures for working with colleagues and the role and responsibilities in relation to this
- KU2.** the importance of effective communication and establishing good working relationships with colleagues
- KU3.** different methods of communication and the circumstances in which it is appropriate to use these
- KU4.** benefits of developing productive working relationships with colleagues
- KU5.** the importance of creating an environment of trust and mutual respect in an environment where there is no authority over those working with
- KU6.** where you do not meet the commitments, the implications this will have on individuals and the organization
- KU7.** different types of information that colleagues might need and the importance of providing this information when it is required

**KU8.** the importance of understanding problems from the colleagues perspective and how to provide support, where necessary, to resolve these

## Generic Skills (GS)

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

- GS1.** complete accurate, well written work with attention to detail
- GS2.** communicate effectively with colleagues in writing
- GS3.** read instructions, guidelines, procedures, rules and service level agreements
- GS4.** make decisions on suitable courses
- GS5.** ask for clarification and advice from line managers
- GS6.** help reach agreements with colleagues
- GS7.** plan and organize the work to achieve targets and deadlines
- GS8.** ensure the work meets customer requirements, and deliver consistent and reliable service
- GS9.** apply problem solving approaches in different situations
- GS10.** apply balanced judgments to different situations
- GS11.** ensure the work is complete and free from errors
- GS12.** ensure the work is complete and free from errors
- GS13.** work effectively with colleagues and other teams in a team environment
- GS14.** treat other cultures with respect
- GS15.** identify and refer anomalies
- GS16.** keep up to date with changes, procedures and practices in the role

## Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<i>Communicate with colleagues</i>	<b>18</b>	<b>30</b>	-	-
<b>PC1.</b> communicate with colleagues clearly, concisely and accurately	-	20	-	-
<b>PC2.</b> work with colleagues to integrate the work effectively with theirs	-	10	-	-
<b>PC3.</b> pass on essential information to colleagues in line with organizational requirements	18	-	-	-
<i>Show respect</i>	<b>2</b>	<b>50</b>	-	-
<b>PC4.</b> work in ways that show respect for colleagues	2	20	-	-
<b>PC5.</b> carry out commitments one has made to colleagues	-	10	-	-
<b>PC6.</b> identify any problems while working with colleagues and take the initiative to solve these problems	-	10	-	-
<b>PC7.</b> follow the organization's policies and procedures for working with colleagues	-	10	-	-
<b>NOS Total</b>	<b>20</b>	<b>80</b>	-	-

## National Occupational Standards (NOS) Parameters

<b>NOS Code</b>	SSC/N9002
<b>NOS Name</b>	Work effectively with colleagues
<b>Sector</b>	IT-ITeS
<b>Sub-Sector</b>	IT Services, Business Process Management, Engineering R&D, Software Product Development, IT Support Services, Software Products, Future Skills
<b>Occupation</b>	Generic
<b>NSQF Level</b>	4
<b>Credits</b>	TBD
<b>Version</b>	2.0
<b>Last Reviewed Date</b>	NA
<b>Next Review Date</b>	31/03/2025
<b>NSQC Clearance Date</b>	



## SSC/N9004: 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.

### Scope

The scope covers the following :

- Obtain information
- Analyze and report information

### Elements and Performance Criteria

#### *Obtain information*

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

- 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
- PC2.** obtain the data/information from reliable sources
- PC3.** check that the obtained data/information is accurate, complete and up-to-date
- PC4.** obtain advice or guidance from appropriate people where there are problems with the data/information

#### *Analyze and report information*

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

- PC5.** carry out rule-based analysis of the data/information, if required
- PC6.** insert the data/information into the agreed formats
- PC7.** report any unresolved anomalies in the data/ information to appropriate people
- PC8.** provide complete, accurate and up-to-date data/information to the appropriate people in the required formats on time

### Knowledge and Understanding (KU)

The individual on the job needs to know and understand:

