









Assistant Robotics Technician (Introduction)

QP Code: ELE/Q7203

Version: 1.0

NSQF Level: 3

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







Contents

| ELE/Q7203: Assistant Robotics Technician (Introduction) | 3 |
|---|-----|
| Brief Job Description | 3 |
| Applicable National Occupational Standards (NOS) | |
| Compulsory NOS | 3 |
| Qualification Pack (QP) Parameters | . 3 |
| ELE/N9972: Communicate and coordinate effectively with others | 5 |
| DGT/VSQ/N0102: Employability Skills (60 Hours) | 9 |
| ELE/N3174: Carry out setup of small-scale robotics system | 17 |
| ELE/N3175: Testing of small-scale robotics system | 21 |
| Assessment Guidelines and Weightage | 24 |
| Assessment Guidelines | 24 |
| Assessment Weightage | 24 |
| Acronyms | 26 |
| Glossary | |







ELE/Q7203: Assistant Robotics Technician (Introduction)

Brief Job Description

Assistant Robotics Technician carries out the setup for Testing of small-scale robotics systems followed by its Inspection for desired and rated functionality, while ensuring adherence to standard working practices.

Personal Attributes

The role of the individual is to understand the various parts of a small-scale robotic systems such as robotics arms and rovers used for various applications, testing and learning how to control them. This job role would help them be ready for a job in the small-scale robotics systems industry assisting senior robotics technicians.

Applicable National Occupational Standards (NOS)

Compulsory NOS:

- 1. ELE/N9972: Communicate and coordinate effectively with others
- 2. DGT/VSQ/N0102: Employability Skills (60 Hours)
- 3. ELE/N3174: Carry out setup of small-scale robotics system
- 4. ELE/N3175: Testing of small-scale robotics system

Qualification Pack (QP) Parameters

| Sector | Electronics |
|-------------------------------|-------------------------|
| Sub-Sector | Industrial Automation |
| Occupation | After Sales Service-I&A |
| Country | India |
| NSQF Level | 3 |
| Credits | 14 |
| Aligned to NCO/ISCO/ISIC Code | NCO-2015/3139.1400 |









| Minimum Educational Qualification & Experience | 10th grade pass OR 9th grade pass with 1 Year of experience relevant Experience | | | |
|---|--|--|--|--|
| Minimum Level of Education for Training in School | 9th Class | | | |
| Pre-Requisite License or Training | NA | | | |
| Minimum Job Entry Age | 18 Years | | | |
| Last Reviewed On | ΝΑ | | | |
| Next Review Date | 31/01/2027 | | | |
| NSQC Approval Date | 31/01/2024 | | | |
| Version | 1.0 | | | |
| Reference code on NQR | QG-03-EH-01992-2024-V1-ESSC | | | |
| NQR Version | 1.0 | | | |







ELE/N9972: Communicate and coordinate effectively with others

Description

This unit is about effective, respectful communication and coordination with supervisors and colleagues

Scope

The scope covers the following :

- Communicate effectively with supervisor and colleagues
- Respect gender and ability differences

Elements and Performance Criteria

Communicate effectively with supervisor and colleagues

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

- PC1. communicate potential hazards of a particular location
- PC2. comply with organisation's policies and procedures for working with colleagues
- PC3. maintain personal hygiene and professional appearance
- PC4. seek clarification on the information provided by supervisor, if needed
- PC5. respect the personal and professional space of colleagues and superiors
- **PC6.** report work completed as per the schedule to superior and inform of any deviations or anomalies
- PC7. analyse and act on feedback received from supervisor

Respect gender and ability differences

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

- PC8. work depicting proper behaviour towards all genders and people with disability
- PC9. identify acts of discrimination and sexual harassment and report to concerned authorities

Knowledge and Understanding (KU)

The individual on the job needs to know and understand:

- KU1. importance of personal grooming
- KU2. organisation's policy on code of conduct
- KU3. organisation's reporting structure and documentation policy
- **KU4.** how to communicate effectively through all means including face-to-face, telephonic as well as written
- **KU5.** different types of information that colleagues might need and the importance of providing the same as and when required
- **KU6.** rights and duties w.r.t PwD at workplace
- **KU7.** organisation policies and standards to support PwD









- **KU8.** gender and disability based concepts or issues such as social and cultural bias, gender roles stereotypes, gender inequality and discrimination, especially for women and transgender
- KU9. organisation grievance redressal mechanisms and related legislations
- KU10. health and safety precautions for all individuals, including PwD at workplace

Generic Skills (GS)

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

- **GS1.** listen actively and carefully in all interactions
- GS2. communicate politely under all circumstances
- GS3. report potential areas of disruptions to work process in writing or in person
- GS4. maintain positive and effective relationships with others
- **GS5.** decide when to report to supervisor and when to deal with a colleague depending on the type of concern
- GS6. receive and act on supervisor's feedback in a constructive manner
- **GS7.** speak, listen, and write using gender-inclusive or gender-neutral terms and gestures
- **GS8.** be aware and accountable of ones own gender identity and role, as well as beliefs and practices about disability







