



Qualification Pack

Jr. TECHNICIAN (PCB FABRICATION)

QP Code: MSME/ELE/Q1901

Version: 1.0

NSQF Level: 3.0

MSME TECHNOLOGY CENTRE ||
B-36 CHANDAKA INDUSTRIAL AREA || email:msmeexamcell@gmail.com



Qualification Pack

Contents

MSME/ELE/Q1901: Jr. TECHNICIAN (PCB FABRICATION)	3
<i>Brief Job Description</i>	3
Applicable National Occupational Standards (NOS)	3
<i>Compulsory NOS</i>	3
<i>Qualification Pack (QP) Parameters</i>	3
MSME/ELE/N1904: Perform Mechanical & Chemical Operation to Manufacture PCB	5
MSME/ELE/N1903: Designing of PCB using CAD/CAM software	10
MSME/ELE/N1902: Designing of PCB using CAD/CAM software	15
MSME/ELE/N1901: Acquire the concepts of Basic Electronics	19
MSME/ELE/N1905: Employability skills	23
Assessment Guidelines and Weightage	28
<i>Assessment Guidelines</i>	28
<i>Assessment Weightage</i>	28
Acronyms	30
Glossary	31



Qualification Pack

MSME/ELE/Q1901: Jr. TECHNICIAN (PCB FABRICATION)

Brief Job Description

After attaining this qualification, Learners shall be able to Carry out assemble of upto 2 sides PCB given in the circuit and PCB requirements

Personal Attributes

After attaining this qualification, Learners shall be able to Carry out assemble of upto 2 sides PCB given in the circuit and PCB requirements

Applicable National Occupational Standards (NOS)

Compulsory NOS:

1. [MSME/ELE/N1904: Perform Mechanical & Chemical Operation to Manufacture PCB](#)
2. [MSME/ELE/N1903: Designing of PCB using CAD/CAM software](#)
3. [MSME/ELE/N1902: Designing of PCB using CAD/CAM software](#)
4. [MSME/ELE/N1901: Acquire the concepts of Basic Electronics](#)
5. [MSME/ELE/N1905: Employability skills](#)

Qualification Pack (QP) Parameters

Sector	Electronics
Sub-Sector	Strategic Electronics
Occupation	Manufacturing
Country	India
NSQF Level	3.0
Credits	20
Aligned to NCO/ISCO/ISIC Code	PCB Assembly Operator



Qualification Pack

Minimum Educational Qualification & Experience	10th grade pass with NA of experience OR Grade 8 pass with 2 years of (NTC/ NAC) after 8th with NA of experience OR Previous relevant Qualification of NSQF Level 2.5 with 1.5 years of experience
Minimum Level of Education for Training in School	
Pre-Requisite License or Training	NA
Minimum Job Entry Age	15 Years
Last Reviewed On	30/04/2024
Next Review Date	30/04/2027
NSQC Approval Date	30/04/2024
Version	1.0
Reference code on NQR	NCVET- QG-03-EH-02381-2024-V1-MSME
NQR Version	1.0



Qualification Pack

MSME/ELE/N1904: Perform Mechanical & Chemical Operation to Manufacture PCB

Description

After completion of course Student should be able to perform Plan sheet cutting.

Scope

The scope covers the following :

- After completion of course Student should be able to perform Plan sheet cutting.