- KU1.** the organization's procedures and guidelines for providing data/information in standard formats and the role and responsibilities in relation to this
- KU2.** the knowledge management culture of the organization
- KU3.** the organization's policies and procedures for recording and sharing information and the importance of complying with these
- KU4.** the importance of validating data/information before use and how to do this
- KU5.** procedures for updating data in appropriate formats and with proper validation
- KU6.** the purpose of the CRM database
- KU7.** how to use the CRM database to record and extract information

- KU8.** the importance of having data/information reviewed by others
- KU9.** the scope of any data/information requirements including the level of detail required
- KU10.** the importance of keeping within the scope of work and adhering to timescales
- KU11.** data/information one may need to provide including the sources and how to do this
- KU12.** templates and formats used for data/information including their purpose and how to use these
- KU13.** different techniques used to obtain data/information and how to apply these
- KU14.** rule-based analysis on the data/information
- KU15.** typical anomalies that may occur in data/information
- KU16.** whom to go to in the event of inaccurate data/information and how to report this

### Generic Skills (GS)

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

- GS1.** complete accurate, well written work with attention to detail
- GS2.** read instructions, guidelines, procedures, rules and service level agreements
- GS3.** listen effectively and orally communicate information accurately
- GS4.** follow rule-based decision-making processes
- GS5.** make decisions on suitable courses of action
- GS6.** plan and organize the work to achieve targets and deadlines
- GS7.** check the work meets customer requirements and exceed customer expectations
- GS8.** apply problem solving approaches in different situations
- GS9.** configure data and disseminate relevant information to others
- GS10.** apply balanced judgments to different situations
- GS11.** use information technology effectively, to input and/or extract data accurately
- GS12.** validate and update data
- GS13.** store and retrieve information

## Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<i>Obtain information</i>	<b>18.75</b>	<b>31.25</b>	-	-
<b>PC1.</b> 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	12.5	-	-	-
<b>PC2.</b> obtain the data/information from reliable sources	-	12.5	-	-
<b>PC3.</b> check that the obtained data/information is accurate, complete and up-to-date	6.25	6.25	-	-
<b>PC4.</b> obtain advice or guidance from appropriate people where there are problems with the data/information	-	12.5	-	-
<i>Analyze and report information</i>	<b>6.25</b>	<b>43.75</b>	-	-
<b>PC5.</b> carry out rule-based analysis of the data/information, if required	-	25	-	-
<b>PC6.</b> insert the data/information into the agreed formats	-	12.5	-	-
<b>PC7.</b> report any unresolved anomalies in the data/ information to appropriate people	6.25	-	-	-
<b>PC8.</b> provide complete, accurate and up-to-date data/information to the appropriate people in the required formats on time	-	6.25	-	-
<b>NOS Total</b>	<b>25</b>	<b>75</b>	-	-

## National Occupational Standards (NOS) Parameters

<b>NOS Code</b>	SSC/N9004
<b>NOS Name</b>	Provide data/information in standard formats
<b>Sector</b>	IT-ITeS
<b>Sub-Sector</b>	IT Services, Business Process Management, Engineering R&D, Software Product Development, IT Support Services, Software Products, Future Skills
<b>Occupation</b>	Generic
<b>NSQF Level</b>	4
<b>Credits</b>	TBD
<b>Version</b>	2.0
<b>Last Reviewed Date</b>	NA
<b>Next Review Date</b>	31/03/2025
<b>NSQC Clearance Date</b>	

## SSC/N9006: Build and Maintain relationships in a Workplace

### Description

This unit is about building and maintaining constructive relationships at the workplace.

