



## Qualification Pack

# JR. TECHNICIAN - Heat Treatment

QP Code: MSME/CSC/Q2801

Version: 1.0

NSQF Level: 3.5

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## Qualification Pack

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## Qualification Pack

# MSME/CSC/Q2801: JR. TECHNICIAN - Heat Treatment

### Brief Job Description

Load and Unload the Material in the Furnace.

### Personal Attributes

Load and Unload the Material in the Furnace.

### Applicable National Occupational Standards (NOS)

#### Compulsory NOS:

1. [MSME/CSC/N2808: Assist & Perform Heat Treatment operation for Metals](#)
2. [MSME/CSC/N2806: Assist in Heat Treatment Processes](#)
3. [MSME/CSC/N2805: Assist in Heat Treatment Processes](#)
4. [MSME/CSC/N2804: Performs Material testing Activities](#)
5. [MSME/CSC/N2803: Performs Material testing Activities](#)
6. [MSME/CSC/N2802: Use and Application of Engineering Materials](#)
7. [MSME/CSC/N2801: Read and Construct the Orthographic Projection of part](#)
8. [MSME/CSC/N2807: Employability Skills MSME/ES/01](#)

### Qualification Pack (QP) Parameters

<b>Sector</b>	Capital Goods
<b>Sub-Sector</b>	Machine Tools
<b>Occupation</b>	Heat Treatment
<b>Country</b>	India
<b>NSQF Level</b>	3.5
<b>Credits</b>	40



## Qualification Pack

<b>Aligned to NCO/ISCO/ISIC Code</b>	8121.4801 / Heat Treatment Operator
<b>Minimum Educational Qualification &amp; Experience</b>	10th Class (PASS) with NA of experience OR Previous relevant Qualification of NSQF Level (Previous relevant Qualification of NSQF Level 3 in metal Working/ Machine Tool area ) with 1.5 years of experience OR Previous relevant Qualification of NSQF Level 2.5 (Previous relevant Qualification of NSQF Level 2.5 in metal Working/ Machine Tool area ) with 3 Years of experience
<b>Minimum Level of Education for Training in School</b>	
<b>Pre-Requisite License or Training</b>	NA
<b>Minimum Job Entry Age</b>	15 Years
<b>Last Reviewed On</b>	NA
<b>Next Review Date</b>	30/04/2027
<b>NSQC Approval Date</b>	30/04/2024
<b>Version</b>	1.0
<b>Reference code on NQR</b>	NCVET-QG-3.5-CG-02401-2024-V1-MSME
<b>NQR Version</b>	1.0



## Qualification Pack

# MSME/CSC/N2808: Assist & Perform Heat Treatment operation for Metals

## Description

Understand principle and working of Liquid carburizing

## Scope

The scope covers the following :

- Understand principle and working of Liquid carburizing

## Elements and Performance Criteria

### *MSME/CCMTH/05 Assist & Perform Heat Treatment operation for Metals*

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

- PC1.** Perform Testing - Chemical, Mechanical and NDT.
- PC2.**
  - Perform operation on Various Furnaces - Vacuum Furnace,
  - Plasma Nitriding, vacuum furnace and Salt Bath.
- PC3.**
  - Perform work in Heat Treatment Department to carry out
  - various activities related to heat treatment shop.



## Qualification Pack

### Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<i>MSME/CCMTH/05 Assist &amp; Perform Heat Treatment operation for Metals</i>	-	<b>100</b>	-	-
<b>PC1.</b> Perform Testing - Chemical, Mechanical and NDT.	-	-	-	-
<b>PC2.</b> <ul style="list-style-type: none"><li>• Perform operation on Various Furnaces - Vacuum Furnace,</li><li>• Plasma Nitriding, vacuum furnace and Salt Bath.</li></ul>	-	-	-	-
<b>PC3.</b> <ul style="list-style-type: none"><li>• Perform work in Heat Treatment Department to carry out</li><li>• various activities related to heat treatment shop.</li></ul>	-	-	-	-
<b>NOS Total</b>	-	<b>100</b>	-	-