Elements and Performance Criteria

MSME/CCPCBF/04 Perform Mechanical & Chemical Operation to Manufacture PCB

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

- PC1.** Plan sheet cutting
- PC2.** Cut sheets by using shearing machine.
- PC3.** Make mounting holes/slots by using punching machine.
- PC4.** Final cutting by using angular cutting machine.
- PC5.** Drill manually using drilling machine.
- PC6.** CNC programming.
- PC7.** CNC drilling.
- PC8.** CNC routing.
- PC9.** Knows the materials used in HAL machine.
- PC10.** Understand how to flux before tinning.
- PC11.** Understand how to tin on single as well as double side PCB.
- PC12.**
 - Remove the oxidation layer from copper surface by manual cleaning,
 - chemical process.
- PC13.** Remove the oxidation layer from copper surface by chemical process.
- PC14.** Remove unwanted copper by using etching process.
- PC15.** Spray etching.
- PC16.** Splash etching
- PC17.** Bubble etching.
- PC18.** Tank etching.
- PC19.** Inspect the PCB with the help of BBT technique.
- PC20.** Inspect open circuit and short circuit.
- PC21.** Inspect for over etched/under etched
- PC22.** Inspect hole size.
- PC23.** Inspect hole for conformity with pad.
- PC24.** Inspect for missing/extra hole.



Qualification Pack

PC25. Inspect overall PCB.



Qualification Pack

Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<i>MSME/CCPCBF/04 Perform Mechanical & Chemical Operation to Manufacture PCB</i>	-	100	-	-
PC1. Plan sheet cutting	-	-	-	-
PC2. Cut sheets by using shearing machine.	-	-	-	-
PC3. Make mounting holes/slots by using punching machine.	-	-	-	-
PC4. Final cutting by using angular cutting machine.	-	-	-	-
PC5. Drill manually using drilling machine.	-	-	-	-
PC6. CNC programming.	-	-	-	-
PC7. CNC drilling.	-	-	-	-
PC8. CNC routing.	-	-	-	-
PC9. Knows the materials used in HAL machine.	-	-	-	-
PC10. Understand how to flux before tinning.	-	-	-	-
PC11. Understand how to tin on single as well as double side PCB.	-	-	-	-
PC12. - Remove the oxidation layer from copper surface by manual cleaning, - chemical process.	-	-	-	-
PC13. Remove the oxidation layer from copper surface by chemical process.	-	-	-	-
PC14. Remove unwanted copper by using etching process.	-	-	-	-
PC15. Spray etching.	-	-	-	-
PC16. Splash etching	-	-	-	-
PC17. Bubble etching.	-	-	-	-



Qualification Pack

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
PC18. Tank etching.	-	-	-	-
PC19. Inspect the PCB with the help of BBT technique.	-	-	-	-
PC20. Inspect open circuit and short circuit.	-	-	-	-
PC21. Inspect for over etched/under etched	-	-	-	-
PC22. Inspect hole size.	-	-	-	-
PC23. Inspect hole for conformity with pad.	-	-	-	-
PC24. Inspect for missing/extra hole.	-	-	-	-
PC25. Inspect overall PCB.	-	-	-	-
NOS Total	-	100	-	-



Qualification Pack

National Occupational Standards (NOS) Parameters

NOS Code	MSME/ELE/N1904
NOS Name	Perform Mechanical & Chemical Operation to Manufacture PCB
Sector	Electronics
Sub-Sector	
Occupation	Manufacturing
NSQF Level	3.0
Credits	4
Version	1.0
Last Reviewed Date	30/04/2024
Next Review Date	30/04/2027
NSQC Clearance Date	30/04/2024



Qualification Pack

MSME/ELE/N1903: Designing of PCB using CAD/CAM software

Description

After completion of course Student should be able to perform Define the artworks required to manufacture a PCB.

Scope

The scope covers the following :

- After completion of course Student should be able to perform Define the artworks required to manufacture a PCB.

Elements and Performance Criteria

MSME/CCPCBF/03 Prepare for Image Transfer Technique

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

- PC1.** Define the artworks required to manufacture a PCB.
- PC2.** Read mechanical and drilling drawing.
- PC3.** Name the types of laminates.
- PC4.** Find out the thickness of laminates.
- PC5.** Properties of glass epoxy laminates
- PC6.** Properties of Teflon.
- PC7.** Properties of Aluminum based laminates.
- PC8.** Properties of double sided laminates.
- PC9.** Characteristics of Lith film.
- PC10.** Characteristics and developing of five star films.
- PC11.** Characteristics and developing of Chromoline film.
- PC12.** Characteristics of Photo Polymer Dry Film Resist.
- PC13.** Process for developing and fixing of lith films
- PC14.** Process for making negative and positive films.
- PC15.** Process of retouching of lith films.
- PC16.** Observe precautions to protect the Photo Polymer Dry Film Resist
- PC17.** Carry out process of single side lamination.
- PC18.** Carry out process of double side lamination.
- PC19.** Carry out process of exposing.
- PC20.** Carry out process of developing of dry film.
- PC21.** Fabricate screen.
- PC22.** Select fabrics.
- PC23.** Measure tension of screen.
- PC24.** Prepare stencils.



