









Assistant Technician - Weighing & Measuring Machine

QP Code: ELE/Q3126

Version: 1.0

NSQF Level: 3

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Contents

ELE/Q3126: Assistant Technician - Weighing & Measuring Machine	3
Brief Job Description	
Applicable National Occupational Standards (NOS)	3
Compulsory NOS	3
Qualification Pack (QP) Parameters	
ELE/N3172: Repairing of the Weighing & Measuring Machine	5
ELE/N3173: Performance & Calibration of Weighing & Measuring Machine	9
DGT/VSQ/N0102: Employability Skills (60 Hours)	13
Assessment Guidelines and Weightage	20
Assessment Guidelines	20
Assessment Weightage	20
Acronyms	
Glossary	23







ELE/Q3126: Assistant Technician - Weighing & Measuring Machine

Brief Job Description

An Assistant Technician - Weighing & Measuring Machine will have the ability to identify problems and rectify the defects and calibrate as per the statuary requirements in the weighing & measuring machines. The person will be skilled in systematic troubleshooting using both observation and diagnostic tools to pinpoint issues accurately

Personal Attributes

The individual must have attention to detail, logical thinking, and ability to execute the Maintenance, Troubleshoots as per client's requirement.

Applicable National Occupational Standards (NOS)

Compulsory NOS:

- 1. ELE/N3172: Repairing of the Weighing & Measuring Machine
- 2. ELE/N3173: Performance & Calibration of Weighing & Measuring Machine
- 3. DGT/VSQ/N0102: Employability Skills (60 Hours)

Qualification Pack (QP) Parameters

Sector	Electronics
Sub-Sector	Consumer Electronics & IT Hardware
Occupation	After Sales Service
Country	India
NSQF Level	3
Credits	11
Aligned to NCO/ISCO/ISIC Code	NCO-2015/8212.0400









Minimum Educational Qualification & Experience	8th grade pass (with 2 Year of NTC) OR 8th grade pass with 2 Years of experience Relevant experience OR 9th grade pass with 1 Year of experience Relevant Experience OR 10th grade pass
Minimum Level of Education for Training in School	8th Class
Pre-Requisite License or Training	ΝΑ
Minimum Job Entry Age	18 Years
Last Reviewed On	NA
Next Review Date	31/08/2026
NSQC Approval Date	31/08/2023
Version	1.0
Reference code on NQR	QC-03-EH-00816-2023-V1-ESSC
NQR Version	1.0







ELE/N3172: Repairing of the Weighing & Measuring Machine

Description

This unit is about the diagnosing, Troubleshoot & fixing any type of the fault in the weighing & measuring machine.

Scope

The scope covers the following :

- Understanding of Weighing & Measuring Machines
- Troubleshooting

Elements and Performance Criteria

Understanding of Weighing & Measuring Machines

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

- PC1. Basic understanding of Weighing & Measuring Machine
- PC2. Types of Weighing Machines
- PC3. Understanding of various classes of Weighing Machine
- PC4. Understanding of the Working of Weighing Machine
- PC5. Knowledge of Mechanical, Electrical & Electronic Components
- PC6. Knowledge of various Tools and Equipment
- PC7. Basic understanding of related programming skills

Troubleshooting

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

- PC8. Basic understanding of Troubleshooting Skills, Calibration Techniques, Analytical Skills
- PC9. Identification of the faults based on the class of the Weighing Machine
- PC10. Adhering to the Statuary Compliance and Protocols of the Legal Meteorological Department
- PC11. Replacement of the faulty components
- PC12. Troubleshooting of the faulty parts
- PC13. Document maintenance and preparation log
- PC14. Adhere to Safety Precautions and Awareness

Knowledge and Understanding (KU)

The individual on the job needs to know and understand:

- KU1. company policies on customer care, code of conduct, reporting structure and documentation
- KU2. company sales and after sales support policy
- **KU3.** packaging waste disposal procedures
- KU4. company policy on products warranty and other terms and conditions









- KU5. Understanding of Oscilloscope for frequency meter.
- **KU6.** Different types of weighing machine.
- **KU7.** Basic of electronics such as active & passive components.
- KU8. Safety precautions to be taken while repairing
- KU9. Manual-based procedure of repairing & servicing the weighing machine
- KU10. Knowledge of related software & hardware
- **KU11.** Knowledge of wiring and connection of weighing & measuring machine
- **KU12.** different features and functionalities of weighing & measuring machine.