## Qualification Pack

### National Occupational Standards (NOS) Parameters

<b>NOS Code</b>	MSME/CSC/N2808
<b>NOS Name</b>	Assist & Perform Heat Treatment operation for Metals
<b>Sector</b>	Capital Goods
<b>Sub-Sector</b>	
<b>Occupation</b>	Heat Treatment
<b>NSQF Level</b>	3.5
<b>Credits</b>	16
<b>Version</b>	1.0
<b>Last Reviewed Date</b>	30/04/2024
<b>Next Review Date</b>	30/04/2027
<b>NSQF Clearance Date</b>	30/04/2024



## Qualification Pack

### MSME/CSC/N2806: Assist in Heat Treatment Processes

#### Description

Identify different steel grades

#### Scope

The scope covers the following :

- Identify different steel grades

#### Elements and Performance Criteria

##### *Assist in Heat Treatment Processes MSME/CCMTHT/04*

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

- PC1.** Explain occupational health and Safety
- PC2.** Explain about safety rules.
- PC3.**
  - State the name and location of people responsible for health and safety in the workplace
- PC4.**
  - State the names and location of documents that refer to health and safety in the workplace
- PC5.**
  - Use various appropriate fire extinguishers on different types of fires correctly
- PC6.** Explain the PPE in Industrial Safety.
- PC7.**
  - Explain Basic injury prevention, Hazard identification and avoidance, safety signs for Danger, Warning, caution & personal safety message
- PC8.** Explain the types of Waste disposal techniques/ Management.
- PC9.**
  - Explain the importance of occupational health and safety at workplace. Describe Iron-Carbon phase diagram and all its components
- PC10.** Describe and explain common heat treatment processes.
- PC11.** Describe about cooling mediums used in heat treatment
- PC12.** operations.
- PC13.** Describe and identify each component of TTT-Curve
- PC14.** (Isothermal transformation)
- PC15.** Describe about Solid / Pack carburizing
- PC16.**
  - Describe and explain principle and working of Liquid carburizing
- PC17.** Describe and explain principle and working of Gas carburizing
- PC18.** Describe about various furnaces used in Heat treatment.
- PC19.** Describe about Surface Hardening treatment.
- PC20.** Describe about Tool steels.



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- PC21.** Describe about Alloy steels.
- PC22.** Describe about Low alloy steels and their Heat Treatment
- PC23.** Describe about High alloy steels and their Heat Treatment.
- PC24.** Perform Heat treatment of alloy steels and tool steels



## Qualification Pack

### Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<i>Assist in Heat Treatment Processes</i> <i>MSME/CCMTHT/04</i>	-	<b>100</b>	-	-
<b>PC1.</b> Explain occupational health and Safety	-	-	-	-
<b>PC2.</b> Explain about safety rules.	-	-	-	-
<b>PC3.</b> <ul style="list-style-type: none"><li>• State the name and location of people responsible for health and safety in the workplace</li></ul>	-	-	-	-
<b>PC4.</b> <ul style="list-style-type: none"><li>• State the names and location of documents that refer to health and safety in the workplace</li></ul>	-	-	-	-
<b>PC5.</b> <ul style="list-style-type: none"><li>• Use various appropriate fire extinguishers on different types of fires correctly</li></ul>	-	-	-	-
<b>PC6.</b> Explain the PPE in Industrial Safety.	-	-	-	-
<b>PC7.</b> <ul style="list-style-type: none"><li>• Explain Basic injury prevention, Hazard identification and avoidance, safety signs for Danger, Warning, caution &amp; personal safety message</li></ul>	-	-	-	-
<b>PC8.</b> Explain the types of Waste disposal techniques/ Management.	-	-	-	-
<b>PC9.</b> <ul style="list-style-type: none"><li>• Explain the importance of occupational health and safety at workplace. Describe Iron-Carbon phase diagram and all its components</li></ul>	-	-	-	-
<b>PC10.</b> Describe and explain common heat treatment processes.	-	-	-	-
<b>PC11.</b> Describe about cooling mediums used in heat treatment	-	-	-	-



