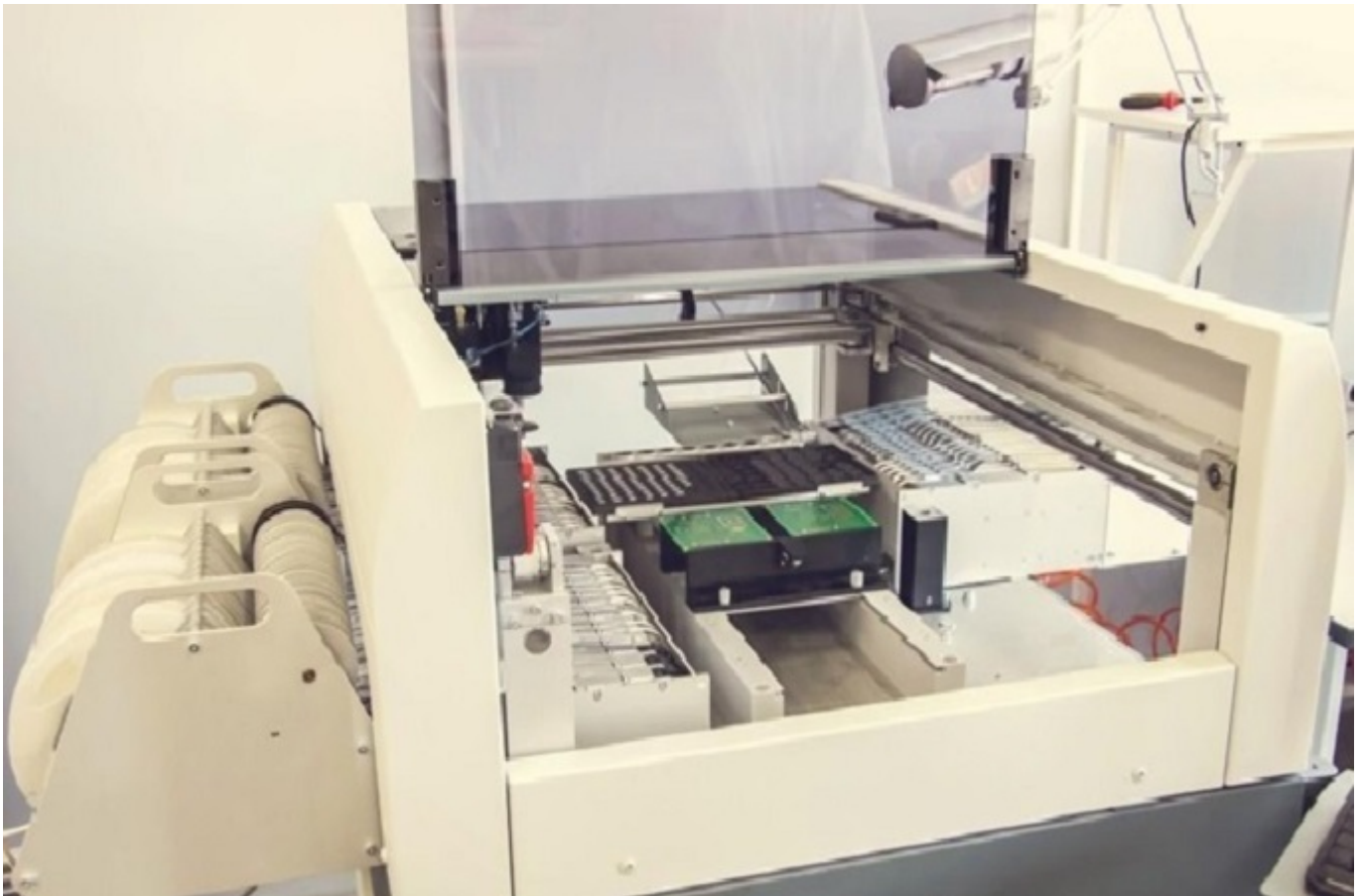**Qualification Pack**

VLSI Design Engineer

QP Code: ELE/Q1201

Version: 4.0

NSQF Level: 5

Electronics Sector Skills Council of India || 155, 2nd Floor, ESC House Okhla Industrial Area-Phase 3 New Delhi- 110020 || email:anu@essc-india.org

Qualification Pack

Contents

ELE/Q1201: VLSI Design Engineer

Brief Job Description

The individual at work designs SOC module function using software and design tools as per the given specifications. The individual is also responsible for coordinating with other design teams involved in the SOC design.

