



IT - ITeS SSC
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Qualification Pack



AI - Machine Learning Engineer

QP Code: SSC/Q8113

Version: 3.0

NSQF Level: 5

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

Qualification Pack

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SSC/Q8113: AI - Machine Learning Engineer

Brief Job Description

Individuals at this job are responsible for developing applications and platforms in AI & Big Data Analytics. S/he will be responsible for developing software code to deploy algorithmic models as per the needs of the business and evaluating the technical performance of the same

Personal Attributes

A Machine Learning engineer needs to have strong analytical and logical skills, attention to detail and problem solving ability. S/he needs to have good communication skills to work with various stakeholders that includes Data Scientists, Data Architects, Business Analysts etc. to ensure alignment on business objectives

Applicable National Occupational Standards (NOS)

Compulsory NOS:

1. [SSC/N8121: Evaluate technical performance of algorithmic models](#)
2. [SSC/N8122: Develop software code to support the deployment of algorithmic models](#)
3. [SSC/N9014: Maintain an inclusive, environmentally sustainable workplace](#)
4. [DGT/VSQ/N0102: Employability Skills \(60 Hours\)](#)

Qualification Pack (QP) Parameters

Sector	IT-ITeS
Sub-Sector	Future Skills
Occupation	Artificial Intelligence and Big Data Analytics
Country	India
NSQF Level	5
Credits	16
Aligned to NCO/ISCO/ISIC Code	NCO-2015/2512.NIL



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Minimum Educational Qualification & Experience	Completed 2nd year of UG (UG Diploma) (UG Program of 3 or 4 years) (Engineering/ Science)) OR Completed 2nd year diploma after 12th OR Previous relevant Qualification of NSQF Level (NSQF Level 4) with 3 Years of experience relevant experience in relevant field
Minimum Level of Education for Training in School	
Pre-Requisite License or Training	NA
Minimum Job Entry Age	24 Years
Last Reviewed On	NA
Next Review Date	22/09/2025
NSQF Approval Date	22/09/2020
Version	3.0
Reference code on NQR	QG-05-IT-00494-2023-V1.1-NASSCOM
NQR Version	3

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SSC/N8121: Evaluate technical performance of algorithmic models

Description

This unit is about measuring the technical performance of algorithmic models for deployment.

Scope

The scope covers the following :

- Define model parameters
- Analyse technical constraints

Elements and Performance Criteria

Define model parameters

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

PC1. define technical specifications and limitations of the system running the algorithmic model

PC2. define the data flows and evaluate the data structures in the algorithmic model

Analyse technical constraints

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

PC3. evaluate the speed, runtime and memory interdependencies of the algorithmic model

PC4. evaluate the parallel programming constraints of the system

PC5. modify and test the algorithmic model to fit speed, runtime and memory limitations of the system

PC6. update documentation on the algorithmic model

PC7. provide feedback on model performance to the team responsible for designing and developing the model

Knowledge and Understanding (KU)

The individual on the job needs to know and understand:

KU1. the purpose and aims of the system being developed

KU2. organizational policies, procedures and guidelines for evaluating the technical performance of algorithmic models

KU3. different data sources and how to access the required documents and information from data sources

KU4. organizational policies and procedures for sharing data

KU5. organizational policies and procedures for documenting algorithmic models

KU6. who to involve when evaluating the technical performance of algorithmic models

KU7. the range of standard templates and tools available and how to use them

KU8. how to identify and interpret the technical specifications and limitations of a system

KU9. different algorithmic models



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- KU10.** different data flows and data structures
- KU11.** how to evaluate the speed, runtime and memory dependencies of algorithmic models
- KU12.** different parallel computing systems such as SISD (Single Instruction Single Data Stream), SIMD (Single Instruction Multiple Data Streams), MISD (Multiple Instructions Single Data Stream), MIMD (Multiple Instructions Multiple Data Streams)
- KU13.** different methodological approaches to measure algorithmic model performance such as Big O notation
- KU14.** how to identify and refer anomalies
- KU15.** 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 of action.
- 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

