Software Developer

QP Code: SSC/Q0501

Version: 1.0

NSQF Level: 7

IT-ITeS Sector Skill Council || NASSCOM Plot No - 7, 8, 9 & 10, 3rd Floor, Sector 126 Noida Uttar Pradesh - 201303

Contents

SSC/Q0501: Software Developer

Brief Job Description

Individuals at this job are responsible for development of software applications and interfaces as well as enhancements to existing packaged applications or pre-engineered templates. The job also involves providing support to custom applications, debugging, maintenance and documentation.

Personal Attributes

This job requires the individual to work independently and be comfortable in making decisions pertaining to his/her area of work. The individual should be result oriented. The individual should also be able to demonstrate skills for communication and logical thinking.

Applicable National Occupational Standards (NOS)

Compulsory NOS:

1. SSC/N0501: Contribute to the design of software products and applications

2. SSC/N0502: Develop software code to specification

3. SSC/N9001: Manage your work to meet requirements

4. SSC/N9002: Work effectively with colleagues

5. SSC/N9003: Maintain a healthy, safe and secure working environment

6. SSC/N9004: Provide data/information in standard formats

7. SSC/N9005: Develop your knowledge, skills and competence

Qualification Pack (QP) Parameters

Sector	IT-ITeS
Sub-Sector	IT Services
Occupation	Application Development
Country	India
NSQF Level	7

Qualification Pack

Aligned to NCO/ISCO/ISIC Code	NCO-2015/ 2512.0204
Minimum Educational Qualification & Experience	Graduate (Computer Science or any related field) with 0-6 Months of experience
Minimum Level of Education for Training in School	12th Class
Pre-Requisite License or Training	NA
Minimum Job Entry Age	18 Years
Last Reviewed On	31/03/2018
Next Review Date	31/03/2022
NSQC Approval Date	18/06/2015
Version	1.0
Reference code on NQR	2015/ITES/ITSSC/00139
NQR Version	1.0

SSC/N0501: Contribute to the design of software products and applications

Description

This unit is about contributing to the design of software products and applications where both the business impact and technical complexity are low.

Scope

This unit/task covers the following: Appropriate people:

- line manager
- peers
- subject matter experts Software Requirements Specification includes:
- functional requirements
- non-functional requirements High Level Design includes:
- technical solution selected and its rationale
- assumptions
- constraints
- dependencies
- interfaces Requirements where:
- business impact is low
- technical complexity is low

Elements and Performance Criteria

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

PC1. check your understanding of the Business Requirements Specification (BRS)/User Requirements Specification (URS) with appropriate people

PC2. check your understanding of the Software Requirements Specification (SRS) with appropriate people

PC3. check your understanding of High Level Design (HLD) with appropriate people

PC4. design basic programming structures to implement functionality in line with requirements defined in BRS/URS, SRS and HLD

PC5. review your designs with appropriate people

PC6. analyze inputs from appropriate people to identify, resolve and record design defects and inform future designs

PC7. document your designs using standard templates and tools

PC8. comply with your organizations policies, procedures and guidelines when contributing to the design of software products and applications

Knowledge and Understanding (KU)

The individual on the job needs to know and understand:

GOVERNMENT OF INDIA
MINISTRY OF SKILL DEVELOPMENT
& ENTREPRENEURSHIP
Qualification Pack
NSDC National Skill Development Corporation
Transforming the skill landscape

KU1. your organizations policies, procedures and guidelines for designing software products and applications and your role and responsibilities in relation to this

KU2. your organizations knowledge base and how to access and update this

KU3. the scope of work to be carried out and the importance of keeping within these boundaries

KU4. who you may need to involve to provide feedback to your designs

KU5. the importance of collating feedback on your designs

KU6. how to analyze and use feedback to improve your designs

KU7. who you may need to involve to provide feedback on your designs

KU8. standard templates and tools available and how to use these to document your designs

KU9. the approval process for designs of software products and applications

KU10. how to interpret and follow different design specifications, including: Business Requirements Specification (BRS) User Requirements Specification (URS) Software Requirements Specification (SRS) High Level Design (HLD)