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
- 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
- **GS6.** Read the relevant literature to get the latest updates about the work
- GS7. Communicate politely and professionally
- GS8. Listen attentively to understand the information being shared
- GS9. Take quick decisions to deal with work emergencies or accidents
- GS10. Identify possible disruptions to work and take appropriate preventive measures
- GS11. Evaluate all possible solutions to a problem to select the best one







Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
Understanding of Weighing & Measuring Machines	14	28	-	7
PC1. Basic understanding of Weighing & Measuring Machine	1	2	-	1
PC2. Types of Weighing Machines	2	3	-	1
PC3. Understanding of various classes of Weighing Machine	1	3	-	1
PC4. Understanding of the Working of Weighing Machine	3	6	-	1
PC5. Knowledge of Mechanical, Electrical & Electronic Components	3	6	-	-
PC6. Knowledge of various Tools and Equipment	2	4	-	2
PC7. Basic understanding of related programming skills	2	4	-	1
Troubleshooting	16	32	-	3
PC8. Basic understanding of Troubleshooting Skills, Calibration Techniques, Analytical Skills	3	6	-	-
PC9. Identification of the faults based on the class of the Weighing Machine	2	4	-	1
PC10. Adhering to the Statuary Compliance and Protocols of the Legal Meteorological Department	2	4	-	1
PC11. Replacement of the faulty components	2	4	-	-
PC12. Troubleshooting of the faulty parts	2	4	-	-
PC13. Document maintenance and preparation log	2	4	-	_
PC14. Adhere to Safety Precautions and Awareness	3	6	-	1
NOS Total	30	60	-	10









National Occupational Standards (NOS) Parameters

NOS Code	ELE/N3172
NOS Name	Repairing of the Weighing & Measuring Machine
Sector	Electronics
Sub-Sector	Consumer Electronics & IT Hardware
Occupation	After Sales Service
NSQF Level	3
Credits	4
Version	1.0
Last Reviewed Date	31/08/2023
Next Review Date	31/08/2026
NSQC Clearance Date	31/08/2023







ELE/N3173: Performance & Calibration of Weighing & Measuring Machine

Description

The person will be skilled in systematic calibration as per the RRSL (Regional Reference Standards Laboratory) guideline.

Scope

The scope covers the following :

- Calibration
- Protocols

Elements and Performance Criteria

Calibration

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

- PC1. Knowledge of Test Weight
- PC2. Testing of Weighing Machine
- PC3. Quality inspection of the Weighing Machine
- PC4. Calibration of the Weighing Machine

Protocols

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

- PC5. Verification & Stamping of the Weighing Machine
- PC6. Knowledge of Model Approval by RRSL (Regional Reference Standards Laboratory)
- **PC7.** Process of Certificate of the Prototype
- PC8. Process of Renewal of the Certificate

Knowledge and Understanding (KU)

The individual on the job needs to know and understand:

- KU1. Knowledge to understand Electronic Hardware related issue
- KU2. Knowledge of the various protocol for calibration
- KU3. Organization's portfolio of products
- KU4. organisational policy on product's warranty and other terms and conditions
- KU5. Learn how to integrate software and hardware

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
- **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
- **GS6.** Read the relevant literature to get the latest updates about the field work
- **GS7.** Communicate politely and professionally
- **GS8.** Listen attentively to understand the information being shared
- GS9. Take quick decisions to deal with work emergencies or accidents
- GS10. Identify possible disruptions to work and take appropriate preventive measures
- GS11. Evaluate all possible solutions to a problem to select the best one







Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
Calibration	11	33	-	11
PC1. Knowledge of Test Weight	2	6	-	2
PC2. Testing of Weighing Machine	3	9	-	3
PC3. Quality inspection of the Weighing Machine	3	9	-	3
PC4. Calibration of the Weighing Machine	3	9	-	3
Protocols	9	27	-	9
PC5. Verification & Stamping of the Weighing Machine	2	6	-	2
PC6. Knowledge of Model Approval by RRSL (Regional Reference Standards Laboratory)	3	9	-	3
PC7. Process of Certificate of the Prototype	2	6	-	2
PC8. Process of Renewal of the Certificate	2	6	-	2
NOS Total	20	60	-	20







National Occupational Standards (NOS) Parameters

NOS Code	ELE/N3173
NOS Name	Performance & Calibration of Weighing & Measuring Machine
Sector	Electronics
Sub-Sector	Consumer Electronics & IT Hardware
Occupation	After Sales Service
NSQF Level	3
Credits	5
Version	1.0
Last Reviewed Date	31/08/2023
Next Review Date	31/08/2026
NSQC Clearance Date	31/08/2023







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	31/12/2021
Next Review Date	31/12/2024
NSQC Clearance Date	31/12/2021

Assessment Guidelines and Assessment Weightage

Assessment Guidelines

Same as per the Qualification

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/N3172.Repairing of the Weighing & Measuring Machine	30	60	0	10	100	40
ELE/N3173.Performance & Calibration of Weighing & Measuring Machine	20	60	0	20	100	40
DGT/VSQ/N0102.Employability Skills (60 Hours)	20	30	-	-	50	20
Total	70	150	-	30	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.