Personal Attributes

The job requires the individual to have attention to details, good eye sight, logical thinking and ability to work for long hours on computer.

Applicable National Occupational Standards (NOS)

Compulsory NOS:

1. ELE/N1427: Developing Functional Design for SOC Modules

2. ELE/N1428: Coordinating and Implementing SOC Design Verification and Testing

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

Qualification Pack (QP) Parameters

Sector	Electronics
Sub-Sector	Semiconductor & Components
Occupation	Product Design-S&C
Country	India
NSQF Level	5
Credits	19
Aligned to NCO/ISCO/ISIC Code	NCO-2015/2152.0501

Minimum Educational Qualification & Experience	Completed 2nd year of UG (UG Diploma) (Physics/Electronics/Electrical/Mechanical) with 1.5 years of experience in Semiconductor & Component domain OR Completed 3 year diploma after 10th (Electronics/Electrical/Mechanical) with 3 Years of experience in Semiconductor & Components Domain OR Certificate-NSQF (Level 4.5) with 1.5 years of experience in Semiconductor & Components Domain
Minimum Level of Education for Training in School	10th Class
Pre-Requisite License or Training	NA
Minimum Job Entry Age	18 Years
Last Reviewed On	NA
Next Review Date	30/04/2028
NSQC Approval Date	08/05/2025
Version	4.0
Reference code on NQR	QG-05-EH-03969-2025-V4-ESSCI
NQR Version	4.0

Remarks:

NA

Qualification Pack

ELE/N1427: Developing Functional Design for SOC Modules

Description

This NOS unit is about design and plan System-on-Chip (SoC) or integrated circuit architectures by interpreting design mandates, selecting appropriate design types, coordinating workflows, and ensuring compliance with specifications using standard tools and methodologies.

Scope

The scope covers the following :

- Identifying Work Requirements
- Interpreting the Design Mandate
- Designing for Specifications

Elements and Performance Criteria

Identifying Work Requirements

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

PC1. Interact with the lead engineer to understand work schedules, shifts, and delivery dates.

PC2. Identify and plan work activities based on workflow and deliverables.

Interpreting the Design Mandate

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

PC3. Interact with project leads and design leads to understand project-specific design requirements for SOC or integrated circuit chips.

PC4. Identify the type of design required, such as digital or analog, and their respective design flows.

PC5. Select the design type, such as ASIC or FPGA, based on factors like design cycle time, expense, and custom design requirements.

PC6. Review the complete system architecture, including memory, microcontroller, microprocessor, memory blocks, timers and oscillators, interfaces, and power management.

PC7. Segregate the design into partitions, assess block placement, and define the functions of each SOC block.

Designing for Specifications

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

PC8. Use organization-recommended tools, software, and applications to perform designing.

PC9. Coordinate with different design teams to finalize the design flow for suitability in verification and testing.

PC10. Specify blocks in the system design using concepts of hierarchy and regularity to enable faster synthesis and lower process times.

PC11. Demonstrate designing reusable blocks.

PC12. Define external interfaces to the design system.

Knowledge and Understanding (KU)

The individual on the job needs to know and understand:

KU1. Understanding of work schedules, shifts, and project timelines in chip design workflows

KU2. Knowledge of workflow planning and task prioritization for design deliverables.

KU3. Familiarity with SOC and IC design requirements, including client and project specifications.

KU4. Differentiation between digital and analog design types and their methodologies.

KU5. Understanding of ASIC vs. FPGA, including trade-offs related to cost, time, and customization.

KU6. Detailed knowledge of system architecture elements like memory, processors, interfaces, and power blocks.

KU7. Techniques for partitioning SOC design and assigning functionality to design blocks.

KU8. Proficiency in using industry-recommended EDA tools and design software.

KU9. Understanding of design flow optimization for verification, synthesis, and testing.

KU10. Concepts of hierarchy, regularity, and reusability in system design to improve performance and efficiency.

Generic Skills (GS)

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

GS1. Communication skills for effective coordination with engineers and design leads.

GS2. Critical thinking to choose appropriate design approaches based on project needs.