KU11. how to design basic program structures

KU12. how to design software products

KU13. how to design software applications

KU14. different sources of information for help to design software products andspecifications

KU15. the range of equipment used to design software products and applications

KU16. common design defects and how to resolve these

KU17. current practice in the infrastructure design of software products andapplications

KU18. the range of activities involved in designing different software products and applications

KU19. how to test new products and applications are fit for purpose

KU20. implications new products and applications may have on business processesand business infrastructure

Generic Skills (GS)

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

GS1. communicate with colleagues in writing

GS2. read instructions, guidelines, procedures, rules and service level agreements

GS3. listen effectively and orally communicate information

GS4. make a decision on a suitable course of action

GS5. plan and organize your work to achieve targets and deadlines

GS6. check that your own work meets customer requirements

GS7. meet and exceed customer expectations

GS8. apply problem-solving approaches in different situations

GS9. configure data and disseminate relevant information to others

GS10. analyze data and activities

GS11. apply balanced judgments to different situations

GS12. check your work is complete and free from errors

GS13. get your work checked by peers

GS14. work effectively in a team environment

GS15. use information technology effectively to input and/or extract data accurately

GS16. agree objectives and work requirements

GS17. keep up to date with changes, procedures and practices in your role

Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
	40	**60**	**-**	**-**
PC1. check your understanding of the Business Requirements Specification (BRS)/User Requirements Specification (URS) with appropriate people	5	-	-	-
PC2. check your understanding of the Software Requirements Specification (SRS) with appropriate people	5	-	-	-
PC3. check your understanding of High Level Design (HLD) with appropriate people	5	-	-	-
PC4. design basic programming structures to implement functionality in line with requirements defined in BRS/URS, SRS and HLD	-	40	-	-
PC5. review your designs with appropriate people	10	-	-	-
PC6. analyze inputs from appropriate people to identify, resolve and record design defects and inform future designs	15	-	-	-
PC7. document your designs using standard templates and tools	-	10	-	-
PC8. comply with your organizations policies, procedures and guidelines when contributing to the design of software products and applications	-	10	-	-
NOS Total	**40**	**60**	**-**	**-**

National Occupational Standards (NOS) Parameters

NOS Code	SSC/N0501
NOS Name	Contribute to the design of software products and applications
Sector	IT-ITeS
Sub-Sector	IT Services
Occupation	Application Development
NSQF Level	7
Credits	TBD
Version	1.0
Last Reviewed Date	31/03/2018
Next Review Date	31/03/2022
NSQC Clearance Date	NA

SSC/N0502: Develop software code to specification

Description

This unit is about developing simple code to meet the requirements of software products and applications where their business impact and technical complexity is low.

Scope

This unit/task covers the following: Appropriate people:

- line manager
- peers
- subject matter experts Software Requirements Specification includes:
- functional requirements
- non-functional requirements High Level Design includes:
- technical solution selected and its rationale
- assumptions
- constraints
- dependencies
- interfaces Low Level Design includes:
- programming structures
- coding standards
- checklists Requirements where:
- business impact is low
- technical complexity is low

Elements and Performance Criteria

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

PC1. check your understanding of the Business Requirements Specification (BRS), Software Requirements Specification (SRS), High Level Design (HLD) and Low Level Design (LLD) with appropriate people

PC2. access reusable components, code generation tools and unit testing tools from your organizations knowledge base

PC3. convert technical specifications into code to meet the requirements, leveraging reusable components, where available

PC4. create appropriate unit test cases (UTCs

PC5. review codes and UTCs with appropriate people

PC6. execute UTCs and document results

PC7. rework the code and UTCs to fix identified defects

PC8. analyze inputs from appropriate people to inform future designs

PC9. record corrective actions for identified defects to inform future designs

PC10. submit tested code for approval by appropriate people

PC11. update your organizations knowledge base with your experiences of the code developed

PC12. comply with your organizations policies, procedures and guidelines when developing software code to specification

Knowledge and Understanding (KU)

The individual on the job needs to know and understand:

KU1. your organizations policies, procedures and guidelines for developing software code and your role and responsibilities in relation to this

KU2. the scope of work to be carried out and the importance of keeping within these boundaries