Qualification Pack

- PC25.** Use squeeze.
- PC26.** Use ink.
- PC27.** Carry out after printing process for drying.
- PC28.** Understand PCB waste management.
- PC29.** Recycle and recovery technique.
- PC30.** Minimize wastages.



Qualification Pack

Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<i>MSME/CCPCBF/03 Prepare for Image Transfer Technique</i>	-	100	-	-
PC1. Define the artworks required to manufacture a PCB.	-	-	-	-
PC2. Read mechanical and drilling drawing.	-	-	-	-
PC3. Name the types of laminates.	-	-	-	-
PC4. Find out the thickness of laminates.	-	-	-	-
PC5. Properties of glass epoxy laminates	-	-	-	-
PC6. Properties of Teflon.	-	-	-	-
PC7. Properties of Aluminum based laminates.	-	-	-	-
PC8. Properties of double sided laminates.	-	-	-	-
PC9. Characteristics of Lith film.	-	-	-	-
PC10. Characteristics and developing of five star films.	-	-	-	-
PC11. Characteristics and developing of Chromoline film.	-	-	-	-
PC12. Characteristics of Photo Polymer Dry Film Resist.	-	-	-	-
PC13. Process for developing and fixing of lith films	-	-	-	-
PC14. Process for making negative and positive films.	-	-	-	-
PC15. Process of retouching of lith films.	-	-	-	-
PC16. Observe precautions to protect the Photo Polymer Dry Film Resist	-	-	-	-
PC17. Carry out process of single side lamination.	-	-	-	-



Qualification Pack

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
PC18. Carry out process of double side lamination.	-	-	-	-
PC19. Carry out process of exposing.	-	-	-	-
PC20. Carry out process of developing of dry film.	-	-	-	-
PC21. Fabricate screen.	-	-	-	-
PC22. Select fabrics.	-	-	-	-
PC23. Measure tension of screen.	-	-	-	-
PC24. Prepare stencils.	-	-	-	-
PC25. Use squeeze.	-	-	-	-
PC26. Use ink.	-	-	-	-
PC27. Carry out after printing process for drying.	-	-	-	-
PC28. Understand PCB waste management.	-	-	-	-
PC29. Recycle and recovery technique.	-	-	-	-
PC30. Minimize wastages.	-	-	-	-
NOS Total	-	100	-	-



Qualification Pack

National Occupational Standards (NOS) Parameters

NOS Code	MSME/ELE/N1903
NOS Name	Designing of PCB using CAD/CAM software
Sector	Electronics
Sub-Sector	
Occupation	Manufacturing
NSQF Level	3.0
Credits	5
Version	1.0
Last Reviewed Date	30/04/2024
Next Review Date	30/04/2027
NSQC Clearance Date	30/04/2024



Qualification Pack

MSME/ELE/N1902: Designing of PCB using CAD/CAM software

Description

After completion of course Student should be able to State rules and regulations of PCB design.

Scope

The scope covers the following :

- After completion of course Student should be able to State rules and regulations of PCB design.