### Scope

The scope covers the following :

- This unit/task covers the following: Build relationships, Maintain relationships
- Appropriate people: line manager, members of the team/department, members from other teams/department

### Elements and Performance Criteria

#### *Build relationships*

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

- PC1.** build rapport with appropriate people at the workplace
- PC2.** develop new professional relationships
- PC3.** build alliances to establish mutually beneficial working arrangements
- PC4.** foster an environment where others feel respected
- PC5.** identify and engage a diverse range of influential contacts

#### *Maintain relationships*

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

- PC6.** obtain guidance from appropriate people, where necessary
- PC7.** attentively listen to ideas and give constructive feedback
- PC8.** promptly resolve conflicts between team members
- PC9.** work with colleagues to deliver shared goals
- PC10.** recognize the contributions made by your colleagues

### Knowledge and Understanding (KU)

The individual on the job needs to know and understand:

- KU1.** organizational policies and procedures for building relationships and their role and responsibilities in relation to this
- KU2.** training programs to enable the development of relevant behavioural competencies
- KU3.** the importance of creating an environment of trust and mutual respect in the organisation
- KU4.** the importance of effective communication in developing productive working relationships with colleagues
- KU5.** training programs to enable the development of relevant behavioural competencies

### Generic Skills (GS)

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

- GS1.** ask for clarification and advice from line managers
- GS2.** work effectively in a team environment

## Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<i>Build relationships</i>	<b>17</b>	<b>33</b>	-	-
<b>PC1.</b> build rapport with appropriate people at the workplace	3	7	-	-
<b>PC2.</b> develop new professional relationships	3	7	-	-
<b>PC3.</b> build alliances to establish mutually beneficial working arrangements	3	7	-	-
<b>PC4.</b> foster an environment where others feel respected	4	6	-	-
<b>PC5.</b> identify and engage a diverse range of influential contacts	4	6	-	-
<i>Maintain relationships</i>	<b>13</b>	<b>37</b>	-	-
<b>PC6.</b> obtain guidance from appropriate people, where necessary	3	7	-	-
<b>PC7.</b> attentively listen to ideas and give constructive feedback	3	7	-	-
<b>PC8.</b> promptly resolve conflicts between team members	2	8	-	-
<b>PC9.</b> work with colleagues to deliver shared goals	2	8	-	-
<b>PC10.</b> recognize the contributions made by your colleagues	3	7	-	-
<b>NOS Total</b>	<b>30</b>	<b>70</b>	-	-

## National Occupational Standards (NOS) Parameters

<b>NOS Code</b>	SSC/N9006
<b>NOS Name</b>	Build and Maintain relationships in a Workplace
<b>Sector</b>	IT-ITeS
<b>Sub-Sector</b>	Future Skills
<b>Occupation</b>	Artificial Intelligence & Big Data Analytics
<b>NSQF Level</b>	6
<b>Credits</b>	TBD
<b>Version</b>	3.0
<b>Last Reviewed Date</b>	NA
<b>Next Review Date</b>	31/03/2025
<b>NSQC Clearance Date</b>	



## SSC/N9010: Convince others to take appropriate action in different situations

### Description

This unit is about convincing others to take appropriate action in different situations.

### Scope

The scope covers the following :

- This unit/task covers the following: Define needs, Persuade others
- Range: Appropriate people such as line manager, members of the team/department, members from other teams / departments

### Elements and Performance Criteria

#### *Define needs*

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

- PC1.** gather needs of concerned people
- PC2.** adapt arguments to consider diverse needs

#### *Persuade others*

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

- PC3.** use small wins as milestones to gain support for ideas
- PC4.** persuade with the help of concrete examples or evidences
- PC5.** take defined steps to reach a consensus on the course of action

### Knowledge and Understanding (KU)

The individual on the job needs to know and understand:

- KU1.** organizational policies and procedures for persuading people and their role and responsibilities in relation to this
- KU2.** types of information that people might need and the importance of providing this information when it is required
- KU3.** methods of communication and the circumstances in which it is appropriate to use these

### Generic Skills (GS)

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

- GS1.** ask for clarification and advice from appropriate people
- GS2.** listen effectively and orally communicate information accurately
- GS3.** make a decision on a suitable course of action
- GS4.** apply balanced judgments to different situations

## Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<i>Define needs</i>	2	25	-	-
<b>PC1.</b> gather needs of concerned people	-	10	-	-
<b>PC2.</b> adapt arguments to consider diverse needs	2	15	-	-
<i>Persuade others</i>	<b>28</b>	<b>45</b>	-	-
<b>PC3.</b> use small wins as milestones to gain support for ideas	8	15	-	-
<b>PC4.</b> persuade with the help of concrete examples or evidences	10	15	-	-
<b>PC5.</b> take defined steps to reach a consensus on the course of action	10	15	-	-
<b>NOS Total</b>	<b>30</b>	<b>70</b>	-	-

## National Occupational Standards (NOS) Parameters

<b>NOS Code</b>	SSC/N9010
<b>NOS Name</b>	Convince others to take appropriate action in different situations
<b>Sector</b>	IT-ITeS
<b>Sub-Sector</b>	Future Skills
<b>Occupation</b>	Artificial Intelligence & Big Data Analytics
<b>NSQF Level</b>	6
<b>Credits</b>	TBD
<b>Version</b>	2.0
<b>Last Reviewed Date</b>	NA
<b>Next Review Date</b>	31/03/2025
<b>NSQC Clearance Date</b>	

## SSC/N9014: Maintain an inclusive, environmentally sustainable workplace

### Description

The unit is about implementing and improving diversity equality and inclusion in a sustainable and environment friendly workplace.

### Scope

The scope covers the following :

- The scope covers the following: Enrich policies to respect diversity, Reinforce practices/regulations/policies to promote and improve equity (equality)/inclusivity, Emphasize sustainable environmental practices

### Elements and Performance Criteria

#### *Sustainable Practices*

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

- PC1.** optimize usage of electricity/energy, materials, and water in various asks / activities / processes and plan the implementation of energy efficient systems in a phased manner
- PC2.** segregate recyclable, non-recyclable and hazardous waste generated for disposal or efficient waste management

#### *Respect diversity and strengthen practices to promote equity (equality)/inclusivity*

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

- PC3.** understand the diversity policy of the organization and use internal & external communication to colleagues to improve
- PC4.** comply with PwD inclusive policies for an adaptable and equitable work environment
- PC5.** improve through specifically designed recruitment practices, PwD friendly infrastructure, job roles, etc.
- PC6.** use and advocate for appropriate verbal/nonverbal communication, schemes and benefits of PwD.

### Knowledge and Understanding (KU)

The individual on the job needs to know and understand:

- KU1.** the organization's policies and procedures about gender inclusivity, equality and sustainability while working with colleagues and your role and responsibilities in relation to this
- KU2.** inclusive tools and practices of communication to acknowledge/validate, share and promote the cause of gender parity at workplace. For example - supporting women with mentorship programs, speaking out against discriminatory practices or harassment
- KU3.** the concept of gender, gender equality and gender discrimination, and all forms of gender discrimination, violence and inequality, including the current and historical causes of gender inequality in the workplace



- KU4.** how to maintain and provide a conducive work environment that is free from any harassment. facilities and amenities to PwD to perform and excel in their role
- KU5.** organization's redressal mechanisms (like the POSH committee) to address harassment and bias at the workplace, with awareness of prevalent legislations against bias and sexual harassment
- KU6.** initiatives towards efficient use of natural resources and energy, reduction and prevention of pollution and promoting waste avoidance and recycling measures in line with internationally disseminated technologies and practices
- KU7.** all about various energy options including renewable and non-renewable with their environmental impacts, health issues, usage, safety and energy security
- KU8.** implications that any non-compliance with electricity and energy may have on individuals and the organization
- KU9.** the organization's electricity first aid emergency procedures
- KU10.** how to monitor, measure and report performance of environmental conservation
- KU11.** different types of electricity accidents, safety and security and how and when to report these
- KU12.** how to use the electricity/energy safety, accident reporting, emergency procedures and the importance of these