KU3. your organizations knowledge base and how to access and update this

KU4. the importance of collating feedback on your coding and UTCs

KU5. how to analyze and use feedback to improve your coding and UTCs

KU6. who you may need to involve to provide feedback on your coding and UTCs

KU7. your organizations approval process for software code designs

KU8. how to interpret and follow different design specifications, including: Business Requirements Specification (BRS) User Requirements Specification (URS) Software Requirements Specification (SRS) High Level Design (HLD)

KU9. the process for converting technical specifications into code

KU10. current practice in the infrastructure design of software code

KU11. . how to write software code that is efficient, readable and maintainable

KU12. the range of code generation tools and unit testing tools used to develop software code

KU13. how to use coding tools

KU14. how to create, review and execute UTCs

KU15. how to determine whether components are suitable for re-use

KU16. different types of problems and defects that may occur and how these may be resolved

KU17. how recording corrective actions for problems and defects can improve future designs

KU18. how to test and debug new software code

KU19. different sources of information for help to write software code

Generic Skills (GS)

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

GS1. communicate with colleagues in writing

GS2. read instructions, guidelines, procedures, rules and service level agreements

GS3. listen effectively and orally communicate information

GS4. make a decision on a suitable course of action

GS5. plan and organize your work to achieve targets and deadlines

GS6. check that your own work meets customer requirements

GS7. meet and exceed customer expectations

GS8. apply problem-solving approaches in different situations

GS9.   configure data and disseminate relevant information to others

GS10. analyze data and activities

GS11. apply balanced judgments to different situations

GS12. check your work is complete and free from errors

GS13. get your work checked by peers

GS14. work effectively in a team environment

GS15. use information technology effectively to input and/or extract data accurately

GS16. agree on objectives and work requirements regarding software coding

GS17. keep up to date with changes, procedures and practices in your role

Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
	20	**80**	**-**	**-**
PC1. check your understanding of the Business Requirements Specification (BRS), Software Requirements Specification (SRS), High Level Design (HLD) and Low Level Design (LLD) with appropriate people	5	-	-	-
PC2. access reusable components, code generation tools and unit testing tools from your organizations knowledge base	-	10	-	-
PC3. convert technical specifications into code to meet the requirements, leveraging reusable components, where available	-	10	-	-
PC4. create appropriate unit test cases (UTCs	-	10	-	-
PC5. review codes and UTCs with appropriate people	5	-	-	-
PC6. execute UTCs and document results	-	10	-	-
PC7. rework the code and UTCs to fix identified defects	-	10	-	-
PC8. analyze inputs from appropriate people to inform future designs	5	-	-	-
PC9. record corrective actions for identified defects to inform future designs	-	10	-	-
PC10. submit tested code for approval by appropriate people	5	-	-	-
PC11. update your organizations knowledge base with your experiences of the code developed	-	10	-	-
PC12. comply with your organizations policies, procedures and guidelines when developing software code to specification	-	10	-	-
NOS Total	**20**	**80**	**-**	**-**

National Occupational Standards (NOS) Parameters

NOS Code	SSC/N0502
NOS Name	Develop software code to specification
Sector	IT-ITeS
Sub-Sector	IT Services
Occupation	Application Development, Software Development, Product Development & Delivery
NSQF Level	7
Credits	TBD
Version	1.0
Last Reviewed Date	31/03/2018
Next Review Date	31/03/2022
NSQC Clearance Date	NA

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.

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 your immediate work area clean and tidy

PC3. utilize your time effectively

PC4. use resources correctly and efficiently

PC5. treat confidential information correctly

PC6. work in line with your organizations policies and procedures

PC7. work within the limits of your job role

PC8. obtain guidance from appropriate people, where necessary

PC9. ensure your work meets the agreed requirements

Knowledge and Understanding (KU)

The individual on the job needs to know and understand:

KU1. your organizations policies, procedures and priorities for your area of work and your role and responsibilities in carrying out your work

KU2. limits of your responsibilities and when to involve others

KU3. your specific work requirements and who these must be agreed with

KU4. the importance of having a tidy work area and how to do this

KU5. how to prioritize your workload according to urgency and importance and the benefits of this