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Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<i>Define model parameters</i>	10	20	-	-
PC1. define technical specifications and limitations of the system running the algorithmic model	5	10	-	-
PC2. define the data flows and evaluate the data structures in the algorithmic model	5	10	-	-
<i>Analyse technical constraints</i>	20	50	-	-
PC3. evaluate the speed, runtime and memory interdependencies of the algorithmic model	5	10	-	-
PC4. evaluate the parallel programming constraints of the system	5	10	-	-
PC5. modify and test the algorithmic model to fit speed, runtime and memory limitations of the system	5	15	-	-
PC6. update documentation on the algorithmic model	-	5	-	-
PC7. provide feedback on model performance to the team responsible for designing and developing the model	5	10	-	-
NOS Total	30	70	-	-

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National Occupational Standards (NOS) Parameters

NOS Code	SSC/N8121
NOS Name	Evaluate technical performance of algorithmic models
Sector	IT-ITeS
Sub-Sector	Future Skills
Occupation	Artificial Intelligence and Big Data Analytics
NSQF Level	5
Credits	TBD
Version	2.0
Last Reviewed Date	NA
Next Review Date	03/05/2026
NSQF Clearance Date	03/05/2023

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SSC/N8122: Develop software code to support the deployment of algorithmic models

Description

This unit is about developing software code to support the deployment of algorithmic models to meet specific requirements and constraints.

Scope

The scope covers the following :

- Define requirements
- Convert specifications into code
- Perform unit tests

Elements and Performance Criteria

Define requirements

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

- PC1.** define technical specifications and limitations of the autonomous system
- PC2.** evaluate the design of data flows and structures in the autonomous system
- PC3.** evaluate the design of core algorithmic models in the autonomous system
- PC4.** evaluate the parallel programming constraints of the autonomous system

Convert specifications into code

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

- PC5.** integrate technical specifications, data flows, core algorithmic models and parallel programming constraints and convert them into reusable code
- PC6.** create documentation on developed software code for relevant stakeholders
- PC7.** validate developed code with relevant stakeholders

Perform unit tests

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

- PC8.** create and execute unit test cases to analyse the performance of the code
- PC9.** evaluate the defects in the code and identify corrective actions
- PC10.** implement corrective actions to optimize code performance
- PC11.** submit tested and optimized code for approval by appropriate people

Knowledge and Understanding (KU)

The individual on the job needs to know and understand:

- KU1.** the purpose and aims of the autonomous system being developed
- KU2.** organizational policies, procedures and guidelines for developing software code



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- KU3.** different data sources and how to access the required documents and information from data sources
- KU4.** organizational policies and procedures for sharing data
- KU5.** organizational policies and procedures for documenting developed code
- KU6.** who to involve when developing software code
- KU7.** their organization's approval process for software code designs
- KU8.** the range of standard templates and tools available and how to use them
- KU9.** how to identify and interpret the technical specifications and limitations of an autonomous system
- KU10.** different data flows and data structures
- KU11.** different algorithmic models and their design
- KU12.** different parallel computing systems such as SISD (Single Instruction Single Data Stream), SIMD (Single Instruction Multiple Data Streams), MISD (Multiple Instructions Single Data Stream), MIMD (Multiple Instructions Multiple Data Streams)
- KU13.** the range of code generation tools and unit testing tools used to develop software code
- KU14.** how to use coding tools
- KU15.** how to create, review and execute unit test cases
- KU16.** how to determine whether components are suitable for re-use
- KU17.** different types of problems and defects that may occur and how these may be resolved
- KU18.** how recording corrective actions for problems and defects can improve future designs
- KU19.** how to use corrective actions to optimize performance of software code
- KU20.** how to identify and refer anomalies
- KU21.** 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 a decision on a suitable course of action
- GS2.** apply problem-solving approaches in different situations
- GS3.** analyze data and activities
- GS4.** configure data and disseminate relevant information to others
- GS5.** apply balanced judgments to different situations
- GS6.** check your work is complete and free from errors

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Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<i>Define requirements</i>	11	24	-	-
PC1. define technical specifications and limitations of the autonomous system	2	3	-	-
PC2. evaluate the design of data flows and structures in the autonomous system	3	7	-	-
PC3. evaluate the design of core algorithmic models in the autonomous system	3	7	-	-
PC4. evaluate the parallel programming constraints of the autonomous system	3	7	-	-
<i>Convert specifications into code</i>	5	25	-	-
PC5. integrate technical specifications, data flows, core algorithmic models and parallel programming constraints and convert them into reusable code	5	15	-	-
PC6. create documentation on developed software code for relevant stakeholders	-	5	-	-
PC7. validate developed code with relevant stakeholders	-	5	-	-
<i>Perform unit tests</i>	9	26	-	-
PC8. create and execute unit test cases to analyse the performance of the code	3	7	-	-
PC9. evaluate the defects in the code and identify corrective actions	3	7	-	-
PC10. implement corrective actions to optimize code performance	3	7	-	-
PC11. submit tested and optimized code for approval by appropriate people	-	5	-	-
NOS Total	25	75	-	-