Elements and Performance Criteria

MSME/CCPCBF/02 Designing of PCB using CAD/CAM software

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

- PC1.** State rules and regulations of PCB design.
- PC2.** Place the components.
- PC3.** Minimize the size of PCB.
- PC4.** Convert schematic diagram to layout diagram
- PC5.** Place ground lines and power supply.
- PC6.** Maintain the mounting holes.
- PC7.** Maintain the angular ring.
- PC8.** Maintain the air gaps.
- PC9.** Maintain the track width.
- PC10.** Do tracking
- PC11.** Generate drilling drawing.
- PC12.** Generate mechanical drawings.
- PC13.** Explain CAD fundamentals.
- PC14.** Draw schematic diagram.
- PC15.** Place schematic components
- PC16.** Edit a library path.
- PC17.** Do wiring
- PC18.** Generate netlist.
- PC19.** Placement of component for layout designing
- PC20.** Library editing in layout.
- PC21.** NC Drill file generation.
- PC22.** Gerber file generation.
- PC23.** Convert Design file to Gerber file and vice versa.
- PC24.** How to take printout.



Qualification Pack

Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<i>MSME/CCPCBF/02 Designing of PCB using CAD/CAM software</i>	-	100	-	-
PC1. State rules and regulations of PCB design.	-	-	-	-
PC2. Place the components.	-	-	-	-
PC3. Minimize the size of PCB.	-	-	-	-
PC4. Convert schematic diagram to layout diagram	-	-	-	-
PC5. Place ground lines and power supply.	-	-	-	-
PC6. Maintain the mounting holes.	-	-	-	-
PC7. Maintain the angular ring.	-	-	-	-
PC8. Maintain the air gaps.	-	-	-	-
PC9. Maintain the track width.	-	-	-	-
PC10. Do tracking	-	-	-	-
PC11. Generate drilling drawing.	-	-	-	-
PC12. Generate mechanical drawings.	-	-	-	-
PC13. Explain CAD fundamentals.	-	-	-	-
PC14. Draw schematic diagram.	-	-	-	-
PC15. Place schematic components	-	-	-	-
PC16. Edit a library path.	-	-	-	-
PC17. Do wiring	-	-	-	-
PC18. Generate netlist.	-	-	-	-
PC19. Placement of component for layout designing	-	-	-	-
PC20. Library editing in layout.	-	-	-	-



Qualification Pack

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
PC21. NC Drill file generation.	-	-	-	-
PC22. Gerber file generation.	-	-	-	-
PC23. Convert Design file to Gerber file and vice versa.	-	-	-	-
PC24. How to take printout.	-	-	-	-
NOS Total	-	100	-	-



Qualification Pack

National Occupational Standards (NOS) Parameters

NOS Code	MSME/ELE/N1902
NOS Name	Designing of PCB using CAD/CAM software
Sector	Electronics
Sub-Sector	
Occupation	Manufacturing
NSQF Level	3.0
Credits	7
Version	1.0
Last Reviewed Date	30/04/2024
Next Review Date	30/04/2027
NSQC Clearance Date	30/04/2024



Qualification Pack

MSME/ELE/N1901: Acquire the concepts of Basic Electronics

Description

After completion of course Student should be able to Follow safety rules.

Scope

The scope covers the following :

- After completion of course Student should be able to Follow safety rules.

Elements and Performance Criteria

MSME/EET/01 Acquire the concepts of Basic Electronics

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

- PC1.** Follow safety rules.
- PC2.** Lab Safety procedure.
- PC3.** Lab accidents and precautions.
- PC4.** Explain structure of matters.
- PC5.** Explain the working principles of cells and batteries.
- PC6.** Calculate the value of resistance with the colour code.
- PC7.** Explain semi-conductor theory.
- PC8.** Explain working principal of diode and its uses.
- PC9.** Explain working principal of transistor and its uses.
- PC10.** Test the electronic component as per its specifications.
- PC11.** State the need and importance of symbols.
- PC12.**
 - Draw and identify the symbols for components and instrument used in
 - electronic assembly
- PC13.** Use of various electronic instruments
- PC14.** Explain the binary number system
- PC15.** Convert number from one number system to other.
- PC16.** Explain the logic families (Nomenclature and brief features).
- PC17.** Identify different packaging system.
- PC18.** Describe logic rules
- PC19.** Explain digital logic system
- PC20.** Draw basic logic symbols.