KU6. your organizations policies and procedures for dealing with confidential information and the importance of complying with these

KU7. the purpose of keeping others updated with the progress of your work

KU8. who to obtain guidance from and the typical circumstances when this may be required

KU9. the purpose and value of being flexible and adapting work plans to reflect change

KU10. the importance of completing work accurately and how to do this

KU11. appropriate timescales for completing your work and the implications of not meeting these for you and the organization

KU12. resources needed for your work and how to obtain and use these

Generic Skills (GS)

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

GS1. complete accurate work with attention to detail

GS2. read instructions, guidelines, procedures, rules and service level agreements

GS3. ask for clarification and advice from line managers

GS4. communicate orally with colleagues

GS5. make decisions on suitable courses

GS6. plan and organize your work to achieve targets and deadlines

GS7. agree objectives and work requirements

GS8. deliver consistent and reliable service to customers

GS9. check your own work meets customer requirements

GS10. refer anomalies to the line manager

GS11. seek clarification on problems from others

GS12. provide relevant information to others

GS13. analyze needs, requirements and dependencies in order to meet your work requirements

GS14. apply judgments to different situations

GS15. check your work is complete and free from errors

GS16. get your work checked by peers

GS17. work effectively in a team environment

GS18. use information technology effectively, to input and/or extract data accurately

GS19. identify and refer anomalies in data

GS20. store and retrieve information

GS21. keep up to date with changes, procedures and practices in your role

Assessment Criteria

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

National Occupational Standards (NOS) Parameters

NOS Code	SSC/N9001
NOS Name	Manage your work to meet requirements
Sector	IT-ITeS
Sub-Sector	IT Services
Occupation	Across all occupations
NSQF Level	4
Credits	TBD
Version	1.0
Last Reviewed Date	27/01/2022
Next Review Date	27/01/2025
NSQC Clearance Date	27/01/2022

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

This unit/task covers the following: Colleagues:

- line manager
- members of your own work group
- people in other work groups in your organization Communicate:
- face-to-face
- by telephone
- in writing

Elements and Performance Criteria

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 your work effectively with theirs

PC3. pass on essential information to colleagues in line with organizational requirements

PC4. work in ways that show respect for colleagues

PC5. carry out commitments you have made to colleagues

PC6. let colleagues know in good time if you cannot carry out your commitments, explaining the reasons

PC7. identify any problems you have working with colleagues and take the initiative to solve these problems

PC8. follow the organizations policies and procedures for working with colleagues

Knowledge and Understanding (KU)

The individual on the job needs to know and understand:

KU1. your organizations policies and procedures for working with colleagues and your 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 you have no authority over those you are working with

KU6. where you do not meet your 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 your 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. listen effectively and orally communicate information accurately

GS5. ask for clarification and advice from line managers

GS6. make decisions on suitable courses of action

GS7. plan and organize your work to achieve targets and deadlines

GS8. check your own work meets customer requirements

GS9. deliver consistent and reliable service to customers

GS10. apply problem solving approaches in different situations

GS11. apply balanced judgments to different situations

GS12. check your work is complete and free from error

GS13. get your work checked by peers

GS14. work effectively in a team environment

GS15. work effectively with colleagues and other teams

GS16. treat other cultures with respect

GS17. identify and refer anomalies

GS18. help reach agreements with colleagues

GS19. keep up to date with changes, procedures and practices in yourrole

Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
	20	**80**	**-**	**-**
PC1. communicate with colleagues clearly, concisely and accurately	-	20	-	-
PC2. work with colleagues to integrate your work effectively with theirs	-	10	-	-
PC3. pass on essential information to colleagues in line with organizational requirements	10	-	-	-
PC4. work in ways that show respect for colleagues	-	20	-	-
PC5. carry out commitments you have made to colleagues	-	10	-	-
PC6. let colleagues know in good time if you cannot carry out your commitments, explaining the reasons	10	-	-	-
PC7. identify any problems you have working with colleagues and take the initiative to solve these problems	-	10	-	-
PC8. follow the organizations policies and procedures for working with colleagues	-	10	-	-
NOS Total	**20**	**80**	**-**	**-**