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National Occupational Standards (NOS) Parameters

NOS Code	SSC/N8122
NOS Name	Develop software code to support the deployment of algorithmic models
Sector	IT-ITes
Sub-Sector	Future Skills
Occupation	Artificial Intelligence & Big Data Analytics
NSQF Level	5
Credits	TBD
Version	2.0
Last Reviewed Date	NA
Next Review Date	03/05/2026
NSQF Clearance Date	03/05/2023

Qualification Pack

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 :

- Sustainable Practices
- Respect diversity and strengthen practices to promote equity (equality)/inclusivity

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



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- 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

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Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<i>Sustainable Practices</i>	10	30	-	-
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	5	15	-	-
PC2. 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>	10	50	-	-
PC3. understand the diversity policy of the organization and use internal & external communication to colleagues to improve	5	10	-	-
PC4. comply with PwD inclusive policies for an adaptable and equitable work environment	-	10	-	-
PC5. improve through specifically designed recruitment practices, PwD friendly infrastructure, job roles, etc.	-	20	-	-
PC6. use and advocate for appropriate verbal/nonverbal communication, schemes and benefits of PwD.	5	10	-	-
NOS Total	20	80	-	-

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National Occupational Standards (NOS) Parameters

NOS Code	SSC/N9014
NOS Name	Maintain an inclusive, environmentally sustainable workplace
Sector	IT-ITes
Sub-Sector	IT Services, Business Process Management, Engineering R&D, Software Product Development, Future Skills
Occupation	Generic,
NSQF Level	5
Credits	1
Version	1.0
Last Reviewed Date	27/01/2022
Next Review Date	28/04/2025
NSQC Clearance Date	28/04/2022

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DGT/VSQ/N0102: Employability Skills (60 Hours)

Description

This unit is about employability skills, Constitutional values, becoming a professional in the 21st Century, digital, financial, and legal literacy, diversity and Inclusion, English and communication skills, customer service, entrepreneurship, and apprenticeship, getting ready for jobs and career development.

Scope

The scope covers the following :

- Introduction to Employability Skills
- Constitutional values - Citizenship
- Becoming a Professional in the 21st Century
- Basic English Skills
- Career Development & Goal Setting
- Communication Skills
- Diversity & Inclusion
- Financial and Legal Literacy
- Essential Digital Skills
- Entrepreneurship
- Customer Service
- Getting ready for Apprenticeship & Jobs

Elements and Performance Criteria

Introduction to Employability Skills

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

- PC1.** identify employability skills required for jobs in various industries
- PC2.** identify and explore learning and employability portals

Constitutional values - Citizenship

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

- PC3.** recognize the significance of constitutional values, including civic rights and duties, citizenship, responsibility towards society etc. and personal values and ethics such as honesty, integrity, caring and respecting others, etc.
- PC4.** follow environmentally sustainable practices

Becoming a Professional in the 21st Century

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

- PC5.** recognize the significance of 21st Century Skills for employment
- PC6.** practice the 21st Century Skills such as Self-Awareness, Behaviour Skills, time management, critical and adaptive thinking, problem-solving, creative thinking, social and cultural awareness, emotional awareness, learning to learn for continuous learning etc. in personal and professional life

Basic English Skills

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



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- PC7.** use basic English for everyday conversation in different contexts, in person and over the telephone
- PC8.** read and understand routine information, notes, instructions, mails, letters etc. written in English
- PC9.** write short messages, notes, letters, e-mails etc. in English

Career Development & Goal Setting

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

- PC10.** understand the difference between job and career
- PC11.** prepare a career development plan with short- and long-term goals, based on aptitude

Communication Skills

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

- PC12.** follow verbal and non-verbal communication etiquette and active listening techniques in various settings
- PC13.** work collaboratively with others in a team

Diversity & Inclusion

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

- PC14.** communicate and behave appropriately with all genders and PwD
- PC15.** escalate any issues related to sexual harassment at workplace according to POSH Act