GS3. Analytical skills to assess and interpret complex system architectures.

GS4. Time management for aligning work with shifts, deadlines, and delivery schedules.

GS5. Collaboration and teamwork with cross-functional design and verification teams.

GS6. Problem-solving skills for resolving design integration and functionality issues.

GS7. Attention to detail for accurate system block specification and interface definition.

GS8. Adaptability to use different design tools and workflows as required.

GS9. Documentation skills to define system specifications, design flows, and interfaces.

GS10. Initiative to design reusable modules and contribute to design efficiency.

Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
Identifying Work Requirements	**6**	**10**	**-**	**-**
PC1. Interact with the lead engineer to understand work schedules, shifts, and delivery dates.	-	-	-	-
PC2. Identify and plan work activities based on workflow and deliverables.	-	-	-	-
Interpreting the Design Mandate	**15**	**25**	**-**	**-**
PC3. Interact with project leads and design leads to understand project-specific design requirements for SOC or integrated circuit chips.	-	-	-	-
PC4. Identify the type of design required, such as digital or analog, and their respective design flows.	-	-	-	-
PC5. Select the design type, such as ASIC or FPGA, based on factors like design cycle time, expense, and custom design requirements.	-	-	-	-
PC6. Review the complete system architecture, including memory, microcontroller, microprocessor, memory blocks, timers and oscillators, interfaces, and power management.	-	-	-	-
PC7. Segregate the design into partitions, assess block placement, and define the functions of each SOC block.	-	-	-	-
Designing for Specifications	**19**	**25**	**-**	**-**
PC8. Use organization-recommended tools, software, and applications to perform designing.	-	-	-	-
PC9. Coordinate with different design teams to finalize the design flow for suitability in verification and testing.	-	-	-	-
PC10. Specify blocks in the system design using concepts of hierarchy and regularity to enable faster synthesis and lower process times.	-	-	-	-
PC11. Demonstrate designing reusable blocks.	-	-	-	-

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
PC12. Define external interfaces to the design system.	-	-	-	-
NOS Total	**40**	**60**	**-**	**-**

National Occupational Standards (NOS) Parameters

NOS Code	ELE/N1427
NOS Name	Developing Functional Design for SOC Modules
Sector	Electronics
Sub-Sector	
Occupation	Product Design-S&C
NSQF Level	5
Credits	10
Version	1.0
Last Reviewed Date	08/05/2025
Next Review Date	30/04/2028
NSQC Clearance Date	08/05/2025

ELE/N1428: Coordinating and Implementing SOC Design Verification and Testing

Description

This NOS unit is about design, code, and synthesize integrated circuit systems using HDLs and high-level languages, while coordinating with verification, testing, and architecture teams to ensure functional and specification-compliant chip design.

Scope

The scope covers the following :

- Coding and Synthesis

Elements and Performance Criteria

Coding and Synthesis

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

PC1. Select languages for designing, such as HDL (Verilog, VHDL) and high-level languages (C, C++).

PC2. Select and specify the coding required for designing in coordination with the architect.

PC3. Identify IP core blocks and their use in the system design.

PC4. Write hardware descriptions of the IC using HDL.

PC5. Build simulated models (e.g., VHDL models) for ASIC designs as per system specifications.

PC6. Interpret and specify different design types, such as high-level design, operative part design, control part design, and memory design.

PC7. Design the logic for the system, including structuring blocks, interconnection patterns, data path structure, and control sequences.

PC8. Coordinate with verification engineers after coding the design system and analyze verification results.

PC9. Collaborate with the backend department of physical design and design-for-test engineers to make design changes based on verification results and system requirements

PC10. Take inputs from the architecture team to specify behavioral requirements for the design and tasks performed by the chip module.

Knowledge and Understanding (KU)

The individual on the job needs to know and understand:

KU1. Knowledge of hardware description languages like Verilog and VHDL and high-level languages like C used in chip design.

KU2. Understanding how to collaborate with architects to define coding strategies for hardware design.

KU3. Familiarity with IP core blocks and their integration into SOC and IC designs.

KU4. Proficiency in writing HDL code to describe hardware components and system behavior.

KU5. Knowledge of simulation techniques for ASIC design using models like VHDL.

KU6. Ability to distinguish between design types such as high-level, control, operative, and memory designs.