National Occupational Standards (NOS) Parameters

NOS Code	SSC/N9002
NOS Name	Work effectively with colleagues
Sector	IT-ITeS
Sub-Sector	IT Services
Occupation	Across all occupations
NSQF Level	4
Credits	TBD
Version	1.0
Last Reviewed Date	31/03/2018
Next Review Date	31/03/2022
NSQC Clearance Date	NA

SSC/N9003: 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

Elements and Performance Criteria

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

PC1. comply with your organizations current health, safety and security policies and procedures

PC2. report any identified breaches in health, safety, and security policies and procedures to the designated person

PC3. identify and correct any hazards that you can deal with safely, competently and within the limits of your authority

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

PC5. follow your organizations emergency procedures promptly, calmly, and efficiently

PC6. identify and recommend opportunities for improving health, safety, and security to the designated person

PC7. complete any health and safety records legibly and accurately

Knowledge and Understanding (KU)

The individual on the job needs to know and understand:

KU1. legislative requirements and organizations procedures for health, safety and security and your role and responsibilities in relation to this

KU2. what is meant by a hazard, including the different types of health and safety hazards that can be found in the workplace

KU3. how and when to report hazards

KU4. limits of your responsibility for dealing with hazards

KU5. your organizations emergency procedures for different emergency situations and the importance of following these

KU6. the importance of maintaining high standards of health, safety and security

KU7. implications that any non-compliance with health, safety and security may have on individuals and the organization

KU8. different types of breaches in health, safety and security and how and when to report these

KU9. evacuation procedures for workers and visitors

KU10. how to summon medical assistance and the emergency services, where necessary

KU11. how to use the health, safety and accident reporting procedures and the importance of these

KU12. government agencies in the areas of safety, health and security and their norms and services

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.	make decisions on suitable courses of action
GS5.	plan and organize your work to meet health, safety and security requirements
GS6.	build and maintain positive and effective relationships with colleagues and customers
GS7.	apply problem solving approaches in different situations
GS8.	analyze data and activities
GS9.	apply balanced judgments to different situations
GS10.	check your work is complete and free from errors
GS11.	get your work checked by peers
GS12.	work effectively in a team environment
GS13.	identify and refer anomalies
GS14.	help reach agreements with colleagues
GS15.	keep up to date with changes, procedures and practices in your role

Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
	30	**70**	**-**	**-**
PC1. comply with your organizations current health, safety and security policies and procedures	10	10	-	-
PC2. report any identified breaches in health, safety, and security policies and procedures to the designated person	-	10	-	-
PC3. identify and correct any hazards that you can deal with safely, competently and within the limits of your authority	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	-	-
PC5. follow your organizations emergency procedures promptly, calmly, and efficiently	10	10	-	-
PC6. identify and recommend opportunities for improving health, safety, and security to the designated person	-	10	-	-
PC7. complete any health and safety records legibly and accurately	-	10	-	-
NOS Total	**30**	**70**	**-**	**-**

National Occupational Standards (NOS) Parameters

NOS Code	SSC/N9003
NOS Name	Maintain a healthy, safe and secure working environment
Sector	IT-ITeS
Sub-Sector	IT Services
Occupation	Across all occupations
NSQF Level	4
Credits	TBD
Version	1.0
Last Reviewed Date	27/01/2022
Next Review Date	27/01/2025
NSQC Clearance Date	27/01/2022

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

This unit/task covers the following: Appropriate people:

- line manager
- members of your own work group
- people in other work groups in your organization
- subject matter experts Data/information:
- Quantitative
- QualitativeSources:
- within your organization
- outside your organization Formats:
- paper-based
- electronic

Elements and Performance Criteria

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 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

PC5. carry out rule-based analysis of the data/information, if required

PC6. insert the data/information into the

PC7. check the accuracy of your work, involving colleagues where required

PC8. report any unresolved anomalies in the data/information to appropriate people

PC9. 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. your organizations procedures and guidelines for providing data/information in standard formats and your role and responsibilities in relation to this

KU2. the knowledge management culture of your organization

KU3. your organizations 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 your 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 you 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. how to carry out rule-based analysis on the data/information