## Qualification Pack

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
PC12. operations.	-	-	-	-
PC13. Describe and identify each component of TTT-Curve	-	-	-	-
PC14. (Isothermal transformation)	-	-	-	-
PC15. Describe about Solid / Pack carburizing	-	-	-	-
PC16. • Describe and explain principle and working of Liquid • carburizing	-	-	-	-
PC17. Describe and explain principle and working of Gas carburizing	-	-	-	-
PC18. Describe about various furnaces used in Heat treatment.	-	-	-	-
PC19. Describe about Surface Hardening treatment.	-	-	-	-
PC20. Describe about Tool steels.	-	-	-	-
PC21. Describe about Alloy steels.	-	-	-	-
PC22. Describe about Low alloy steels and their Heat Treatment	-	-	-	-
PC23. Describe about High alloy steels and their Heat Treatment.	-	-	-	-
PC24. Perform Heat treatment of alloy steels and tool steels	-	-	-	-
<b>NOS Total</b>	-	<b>100</b>	-	-



## Qualification Pack

### National Occupational Standards (NOS) Parameters

<b>NOS Code</b>	MSME/CSC/N2806
<b>NOS Name</b>	Assist in Heat Treatment Processes
<b>Sector</b>	Capital Goods
<b>Sub-Sector</b>	
<b>Occupation</b>	Heat Treatment
<b>NSQF Level</b>	3.5
<b>Credits</b>	10
<b>Version</b>	1.0
<b>Last Reviewed Date</b>	30/04/2024
<b>Next Review Date</b>	30/04/2027
<b>NSQF Clearance Date</b>	30/04/2024



## Qualification Pack

### MSME/CSC/N2805: Assist in Heat Treatment Processes

#### Description

Identify different steel grades

#### Scope

The scope covers the following :

- Identify different steel grades

#### Elements and Performance Criteria

##### *Assist in Heat Treatment Processes MSME/CCMTHT/04*

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

- PC1.** Explain occupational health and Safety
- PC2.** Explain about safety rules.
- PC3.**
  - State the name and location of people responsible for health and safety in the workplace
- PC4.**
  - State the names and location of documents that refer to health and safety in the workplace
- PC5.**
  - Use various appropriate fire extinguishers on different types of fires correctly
- PC6.** Explain the PPE in Industrial Safety.
- PC7.**
  - Explain Basic injury prevention, Hazard identification and avoidance, safety signs for Danger, Warning, caution & personal safety message
- PC8.** Explain the types of Waste disposal techniques/ Management.
- PC9.**
  - Explain the importance of occupational health and safety at workplace. Describe Iron-Carbon phase diagram and all its components
- PC10.** Describe and explain common heat treatment processes.
- PC11.** Describe about cooling mediums used in heat treatment
- PC12.** operations.
- PC13.** Describe and identify each component of TTT-Curve
- PC14.** (Isothermal transformation)
- PC15.** Describe about Solid / Pack carburizing
- PC16.**
  - Describe and explain principle and working of Liquid carburizing
- PC17.** Describe and explain principle and working of Gas carburizing
- PC18.** Describe about various furnaces used in Heat treatment.
- PC19.** Describe about Surface Hardening treatment.
- PC20.** Describe about Tool steels.