Qualification Pack

Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<i>MSME/EET/01 Acquire the concepts of Basic Electronics</i>	100	-	-	-
PC1. Follow safety rules.	-	-	-	-
PC2. Lab Safety procedure.	-	-	-	-
PC3. Lab accidents and precautions.	-	-	-	-
PC4. Explain structure of matters.	-	-	-	-
PC5. Explain the working principles of cells and batteries.	-	-	-	-
PC6. Calculate the value of resistance with the colour code.	-	-	-	-
PC7. Explain semi-conductor theory.	-	-	-	-
PC8. Explain working principal of diode and its uses.	-	-	-	-
PC9. Explain working principal of transistor and its uses.	-	-	-	-
PC10. Test the electronic component as per its specifications.	-	-	-	-
PC11. State the need and importance of symbols.	-	-	-	-
PC12. • Draw and identify the symbols for components and instrument used in • electronic assembly	-	-	-	-
PC13. Use of various electronic instruments	-	-	-	-
PC14. Explain the binary number system	-	-	-	-
PC15. Convert number from one number system to other.	-	-	-	-
PC16. Explain the logic families (Nomenclature and brief features).	-	-	-	-



Qualification Pack

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
PC17. Identify different packaging system.	-	-	-	-
PC18. Describe logic rules	-	-	-	-
PC19. Explain digital logic system	-	-	-	-
PC20. Draw basic logic symbols.	-	-	-	-
NOS Total	100	-	-	-



Qualification Pack

National Occupational Standards (NOS) Parameters

NOS Code	MSME/ELE/N1901
NOS Name	Acquire the concepts of Basic Electronics
Sector	Electronics
Sub-Sector	
Occupation	Manufacturing
NSQF Level	3
Credits	3
Version	1.0
Last Reviewed Date	30/04/2024
Next Review Date	30/04/2027
NSQC Clearance Date	30/04/2024



Qualification Pack

MSME/ELE/N1905: Employability skills

Description

This NOS unit is about carrying out operations about learners applying basic and advanced Employability Skills concepts in real life situations to become a successful 21st century professional

Scope

The scope covers the following :

- The scope covers the following:
- plan and prepare advance employability skills activities
- carry out the work to plan and prepare the learners to build key knowledge and skills for career
- development in the 21st century using advanced employability skills
- documenting the record

Elements and Performance Criteria

MSME/ES/01 Employability Skills

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

- PC1.** • Discuss the importance of Employability Skills in meeting the job requirements.
- PC2.** • Explain constitutional values, civic rights, duties, citizenship, responsibility towards society etc. that are required to be followed to become a responsible citizen.
- PC3.** Show how to practice different environmentally sustainable practices
- PC4.** Discuss 21st century skills.
- PC5.** • Display positive attitude, self -motivation, problem solving, time management skills and continuous learning mindset in different situations.
- PC6.** Use appropriate basic English sentences/phrases while speaking.
- PC7.** • Demonstrate how to communicate in a well -mannered way with others.
- PC8.** Demonstrate working with others in a team.
- PC9.** Show how to conduct oneself appropriately with all genders and PwD
- PC10.** Discuss the significance of reporting sexual harassment issues in time
- PC11.** • Discuss the significance of using financial products and services safely and securely.
- PC12.** Explain the importance of managing expenses, income, and savings.
- PC13.** • Explain the significance of approaching the concerned authorities in time for any exploitation as per legal rights and laws.
- PC14.** • Show how to operate digital devices and use the associated applications and features, safely and securely.
- PC15.** • Discuss the significance of using internet for browsing, accessing social media platforms, safely and Securely.