KU15. typical anomalies that may occur in data/information

KU16. who 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 your work to achieve targets and deadlines

GS7. check your own work meets customer requirements

GS8. meet and exceed customer expectations

GS9. apply problem solving approaches in different situations

GS10. configure data and disseminate relevant information to others

GS11. apply balanced judgments to different situations

GS12. check your work is complete and free from errors

GS13. get your work checked by peers

GS14. work effectively in a team environment

GS15. use information technology effectively, to input and/or extract data accurately

GS16. validate and update data

GS17. identify and refer anomalies in data

GS18. store and retrieve information

GS19. share information using standard formats and templates

GS20. keep up to date with changes, procedures and practices in your role

Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
	25	**75**	**-**	**-**
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	12.5	-	-	-
PC2. obtain the data/information from reliable sources	-	12.5	-	-
PC3. check that the data/information is accurate, complete and up-to-date	6.25	6.25	-	-
PC4. obtain advice or guidance from appropriate people where there are problems with the data/information	-	6.25	-	-
PC5. carry out rule-based analysis of the data/information, if required	-	25	-	-
PC6. insert the data/information into the	-	12.5	-	-
PC7. check the accuracy of your work, involving colleagues where required	-	6.25	-	-
PC8. report any unresolved anomalies in the data/information to appropriate people	6.25	-	-	-
PC9. provide complete, accurate and up-to-date data/information to the appropriate people in the required formats on time	-	6.25	-	-
NOS Total	**25**	**75**	**-**	**-**

National Occupational Standards (NOS) Parameters

NOS Code	SSC/N9004
NOS Name	Provide data/information in standard formats
Sector	IT-ITeS
Sub-Sector	IT Services
Occupation	Across all occupations
NSQF Level	4
Credits	TBD
Version	1.0
Last Reviewed Date	31/03/2018
Next Review Date	31/03/2022
NSQC Clearance Date	NA

SSC/N9005: Develop your knowledge, skills and competence

Description

This unit is about taking action to ensure you have the knowledge and skills you need to perform competently in your current job role and to take on new responsibilities, where required. Competence is defined as: the application of knowledge and skills to perform to the standards required.

Scope

This unit/task covers the following: Appropriate people may be:

- line manager
- human resources specialists
- learning and development specialists
- peers Job role:
- current responsibilities as defined in your job description
- possible future responsibilities Learning and development activities:
- formal education and training programs, leading to certification
- non-formal activities (such as private study, learning from colleagues, project work), designed to meet learning and development objectives but without certification Appropriate action may be:
- undertaking further learning and development activities
- finding further opportunities to apply your knowledge and skills

Elements and Performance Criteria

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

PC1. obtain advice and guidance from appropriate people to develop your knowledge, skills and competence

PC2. identify accurately the knowledge and skills you need for your job role

PC3. identify accurately your current level of knowledge, skills and competence and any learning and development needs

PC4. agree with appropriate people a plan of learning and development activities to address your learning needs

PC5. undertake learning and development activities in line with your plan

PC6. apply your new knowledge and skills in the workplace, under supervision

PC7. obtain feedback from appropriate people on your knowledge and skills and how effectively you apply them

PC8. review your knowledge, skills and competence regularly and take appropriate action

Knowledge and Understanding (KU)

The individual on the job needs to know and understand:

KU1. your organizations procedures and guidelines for developing your knowledge, skills and competence and your role and responsibilities in relation to this

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Qualification Pack

KU2. the importance of developing your knowledge, skills and competence to you and your organization

KU3. different methods used by your organization to review skills and knowledge including: training need analysis skills need analysis performance appraisals

KU4. how to review your knowledge and skills against your job role using different methods and analyses

KU5. different types of learning and development activities available for your job role and how to access these

KU6. how to produce a plan to address your learning and development needs, who to agree it with and the importance of undertaking the planned activities

KU7. different types of support available to help you plan and undertake learning and development activities and how to access these

KU8. why it is important to maintain records of your learning and development

KU9. methods of obtaining and accepting feedback from appropriate people on your knowledge skills and competence