## Qualification Pack

- PC21.** Describe about Alloy steels.
- PC22.** Describe about Low alloy steels and their Heat Treatment
- PC23.** Describe about High alloy steels and their Heat Treatment.
- PC24.** Perform Heat treatment of alloy steels and tool steels



## Qualification Pack

### Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<i>Assist in Heat Treatment Processes</i> <i>MSME/CCMTHT/04</i>	<b>100</b>	-	-	-
<b>PC1.</b> Explain occupational health and Safety	-	-	-	-
<b>PC2.</b> Explain about safety rules.	-	-	-	-
<b>PC3.</b> • State the name and location of people responsible for health • and safety in the workplace	-	-	-	-
<b>PC4.</b> • State the names and location of documents that refer to • health and safety in the workplace	-	-	-	-
<b>PC5.</b> • Use various appropriate fire extinguishers on different types • of fires correctly	-	-	-	-
<b>PC6.</b> Explain the PPE in Industrial Safety.	-	-	-	-
<b>PC7.</b> • Explain Basic injury prevention, Hazard identification and • avoidance, safety signs for Danger, Warning, caution & • personal safety message	-	-	-	-
<b>PC8.</b> Explain the types of Waste disposal techniques/ Management.	-	-	-	-
<b>PC9.</b> • Explain the importance of occupational health and safety at • workplace. Describe Iron-Carbon phase diagram and all its • components	-	-	-	-
<b>PC10.</b> Describe and explain common heat treatment processes.	-	-	-	-
<b>PC11.</b> Describe about cooling mediums used in heat treatment	-	-	-	-



## Qualification Pack

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
PC12. operations.	-	-	-	-
PC13. Describe and identify each component of TTT-Curve	-	-	-	-
PC14. (Isothermal transformation)	-	-	-	-
PC15. Describe about Solid / Pack carburizing	-	-	-	-
PC16. <ul style="list-style-type: none"><li>Describe and explain principle and working of Liquid</li><li>carburizing</li></ul>	-	-	-	-
PC17. Describe and explain principle and working of Gas carburizing	-	-	-	-
PC18. Describe about various furnaces used in Heat treatment.	-	-	-	-
PC19. Describe about Surface Hardening treatment.	-	-	-	-
PC20. Describe about Tool steels.	-	-	-	-
PC21. Describe about Alloy steels.	-	-	-	-
PC22. Describe about Low alloy steels and their Heat Treatment	-	-	-	-
PC23. Describe about High alloy steels and their Heat Treatment.	-	-	-	-
PC24. Perform Heat treatment of alloy steels and tool steels	-	-	-	-
<b>NOS Total</b>	<b>100</b>	-	-	-



## Qualification Pack

### National Occupational Standards (NOS) Parameters

<b>NOS Code</b>	MSME/CSC/N2805
<b>NOS Name</b>	Assist in Heat Treatment Processes
<b>Sector</b>	Capital Goods
<b>Sub-Sector</b>	
<b>Occupation</b>	Heat Treatment
<b>NSQF Level</b>	3.5
<b>Credits</b>	3
<b>Version</b>	1.0
<b>Last Reviewed Date</b>	30/04/2024
<b>Next Review Date</b>	30/04/2027
<b>NSQF Clearance Date</b>	30/04/2024



## Qualification Pack

### MSME/CSC/N2804: Performs Material testing Activities

#### Description

Understand about structure of plain carbon steel

#### Scope

The scope covers the following :

- Understand about structure of plain carbon steel

#### Elements and Performance Criteria

##### *Performs Material testing Activities MSME/CCMTH/03*

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

- PC1.** Describe and demonstrate Material testing methods
- PC2.** Describe about Stress strain relation
- PC3.** Understand about Hardness and Hardenability
- PC4.** Perform Different Hardness test
- PC5.** Perform Impact test (Izod and Charpy test)
- PC6.** Identify different materials by sparktesting method
- PC7.** Understand Effect of alloying elements onspark
- PC8.** Understand about Pressure for generating spark