## Generic Skills (GS)

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

- GS1.** read PwD instructions, guidelines, procedures, diversity policies/acts, rules and service level agreements
- GS2.** be aware of one's own gender identity and gender role and respectful of the gender performances of others
- GS3.** organize team building or sensitization workshops to address gender biases, stereotypes and potentially blind spots
- GS4.** clarify personal norms and values related to energy production and usage as well as to reflect and evaluate their own energy usage in terms of efficiency and sufficiency
- GS5.** listen and communicate (oral) effectively and accurately on all PwD policies
- GS6.** apply balanced judgments in gender diversity situations
- GS7.** take action to reduce the carbon footprint of business activities and embed environmental responsibility
- GS8.** calibration session with employees to discuss gender biases, stereotypes and potentially blind spots

## Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<i>Sustainable Practices</i>	<b>10</b>	<b>30</b>	-	-
<b>PC1.</b> optimize usage of electricity/energy, materials, and water in various asks / activities / processes and plan the implementation of energy efficient systems in a phased manner	5	15	-	-
<b>PC2.</b> segregate recyclable, non-recyclable and hazardous waste generated for disposal or efficient waste management	5	15	-	-
<i>Respect diversity and strengthen practices to promote equity (equality)/inclusivity</i>	<b>10</b>	<b>50</b>	-	-
<b>PC3.</b> understand the diversity policy of the organization and use internal & external communication to colleagues to improve	5	10	-	-
<b>PC4.</b> comply with PwD inclusive policies for an adaptable and equitable work environment	-	10	-	-
<b>PC5.</b> improve through specifically designed recruitment practices, PwD friendly infrastructure, job roles, etc.	-	20	-	-
<b>PC6.</b> use and advocate for appropriate verbal/nonverbal communication, schemes and benefits of PwD.	5	10	-	-
<b>NOS Total</b>	<b>20</b>	<b>80</b>	-	-

## National Occupational Standards (NOS) Parameters

<b>NOS Code</b>	SSC/N9014
<b>NOS Name</b>	Maintain an inclusive, environmentally sustainable workplace
<b>Sector</b>	IT-ITeS
<b>Sub-Sector</b>	IT Services, Business Process Management, Engineering R&D, Software Product Development, Future Skills
<b>Occupation</b>	Generic,
<b>NSQF Level</b>	5
<b>Credits</b>	TBD
<b>Version</b>	1.0
<b>Last Reviewed Date</b>	NA
<b>Next Review Date</b>	31/03/2025
<b>NSQC Clearance Date</b>	

## 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 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.

### 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
SSC/N8120.Develop tools, processes and mechanisms for continuous integration and delivery	30	70	-	-	100	20
SSC/N9001.Manage your work to meet requirements	25	75	-	-	100	14
SSC/N9002.Work effectively with colleagues	20	80	-	-	100	14
SSC/N9004.Provide data/information in standard formats	25	75	-	-	100	14
SSC/N9006.Build and Maintain relationships in a Workplace	30	70	-	-	100	14
SSC/N9010.Convince others to take appropriate action in different situations	30	70	-	-	100	14
SSC/N9014.Maintain an inclusive, environmentally sustainable workplace	20	80	-	-	100	10
<b>Total</b>	<b>180</b>	<b>520</b>	<b>-</b>	<b>-</b>	<b>700</b>	<b>100</b>



## 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

## 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.
<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.

<p><b>Organisational Context</b></p>	<p>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.</p>
<p><b>Technical Knowledge</b></p>	<p>Technical knowledge is the specific knowledge needed to accomplish specific designated responsibilities.</p>
<p><b>Core Skills/ Generic Skills (GS)</b></p>	<p>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.</p>
<p><b>Electives</b></p>	<p>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.</p>
<p><b>Options</b></p>	<p>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.</p>