KU10. how to use feedback to develop in your job role

KU11. the knowledge and skills required in your job role

KU12. your current learning and development needs in relation to your job role

KU13. different types of learning styles and methods including those that help you learn best

KU14. the importance of taking responsibility for your own learning and development

KU15. to the importance of learning and practicing new concepts, theory and how to apply these in the work environment or on samples

KU16. how to explore sample problems and apply solutions

Generic Skills (GS)

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

GS1. communicate with colleagues in writing

GS2. read instructions, guidelines, procedures

GS3. ask for clarification and advice from line managers

GS4. make decisions on suitable courses of action

GS5. plan and organize your work to achieve targets and deadlines

GS6. check your own work meets customer requirements

GS7. refer anomalies to the line manager

GS8. analyze data and activities

GS9. apply balanced judgments to different situations

GS10. check your work is complete and free from errors

GS11. get your work checked by peers

GS12. work effectively in a team environment

GS13. use information technology effectively

GS14. agree objectives and work requirements

GS15. keep up to date with changes, procedures and practices in your role

Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
	20	**80**	**-**	**-**
PC1. obtain advice and guidance from appropriate people to develop your knowledge, skills and competence	-	10	-	-
PC2. identify accurately the knowledge and skills you need for your job role	-	10	-	-
PC3. identify accurately your current level of knowledge, skills and competence and any learning and development needs	10	10	-	-
PC4. agree with appropriate people a plan of learning and development activities to address your learning needs	-	10	-	-
PC5. undertake learning and development activities in line with your plan	10	10	-	-
PC6. apply your new knowledge and skills in the workplace, under supervision	-	10	-	-
PC7. obtain feedback from appropriate people on your knowledge and skills and how effectively you apply them	-	10	-	-
PC8. review your knowledge, skills and competence regularly and take appropriate action	-	10	-	-
NOS Total	**20**	**80**	**-**	**-**

National Occupational Standards (NOS) Parameters

NOS Code	SSC/N9005
NOS Name	Develop your knowledge, skills and competence
Sector	IT-ITeS
Sub-Sector	IT Services
Occupation	Across all occupations
NSQF Level	4
Credits	TBD
Version	1.0
Last Reviewed Date	16/12/2019
Next Review Date	16/12/2024
NSQC Clearance Date	NA

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) (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. Individual assessment agencies will create unique question papers for theory part for each candidate at each examination/training center (as per assessment criteria below).

4. Individual assessment agencies will create unique evaluations for skill practical for every student at each examination/ training center based on these criteria.

5. In case of successfully passing only certain number of NOSs, the trainee is eligible to take subsequent assessment on the balance NOS's to pass the Qualification Pack.

6. 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/N0501.Contribute to the design of software products and applications	40	60	-	-	100	15
SSC/N0502.Develop software code to specification	20	80	-	-	100	15
SSC/N9001.Manage your work to meet requirements	25	75	-	-	100	14
SSC/N9002.Work effectively with colleagues	20	80	-	-	100	14
SSC/N9003.Maintain a healthy, safe and secure working environment	30	70	-	-	100	14
SSC/N9004.Provide data/information in standard formats	25	75	-	-	100	14
SSC/N9005.Develop your knowledge, skills and competence	20	80	-	-	100	14
Total	**180**	**520**	**-**	**-**	**700**	**100**

Acronyms

NOS	National Occupational Standard(s)
NSQF	National Skills Qualifications Framework
QP	Qualifications Pack
TVET	Technical and Vocational Education and Training
IT-ITeS	Information Technology - Information Technology enabled Services
BPM	Business Process Management
BPO	Business Process Outsourcing
KPO	Knowledge Process Outsourcing
LPO	Legal Process Outsourcing
IPO	Information Process Outsourcing
BCA	Bachelor of Computer Applications
B.Sc	. Bachelor of Science

Glossary

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 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 (KU) they need to meet that standard consistently. Occupational Standards are applicable both in the Indian and global contexts.
Performance Criteria (PC)	Performance Criteria (PC) 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 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 (KU)	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.
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 (GS)	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.
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.
Helpdesk	Helpdesk is an entity to which the customers will report their IT problems. IT Service Helpdesk Attendant is responsible for managing the helpdesk.