## Qualification Pack

### Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<i>Performs Material testing Activities</i> <i>MSME/CCMTHT/03</i>	-	<b>100</b>	-	-
<b>PC1.</b> Describe and demonstrate Material testing methods	-	-	-	-
<b>PC2.</b> Describe about Stress strain relation	-	-	-	-
<b>PC3.</b> Understand about Hardness and Hardenability	-	-	-	-
<b>PC4.</b> Perform Different Hardness test	-	-	-	-
<b>PC5.</b> Perform Impact test (Izod and Charpy test)	-	-	-	-
<b>PC6.</b> Identify different materials by sparktesting method	-	-	-	-
<b>PC7.</b> Understand Effect of alloying elements onspark	-	-	-	-
<b>PC8.</b> Understand about Pressure for generating spark	-	-	-	-
<b>NOS Total</b>	-	<b>100</b>	-	-



## Qualification Pack

### National Occupational Standards (NOS) Parameters

<b>NOS Code</b>	MSME/CSC/N2804
<b>NOS Name</b>	Performs Material testing Activities
<b>Sector</b>	Capital Goods
<b>Sub-Sector</b>	
<b>Occupation</b>	Heat Treatment
<b>NSQF Level</b>	3.5
<b>Credits</b>	2
<b>Version</b>	1.0
<b>Last Reviewed Date</b>	30/04/2024
<b>Next Review Date</b>	30/04/2027
<b>NSQF Clearance Date</b>	30/04/2024



## Qualification Pack

### MSME/CSC/N2803: Performs Material testing Activities

#### Description

Understand about structure of plain carbon steel

#### Scope

The scope covers the following :

- Understand about structure of plain carbon steel

#### Elements and Performance Criteria

##### *Performs Material testing Activities MSME/CCMHT/03*

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

- PC1.** Describe and demonstrate Material testing methods
- PC2.** Describe about Stress strain relation
- PC3.** Understand about Hardness and Hardenability
- PC4.** Perform Different Hardness test
- PC5.** Perform Impact test (Izod and Charpy test)
- PC6.** Identify different materials by sparktesting method
- PC7.** Understand Effect of alloying elements onspark
- PC8.** Understand about Pressure for generating spark



## Qualification Pack

### Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<i>Performs Material testing Activities</i> <i>MSME/CCMTH/03</i>	<b>100</b>	-	-	-
<b>PC1.</b> Describe and demonstrate Material testing methods	-	-	-	-
<b>PC2.</b> Describe about Stress strain relation	-	-	-	-
<b>PC3.</b> Understand about Hardness and Hardenability	-	-	-	-
<b>PC4.</b> Perform Different Hardness test	-	-	-	-
<b>PC5.</b> Perform Impact test (Izod and Charpy test)	-	-	-	-
<b>PC6.</b> Identify different materials by sparktesting method	-	-	-	-
<b>PC7.</b> Understand Effect of alloying elements onspark	-	-	-	-
<b>PC8.</b> Understand about Pressure for generating spark	-	-	-	-
<b>NOS Total</b>	<b>100</b>	-	-	-



## Qualification Pack

### National Occupational Standards (NOS) Parameters

<b>NOS Code</b>	MSME/CSC/N2803
<b>NOS Name</b>	Performs Material testing Activities
<b>Sector</b>	Capital Goods
<b>Sub-Sector</b>	
<b>Occupation</b>	Heat Treatment
<b>NSQF Level</b>	3.5
<b>Credits</b>	1
<b>Version</b>	1.0
<b>Last Reviewed Date</b>	30/04/2024
<b>Next Review Date</b>	30/04/2027
<b>NSQF Clearance Date</b>	30/04/2024



## Qualification Pack

# MSME/CSC/N2802: Use and Application of Engineering Materials

## Description

Understand about ferrous and non-ferrous metals

## Scope

The scope covers the following :

- Understand about ferrous and non-ferrous metals

## Elements and Performance Criteria

### *Use and Application of Engineering Materials MSME/CCMTH/02*

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

- PC1.** Describe and explain about crystals and its formation.
- PC2.** Distinguish between ferrous and non-ferrous metals.
- PC3.** Identify ferrous and non-ferrous metals.
- PC4.** Describe about Iron and steel and its various industrial applications.
- PC5.** Describe the structure of plain carbon steel.
- PC6.** Describe the mechanical properties of ferrous and nonferrous metals.