Assessment Criteria

| Assessment Criteria for Outcomes | Theory Marks | Practical Marks | Project Marks | Viva Marks |
|---|-----------------|--------------------|------------------|---------------|
| Communicate effectively with supervisor and colleagues | 27 | 51 | - | - |
| PC1. communicate potential hazards of a particular location | 4 | 7 | - | - |
| PC2. comply with organisation's policies and procedures for working with colleagues | 4 | 7 | - | - |
| PC3. maintain personal hygiene and professional appearance | 4 | 7 | - | - |
| PC4. seek clarification on the information provided by supervisor, if needed | 4 | 8 | - | - |
| PC5. respect the personal and professional space of colleagues and superiors | 3 | 8 | - | - |
| PC6. report work completed as per the schedule to superior and inform of any deviations or anomalies | 4 | 7 | - | - |
| PC7. analyse and act on feedback received from supervisor | 4 | 7 | - | - |
| Respect gender and ability differences | 8 | 14 | - | - |
| PC8. work depicting proper behaviour towards all genders and people with disability | 4 | 7 | - | - |
| PC9. identify acts of discrimination and sexual harassment and report to concerned authorities | 4 | 7 | - | - |
| NOS Total | 35 | 65 | - | - |







National Occupational Standards (NOS) Parameters

| NOS Code | ELE/N9972 |
|---------------------|--|
| NOS Name | Communicate and coordinate effectively with others |
| Sector | Electronics |
| Sub-Sector | Generic |
| Occupation | Generic - Organizational Behaviour |
| NSQF Level | 3 |
| Credits | TBD |
| Version | 2.0 |
| Last Reviewed Date | 31/01/2024 |
| Next Review Date | 31/01/2027 |
| NSQC Clearance Date | 31/01/2024 |







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 | 31/01/2024 |
| Next Review Date | 31/01/2027 |
| NSQC Clearance Date | 31/01/2024 |







ELE/N3174: Carry out setup of small-scale robotics system

Description

A Junior Robotics Technician carries out the setup of small-scale robotics systems, as per the customised requirements.

Scope

The scope covers the following :

- Understanding the components, operational basics of a Small-scale Robotics system,
- Understanding basic motion principles of a robotics system through a fundamental mobile control application

Elements and Performance Criteria

Understanding the components, operational basics of a Small-scale Robotics system

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

- **PC1.** Identify different parts of a small-scale robotics system
- **PC2.** Knowing basic operations of a small-scale robotics system such as Robotics Arms and rovers and rational of parts used
- PC3. Understand the purpose of each component used in a small -scale Robotics system
- PC4. Understand the fitting mechanisms and right tools needed for the fitting/assembly

Understanding basic motion principles of a robotics system through a fundamental mobile control application

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

- PC5. Understand the purpose of the different parts of a small-scale robotics system
- PC6. Understand concept of degrees of freedom of a small-scale robotics system
- **PC7.** Understand concepts of motion control of a small-scale robotics systems
- PC8. Understand sensor interfacing with a small-scale robotics system

Knowledge and Understanding (KU)

The individual on the job needs to know and understand:

- KU1. Organisational policies on incentives and personnel management
- KU2. Importance of the individual's role in the workflow
- **KU3.** Reporting structure followed in the organisation
- KU4. Organisations portfolio of products
- KU5. Organisational policy on product's warranty and other terms and conditions
- KU6. Manufacturer guidelines for starting and shutting down the robot safely
- KU7. Standard work practices for disassembling and assembling the robot







Generic Skills (GS)

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

- **GS1.** Write common words/signs and set phrases used in the work
- GS2. Prepare checklists, reports and fill out forms in local language or English/ Hindi maintain
 work related notes and records
- GS3. Measure various dimensions as per task requirements
- GS4. Perform arithmetic calculations of addition, subtraction, multiplication and division processes
- **GS5.** Read and interpret information (symbols, dimensions, terminology, dates etc.) given • language







Assessment Criteria

| Assessment Criteria for Outcomes | Theory Marks | Practical Marks | Project Marks | Viva Marks |
|---|-----------------|--------------------|------------------|---------------|
| <i>Understanding the components, operational basics of a Small-scale Robotics system</i> | 20 | 30 | - | - |
| PC1. Identify different parts of a small-scale robotics system | 4 | 8 | - | - |
| PC2. Knowing basic operations of a small-scale robotics system such as Robotics Arms and rovers and rational of parts used | 4 | 8 | - | _ |
| PC3. Understand the purpose of each component used in a small -scale Robotics system | 6 | 8 | - | - |
| PC4. Understand the fitting mechanisms and right tools needed for the fitting/assembly | 6 | 6 | - | - |
| Understanding basic motion principles of a robotics system through a fundamental mobile control application | 20 | 30 | - | - |
| PC5. Understand the purpose of the different parts of a small-scale robotics system | 8 | 8 | - | - |
| PC6. Understand concept of degrees of freedom of a small-scale robotics system | 6 | 8 | - | - |
| PC7. Understand concepts of motion control of a small-scale robotics systems | 4 | 8 | - | - |
| PC8. Understand sensor interfacing with a small-scale robotics system | 2 | 6 | - | - |
| NOS Total | 40 | 60 | - | - |