KU7. Understanding of digital logic design including data paths, control logic, and interconnects.

KU8. Awareness of verification methodologies and interpreting verification results.

KU9. Knowledge of backend design processes and testability considerations (DFT).

KU10. Understanding behavioral modeling and architectural input integration in system design.

Generic Skills (GS)

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

GS1. Technical communication to effectively collaborate with architects and design teams.

GS2. Analytical thinking to interpret complex design specifications and translate them into code.

GS3. Problem-solving skills for debugging and improving hardware functionality based on simulations.

GS4. Teamwork for efficient coordination with verification, testing, and backend teams.

GS5. Planning and organizing skills to manage coding tasks and simulation milestones.

GS6. Attention to detail in writing precise and optimized HDL code.

GS7. Adaptability to incorporate verification feedback and make iterative design changes.

GS8. Documentation skills for recording design logic, test results, and revisions.

GS9. Initiative to explore and integrate reusable IPs and efficient coding practices.

GS10. Time management for aligning design tasks with verification and architecture inputs.

Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
Coding and Synthesis	**40**	**60**	-	-
PC1. Select languages for designing, such as HDL (Verilog, VHDL) and high-level languages (C, C++).	-	-	-	-
PC2. Select and specify the coding required for designing in coordination with the architect.	-	-	-	-
PC3. Identify IP core blocks and their use in the system design.	-	-	-	-
PC4. Write hardware descriptions of the IC using HDL.	-	-	-	-
PC5. Build simulated models (e.g., VHDL models) for ASIC designs as per system specifications.	-	-	-	-
PC6. Interpret and specify different design types, such as high-level design, operative part design, control part design, and memory design.	-	-	-	-
PC7. Design the logic for the system, including structuring blocks, interconnection patterns, data path structure, and control sequences.	-	-	-	-
PC8. Coordinate with verification engineers after coding the design system and analyze verification results.	-	-	-	-
PC9. Collaborate with the backend department of physical design and design-for-test engineers to make design changes based on verification results and system requirements	-	-	-	-
PC10. Take inputs from the architecture team to specify behavioral requirements for the design and tasks performed by the chip module.	-	-	-	-
NOS Total	**40**	**60**	-	-

Qualification Pack

National Occupational Standards (NOS) Parameters

NOS Code	ELE/N1428
NOS Name	Coordinating and Implementing SOC Design Verification and Testing
Sector	Electronics
Sub-Sector	
Occupation	Product Design-S&C
NSQF Level	5
Credits	7
Version	1.0
Last Reviewed Date	08/05/2025
Next Review Date	30/04/2028
NSQC Clearance Date	08/05/2025

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:

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.

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

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

Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
Introduction to Employability Skills	1	1	-	-
PC1. identify employability skills required for jobs in various industries	-	-	-	-
PC2. identify and explore learning and employability portals	-	-	-	-
Constitutional values – Citizenship	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	-	-	-	-
Becoming a Professional in the 21st Century	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	-	-	-	-
Basic English Skills	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	-	-	-	-
Career Development & Goal Setting	1	2	-	-

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	-	-	-	-
Communication Skills	**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	-	-	-	-
Diversity & Inclusion	**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	-	-	-	-
Financial and Legal Literacy	**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	-	-	-	-
Essential Digital Skills	**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	-	-	-	-

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
Entrepreneurship	**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	-	-	-	-
Customer Service	**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	-	-	-	-
Getting ready for apprenticeship & Jobs	**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**	**-**	**-**

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	08/05/2025
Next Review Date	31/10/2025
NSQC Clearance Date	08/05/2025

Assessment Guidelines and Assessment Weightage

Assessment Guidelines

1. Criteria for assessment for each Qualification Pack will be created by the Sector Skill Council. Each Element/ 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 Element/ 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 these criteria.

6. To pass the Qualification Pack assessment, every trainee should score the Recommended Pass % aggregate for the QP.

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
ELE/N1427.Developing Functional Design for SOC Modules	40	60	-	-	100	40
ELE/N1428.Coordinating and Implementing SOC Design Verification and Testing	40	60	-	-	100	40
DGT/VSQ/N0102.Employability Skills (60 Hours)	20	30	-	-	50	20
Total	**100**	**150**	**-**	**-**	**250**	**100**

Acronyms

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

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.