## Qualification Pack

### Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<i>Use and Application of Engineering Materials MSME/CCMTHT/02</i>	<b>100</b>	-	-	-
<b>PC1.</b> Describe and explain about crystals and its formation.	-	-	-	-
<b>PC2.</b> Distinguish between ferrous and non-ferrous metals.	-	-	-	-
<b>PC3.</b> Identify ferrous and non-ferrous metals.	-	-	-	-
<b>PC4.</b> Describe about Iron and steel and its various industrial applications.	-	-	-	-
<b>PC5.</b> Describe the structure of plain carbon steel.	-	-	-	-
<b>PC6.</b> Describe the mechanical properties of ferrous and nonferrous metals.	-	-	-	-
<b>NOS Total</b>	<b>100</b>	-	-	-



## Qualification Pack

### National Occupational Standards (NOS) Parameters

<b>NOS Code</b>	MSME/CSC/N2802
<b>NOS Name</b>	Use and Application of Engineering Materials
<b>Sector</b>	Capital Goods
<b>Sub-Sector</b>	
<b>Occupation</b>	Heat Treatment
<b>NSQF Level</b>	3.5
<b>Credits</b>	2
<b>Version</b>	1.0
<b>Last Reviewed Date</b>	30/04/2024
<b>Next Review Date</b>	30/04/2027
<b>NSQF Clearance Date</b>	30/04/2024



## Qualification Pack

# MSME/CSC/N2801: Read and Construct the Orthographic Projection of part

## Description

To scale, line and lettering drawing and practical in different lines and lettering. Drawing of different line and letters in drawing book.

## Scope

The scope covers the following :

- To scale, line and lettering drawing and practical in different lines and lettering. Drawing of different line and
- letters in drawing book.

## Elements and Performance Criteria

### *Read and Construct the Orthographic Projection of part MSME/CCMTHT/01*

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

- PC1.** Describe the various dimensioning techniques.
- PC2.**
  - Identify orthographic views of objects: Front, top, left side,
  - right side using lines.
- PC3.** Draw elements and simple assembly.
- PC4.**
  - Assessment examination (Written + Practical) to test basic
  - skills on engineering drawing.
- PC5.**
  - Their applications will also be assessed during execution of
  - assessable outcome and also tested during theory and
  - practical examination.
- PC6.**
  - Describe Layout of drawing sheet as per B.I.S. Block letters &
  - numerals, Single & double stroke as per BIS.
- PC7.** Describe different types of lines as per BIS.
- PC8.**
  - Construct simple geometrical figures like triangle, polygons,
  - circle, ellipse etc.
- PC9.** Draw Projection of points, lines and plain figures
- PC10.** Provide dimension on object as per BIS



## Qualification Pack

### Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<i>Read and Construct the Orthographic Projection of part MSME/CCMTH/01</i>	-	100	-	-
<b>PC1.</b> Describe the various dimensioning techniques.	-	-	-	-
<b>PC2.</b> <ul style="list-style-type: none"><li>Identify orthographic views of objects: Front, top, left side,</li><li>right side using lines.</li></ul>	-	-	-	-
<b>PC3.</b> Draw elements and simple assembly.	-	-	-	-
<b>PC4.</b> <ul style="list-style-type: none"><li>Assessment examination (Written + Practical) to test basic</li><li>skills on engineering drawing.</li></ul>	-	-	-	-
<b>PC5.</b> <ul style="list-style-type: none"><li>Their applications will also be assessed during execution of</li><li>assessable outcome and also tested during theory and</li><li>practical examination.</li></ul>	-	-	-	-
<b>PC6.</b> <ul style="list-style-type: none"><li>Describe Layout of drawing sheet as per B.I.S. Block letters &amp;</li><li>numerals, Single &amp; double stroke as per BIS.</li></ul>	-	-	-	-
<b>PC7.</b> Describe different types of lines as per BIS.	-	-	-	-
<b>PC8.</b> <ul style="list-style-type: none"><li>Construct simple geometrical figures like triangle, polygons,</li><li>circle, ellipse etc.</li></ul>	-	-	-	-
<b>PC9.</b> Draw Projection of points, lines and plain figures	-	-	-	-
<b>PC10.</b> Provide dimension on object as per BIS	-	-	-	-
<b>NOS Total</b>	-	100	-	-