Financial and Legal Literacy

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

- PC16.** select financial institutions, products and services as per requirement
- PC17.** carry out offline and online financial transactions, safely and securely
- PC18.** identify common components of salary and compute income, expenses, taxes, investments etc
- PC19.** identify relevant rights and laws and use legal aids to fight against legal exploitation

Essential Digital Skills

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

- PC20.** operate digital devices and carry out basic internet operations securely and safely
- PC21.** use e- mail and social media platforms and virtual collaboration tools to work effectively
- PC22.** use basic features of word processor, spreadsheets, and presentations

Entrepreneurship

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

- PC23.** identify different types of Entrepreneurship and Enterprises and assess opportunities for potential business through research
- PC24.** develop a business plan and a work model, considering the 4Ps of Marketing Product, Price, Place and Promotion
- PC25.** identify sources of funding, anticipate, and mitigate any financial/ legal hurdles for the potential business opportunity

Customer Service

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

- PC26.** identify different types of customers
- PC27.** identify and respond to customer requests and needs in a professional manner.

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PC28. follow appropriate hygiene and grooming standards

Getting ready for apprenticeship & Jobs

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

PC29. create a professional Curriculum vitae (Résumé)

PC30. search for suitable jobs using reliable offline and online sources such as Employment exchange, recruitment agencies, newspapers etc. and job portals, respectively

PC31. apply to identified job openings using offline /online methods as per requirement

PC32. answer questions politely, with clarity and confidence, during recruitment and selection

PC33. identify apprenticeship opportunities and register for it as per guidelines and requirements

Knowledge and Understanding (KU)

The individual on the job needs to know and understand:

KU1. need for employability skills and different learning and employability related portals

KU2. various constitutional and personal values

KU3. different environmentally sustainable practices and their importance

KU4. Twenty first (21st) century skills and their importance

KU5. how to use English language for effective verbal (face to face and telephonic) and written communication in formal and informal set up

KU6. importance of career development and setting long- and short-term goals

KU7. about effective communication

KU8. POSH Act

KU9. Gender sensitivity and inclusivity

KU10. different types of financial institutes, products, and services

KU11. how to compute income and expenditure

KU12. importance of maintaining safety and security in offline and online financial transactions

KU13. different legal rights and laws

KU14. different types of digital devices and the procedure to operate them safely and securely

KU15. how to create and operate an e- mail account and use applications such as word processors, spreadsheets etc.

KU16. how to identify business opportunities

KU17. types and needs of customers

KU18. how to apply for a job and prepare for an interview

KU19. apprenticeship scheme and the process of registering on apprenticeship portal

Generic Skills (GS)

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

GS1. read and write different types of documents/instructions/correspondence

GS2. communicate effectively using appropriate language in formal and informal settings

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- GS3.** behave politely and appropriately with all
- GS4.** how to work in a virtual mode
- GS5.** perform calculations efficiently
- GS6.** solve problems effectively
- GS7.** pay attention to details
- GS8.** manage time efficiently
- GS9.** maintain hygiene and sanitization to avoid infection

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Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<i>Introduction to Employability Skills</i>	1	1	-	-
PC1. identify employability skills required for jobs in various industries	-	-	-	-
PC2. identify and explore learning and employability portals	-	-	-	-
<i>Constitutional values - Citizenship</i>	1	1	-	-
PC3. recognize the significance of constitutional values, including civic rights and duties, citizenship, responsibility towards society etc. and personal values and ethics such as honesty, integrity, caring and respecting others, etc.	-	-	-	-
PC4. follow environmentally sustainable practices	-	-	-	-
<i>Becoming a Professional in the 21st Century</i>	2	4	-	-
PC5. recognize the significance of 21st Century Skills for employment	-	-	-	-
PC6. practice the 21st Century Skills such as Self-Awareness, Behaviour Skills, time management, critical and adaptive thinking, problem-solving, creative thinking, social and cultural awareness, emotional awareness, learning to learn for continuous learning etc. in personal and professional life	-	-	-	-
<i>Basic English Skills</i>	2	3	-	-
PC7. use basic English for everyday conversation in different contexts, in person and over the telephone	-	-	-	-
PC8. read and understand routine information, notes, instructions, mails, letters etc. written in English	-	-	-	-
PC9. write short messages, notes, letters, e-mails etc. in English	-	-	-	-
<i>Career Development & Goal Setting</i>	1	2	-	-