Qualification Pack

- PC16.** • Discuss the need for identifying opportunities for potential business,
• sources for arranging money and potential legal and financial
• challenges.
- PC17.** Differentiate between types of customers.
- PC18.** • Explain the significance of identifying customer needs and addressing
• them.
- PC19.** • Discuss the significance of maintaining hygiene and dressing
• appropriately.
- PC20.** Create a biodata
- PC21.** Use various sources to search and apply for jobs
- PC22.** • Discuss the significance of dressing up neatly and maintaining hygiene
• for an interview
- PC23.** Discuss how to search and register for apprenticeship opportunities



Qualification Pack

Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<i>MSME/ES/01 Employability Skills</i>	100	-	-	-
PC1. • Discuss the importance of Employability Skills in meeting the job requirements.	-	-	-	-
PC2. • Explain constitutional values, civic rights, duties, citizenship, • responsibility towards society etc. that are required to be followed to • become a responsible citizen.	-	-	-	-
PC3. Show how to practice different environmentally sustainable practices	-	-	-	-
PC4. Discuss 21st century skills.	-	-	-	-
PC5. • Display positive attitude, self -motivation, problem solving, time • management skills and continuous learning mindset in different • situations.	-	-	-	-
PC6. Use appropriate basic English sentences/phrases while speaking.	-	-	-	-
PC7. • Demonstrate how to communicate in a well -mannered way with • others.	-	-	-	-
PC8. Demonstrate working with others in a team.	-	-	-	-
PC9. Show how to conduct oneself appropriately with all genders and PwD	-	-	-	-
PC10. Discuss the significance of reporting sexual harassment issues in time	-	-	-	-
PC11. • Discuss the significance of using financial products and services safely • and securely.	-	-	-	-



Qualification Pack

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
PC12. Explain the importance of managing expenses, income, and savings.	-	-	-	-
PC13. - Explain the significance of approaching the concerned authorities in - time for any exploitation as per legal rights and laws.	-	-	-	-
PC14. - Show how to operate digital devices and use the associated - applications and features, safely and securely.	-	-	-	-
PC15. - Discuss the significance of using internet for browsing, accessing social - media platforms, safely and Securely.	-	-	-	-
PC16. - Discuss the need for identifying opportunities for potential business, - sources for arranging money and potential legal and financial - challenges.	-	-	-	-
PC17. Differentiate between types of customers.	-	-	-	-
PC18. - Explain the significance of identifying customer needs and addressing - them.	-	-	-	-
PC19. - Discuss the significance of maintaining hygiene and dressing - appropriately.	-	-	-	-
PC20. Create a biodata	-	-	-	-
PC21. Use various sources to search and apply for jobs	-	-	-	-
PC22. - Discuss the significance of dressing up neatly and maintaining hygiene - for an interview	-	-	-	-



Qualification Pack

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
PC23. Discuss how to search and register for apprenticeship opportunities	-	-	-	-
NOS Total	100	-	-	-



Qualification Pack

National Occupational Standards (NOS) Parameters

NOS Code	MSME/ELE/N1905
NOS Name	Employability skills
Sector	Electronics
Sub-Sector	
Occupation	Manufacturing
NSQF Level	3.0
Credits	1
Version	1.0
Last Reviewed Date	30/04/2024
Next Review Date	30/04/2027
NSQC Clearance Date	30/04/2024

Assessment Guidelines and Assessment Weightage

Assessment Guidelines

As per QP

Minimum Aggregate Passing % at QP Level : 40

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

Minimum Passing % at NOS Level: 40

(Please note: A Trainee must score the minimum percentage for each NOS separately as well as on the QP as a whole.)

Assessment Weightage

Compulsory NOS



Qualification Pack

National Occupational Standards	Theory Marks	Practical Marks	Project Marks	Viva Marks	Total Marks	Weightage
MSME/ELE/N1904.Perform Mechanical & Chemical Operation to Manufacture PCB	-	100	-	-	100	20
MSME/ELE/N1903.Designing of PCB using CAD/CAM software	-	100	-	-	100	20
MSME/ELE/N1902.Designing of PCB using CAD/CAM software	-	100	-	-	100	20
MSME/ELE/N1901.Acquire the concepts of Basic Electronics	100	-	-	-	100	20
MSME/ELE/N1905.Employability skills	100	-	-	-	100	20
Total	200	300	-	-	500	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.