## Qualification Pack

### National Occupational Standards (NOS) Parameters

<b>NOS Code</b>	MSME/CSC/N2801
<b>NOS Name</b>	Read and Construct the Orthographic Projection of part
<b>Sector</b>	Capital Goods
<b>Sub-Sector</b>	
<b>Occupation</b>	Heat Treatment
<b>NSQF Level</b>	3.5
<b>Credits</b>	2
<b>Version</b>	1.0
<b>Last Reviewed Date</b>	30/04/2024
<b>Next Review Date</b>	30/04/2027
<b>NSQF Clearance Date</b>	30/04/2024



## Qualification Pack

### MSME/CSC/N2807: Employability Skills MSME/ES/01

#### Description

Understand about employability .

#### Scope

The scope covers the following :

- Understand about employability .

#### Elements and Performance Criteria

##### *Employability Skills MSME/ES/01*

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

- PC1.** Explain the major applications of MS Office
- PC2.** Explain the different types of e-commerce
- PC3.** List the benefits of e-commerce for retailers and customers
- PC4.** Discuss how the Digital India campaign will help boost ecommerce in India
- PC5.** Write applications pertaining to various matters.
- PC6.**
  - Explain power of positive attitude and Importance of
  - Commitment
- PC7.** Explain motivation and the Ways to motivate oneself and Personal goal setting
- PC8.** Explain the Effective & Level of Communication
- PC9.**
  - Explain communication and Significance of technical
  - communication?
- PC10.** Explain the methods of listening Skills.
- PC11.** Explain the differences between bio-data, CV and Resume.
- PC12.** Explain verbal and non-verbal Communication
- PC13.** Explain how to face an interview.
- PC14.** Explain team work, group work, team formation process
- PC15.** How to Minimize the team conflicts
- PC16.** Explain Ethics & values
- PC17.**
  - Explain the concept of entrepreneurship, and
  - entrepreneurship v/s Management
- PC18.**
  - Explain the process of project report preparation for setting
  - up a new business
- PC19.** Explain the role of various schemes and institute for self employment i.e MSME, DIC, NSIC, SIDBI etc.
- PC20.** Role of financial institution to support startup
- PC21.** Discuss the importance of saving money
- PC22.** Discuss the main types of bank accounts



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- PC23.** Differentiate between fixed and variable costs
- PC24.** Describe the different types of insurance products
- PC25.** Discuss the main types of electronic funds transfers



## Qualification Pack

### Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<i>Employability Skills MSME/ES/01</i>	<b>100</b>	-	-	-
<b>PC1.</b> Explain the major applications of MS Office	-	-	-	-
<b>PC2.</b> Explain the different types of e-commerce	-	-	-	-
<b>PC3.</b> List the benefits of e-commerce for retailers and customers	-	-	-	-
<b>PC4.</b> Discuss how the Digital India campaign will help boost ecommerce in India	-	-	-	-
<b>PC5.</b> Write applications pertaining to various matters.	-	-	-	-
<b>PC6.</b> <ul style="list-style-type: none"><li>• Explain power of positive attitude and Importance of</li><li>• Commitment</li></ul>	-	-	-	-
<b>PC7.</b> Explain motivation and the Ways to motivate oneself and Personal goal setting	-	-	-	-
<b>PC8.</b> Explain the Effective & Level of Communication	-	-	-	-
<b>PC9.</b> <ul style="list-style-type: none"><li>• Explain communication and Significance of technical</li><li>• communication?</li></ul>	-	-	-	-
<b>PC10.</b> Explain the methods of listening Skills.	-	-	-	-
<b>PC11.</b> Explain the differences between bio-data, CV and Resume.	-	-	-	-
<b>PC12.</b> Explain verbal and non-verbal Communication	-	-	-	-
<b>PC13.</b> Explain how to face an interview.	-	-	-	-
<b>PC14.</b> Explain team work, group work, team formation process	-	-	-	-
<b>PC15.</b> How to Minimize the team conflicts	-	-	-	-