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Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
PC10. understand the difference between job and career	-	-	-	-
PC11. prepare a career development plan with short- and long-term goals, based on aptitude	-	-	-	-
<i>Communication Skills</i>	2	2	-	-
PC12. follow verbal and non-verbal communication etiquette and active listening techniques in various settings	-	-	-	-
PC13. work collaboratively with others in a team	-	-	-	-
<i>Diversity & Inclusion</i>	1	2	-	-
PC14. communicate and behave appropriately with all genders and PwD	-	-	-	-
PC15. escalate any issues related to sexual harassment at workplace according to POSH Act	-	-	-	-
<i>Financial and Legal Literacy</i>	2	3	-	-
PC16. select financial institutions, products and services as per requirement	-	-	-	-
PC17. carry out offline and online financial transactions, safely and securely	-	-	-	-
PC18. identify common components of salary and compute income, expenses, taxes, investments etc	-	-	-	-
PC19. identify relevant rights and laws and use legal aids to fight against legal exploitation	-	-	-	-
<i>Essential Digital Skills</i>	3	4	-	-
PC20. operate digital devices and carry out basic internet operations securely and safely	-	-	-	-
PC21. use e- mail and social media platforms and virtual collaboration tools to work effectively	-	-	-	-
PC22. use basic features of word processor, spreadsheets, and presentations	-	-	-	-



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Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<i>Entrepreneurship</i>	2	3	-	-
PC23. identify different types of Entrepreneurship and Enterprises and assess opportunities for potential business through research	-	-	-	-
PC24. develop a business plan and a work model, considering the 4Ps of Marketing Product, Price, Place and Promotion	-	-	-	-
PC25. identify sources of funding, anticipate, and mitigate any financial/ legal hurdles for the potential business opportunity	-	-	-	-
<i>Customer Service</i>	1	2	-	-
PC26. identify different types of customers	-	-	-	-
PC27. identify and respond to customer requests and needs in a professional manner.	-	-	-	-
PC28. follow appropriate hygiene and grooming standards	-	-	-	-
<i>Getting ready for apprenticeship & Jobs</i>	2	3	-	-
PC29. create a professional Curriculum vitae (Résumé)	-	-	-	-
PC30. search for suitable jobs using reliable offline and online sources such as Employment exchange, recruitment agencies, newspapers etc. and job portals, respectively	-	-	-	-
PC31. apply to identified job openings using offline /online methods as per requirement	-	-	-	-
PC32. answer questions politely, with clarity and confidence, during recruitment and selection	-	-	-	-
PC33. identify apprenticeship opportunities and register for it as per guidelines and requirements	-	-	-	-
NOS Total	20	30	-	-

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National Occupational Standards (NOS) Parameters

NOS Code	DGT/VSQ/N0102
NOS Name	Employability Skills (60 Hours)
Sector	Cross Sectoral
Sub-Sector	Professional Skills
Occupation	Employability
NSQF Level	4
Credits	2
Version	1.0
Last Reviewed Date	23/06/2023
Next Review Date	23/06/2026
NSQC Clearance Date	23/06/2023

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 or NOS, a trainee should score an average of 70% or more
7. In case of unsuccessful completion, the trainee may seek reassessment on the Qualification Pack.

Qualification Pack

Minimum Aggregate Passing % at QP Level : 70

(Please note: Every Trainee should score a minimum aggregate passing percentage as specified above, to successfully clear the Qualification Pack assessment.)

Assessment Weightage

Compulsory NOS

National Occupational Standards	Theory Marks	Practical Marks	Project Marks	Viva Marks	Total Marks	Weightage
SSC/N8121.Evaluate technical performance of algorithmic models	30	70	-	-	100	35
SSC/N8122.Develop software code to support the deployment of algorithmic models	25	75	-	-	100	35
SSC/N9014.Maintain an inclusive, environmentally sustainable workplace	20	80	-	-	100	15
DGT/VSQ/N0102.Employability Skills (60 Hours)	20	30	0	0	50	15
Total	95	255	-	-	350	100

Qualification Pack

Acronyms

NOS	National Occupational Standard(s)
NSQF	National Skills Qualifications Framework
QP	Qualifications Pack
TVET	Technical and Vocational Education and Training

Qualification Pack

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.



Qualification Pack

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.