National Occupational Standards (NOS) Parameters

| NOS Code | ELE/N3174 |
|---------------------|--|
| NOS Name | Carry out setup of small-scale robotics system |
| Sector | Electronics |
| Sub-Sector | Industrial Automation |
| Occupation | After Sales Service |
| NSQF Level | 3 |
| Credits | 5 |
| Version | 1.0 |
| Last Reviewed Date | 31/01/2024 |
| Next Review Date | 31/01/2027 |
| NSQC Clearance Date | 31/01/2024 |







ELE/N3175: Testing of small-scale robotics system

Description

Testing of small-scale robotics systems followed by its Inspection for desired and rated functionality, while ensuring adherence to standard working practices.

Scope

The scope covers the following :

- Performing Checks and Repair,
- Reporting to superior

Elements and Performance Criteria

Performing Checks and Repair

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

- **PC1.** Inspect the functional components of a robotics system thoroughly by connecting to an external power source, using multi meters and other tools etc.
- **PC2.** Testing the robotics components as per desirable industry practices as per drawings
- **PC3.** Pre-test that the small-scale robotics systems is working desirably as per the rated norms/specifications

Reporting to superior

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

- PC4. Inform on the workload and completion status
- PC5. Report work status through proper documentation as per organisational standards
- PC6. Intimate the problems unresolved during assembly, with reason
- PC7. Prepare the feedback form on customer installation with respect to the product deployment

Knowledge and Understanding (KU)

The individual on the job needs to know and understand:

- KU1. Troubleshooting methods
- KU2. Inspection techniques and various checks for identification of faulty components
- **KU3.** Various tests and their procedures for checking the robot
- **KU4.** Usage of various tools for repairing the robot such as multi meter, soldering gun etc.
- KU5. Techniques for repairing and replacing the faulty robot components
- **KU6.** Installation of various types of electronics components in robot
- KU7. Documentation performed during the entire process
- KU8. Applicable safety and quality standards during the entire process

Generic Skills (GS)

NSQC Approved || Electronics Sector Skills Council of India







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

- **GS1.** Read the relevant literature to get the latest updates about the field of work
- **GS2.** Communicate politely and professionally
- **GS3.** Listen attentively to understand the information being shared
- **GS4.** Take quick decisions to deal with work emergencies or accidents
- GS5. Identify possible disruptions to work and take appropriate preventive







Assessment Criteria

| Assessment Criteria for Outcomes | Theory Marks | Practical Marks | Project Marks | Viva Marks |
|--|-----------------|--------------------|------------------|---------------|
| Performing Checks and Repair | 20 | 40 | - | - |
| PC1. Inspect the functional components of a robotics system thoroughly by connecting to an external power source, using multi meters and other tools etc. | 4 | 10 | - | - |
| PC2. Testing the robotics components as per desirable industry practices as per drawings | 8 | 20 | - | - |
| PC3. Pre-test that the small-scale robotics systems is working desirably as per the rated norms/specifications | 8 | 10 | - | - |
| Reporting to superior | 20 | 20 | - | - |
| PC4. Inform on the workload and completion status | 4 | 6 | - | - |
| PC5. Report work status through proper documentation as per organisational standards | 8 | 4 | - | - |
| PC6. Intimate the problems unresolved during assembly, with reason | 4 | 6 | - | - |
| PC7. Prepare the feedback form on customer installation with respect to the product deployment | 4 | 4 | - | - |
| NOS Total | 40 | 60 | - | - |







National Occupational Standards (NOS) Parameters

| NOS Code | ELE/N3175 |
|---------------------|--|
| NOS Name | Testing of small-scale robotics system |
| Sector | Electronics |
| Sub-Sector | Industrial Automation |
| Occupation | After Sales Service |
| NSQF Level | 3 |
| Credits | 6 |
| Version | 1.0 |
| Last Reviewed Date | 31/01/2024 |
| Next Review Date | 31/01/2027 |
| NSQC Clearance Date | 31/01/2024 |

Assessment Guidelines and Assessment Weightage

Assessment Guidelines

As per the Assessment Guideline.

Minimum Aggregate Passing % at QP Level : 50

(**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/N9972.Communicate and coordinate effectively with others | 35 | 65 | - | - | 100 | 10 |
| DGT/VSQ/N0102.Employability Skills (60 Hours) | 20 | 30 | - | - | 50 | 10 |
| ELE/N3174.Carry out setup of small-scale robotics system | 40 | 60 | - | - | 100 | 40 |
| ELE/N3175.Testing of small- scale robotics system | 40 | 60 | - | - | 100 | 40 |
| Total | 135 | 215 | - | - | 350 | 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. |