## Qualification Pack

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<b>PC16.</b> Explain Ethics & values	-	-	-	-
<b>PC17.</b> <ul style="list-style-type: none"><li>• Explain the concept of entrepreneurship, and</li><li>• entrepreneurship v/s Management</li></ul>	-	-	-	-
<b>PC18.</b> <ul style="list-style-type: none"><li>• Explain the process of project report preparation for setting</li><li>• up a new business</li></ul>	-	-	-	-
<b>PC19.</b> Explain the role of various schemes and institute for self employment i.e MSME, DIC, NSIC, SIDBI etc.	-	-	-	-
<b>PC20.</b> Role of financial institution to support startup	-	-	-	-
<b>PC21.</b> Discuss the importance of saving money	-	-	-	-
<b>PC22.</b> Discuss the main types of bank accounts	-	-	-	-
<b>PC23.</b> Differentiate between fixed and variable costs	-	-	-	-
<b>PC24.</b> Describe the different types of insurance products	-	-	-	-
<b>PC25.</b> Discuss the main types of electronic funds transfers	-	-	-	-
<b>NOS Total</b>	<b>100</b>	-	-	-



## Qualification Pack

### National Occupational Standards (NOS) Parameters

<b>NOS Code</b>	MSME/CSC/N2807
<b>NOS Name</b>	Employability Skills MSME/ES/01
<b>Sector</b>	Capital Goods
<b>Sub-Sector</b>	
<b>Occupation</b>	Heat Treatment
<b>NSQF Level</b>	3.5
<b>Credits</b>	4
<b>Version</b>	1.0
<b>Last Reviewed Date</b>	30/04/2024
<b>Next Review Date</b>	30/04/2027
<b>NSQC Clearance Date</b>	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/CSC/N2808.Assist & Perform Heat Treatment operation for Metals	-	100	-	-	100	10
MSME/CSC/N2806.Assist in Heat Treatment Processes	-	100	-	-	100	10
MSME/CSC/N2805.Assist in Heat Treatment Processes	100	-	-	-	100	10
MSME/CSC/N2804.Performs Material testing Activities	-	100	-	-	100	10
MSME/CSC/N2803.Performs Material testing Activities	100	-	-	-	100	10
MSME/CSC/N2802.Use and Application of Engineering Materials	100	-	-	-	100	10
MSME/CSC/N2801.Read and Construct the Orthographic Projection of part	-	100	-	-	100	10
MSME/CSC/N2807.Employability Skills MSME/ES/01	100	-	-	-	100	30
<b>Total</b>	<b>400</b>	<b>400</b>	<b>-</b>	<b>-</b>	<b>800</b>	<b>100</b>



## Qualification Pack

### Acronyms

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



## Qualification Pack

### Glossary

<b>Sector</b>	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.
<b>Sub-sector</b>	Sub-sector is derived from a further breakdown based on the characteristics and interests of its components.
<b>Occupation</b>	Occupation is a set of job roles, which perform similar/ related set of functions in an industry.
<b>Job role</b>	Job role defines a unique set of functions that together form a unique employment opportunity in an organisation.
<b>Occupational Standards (OS)</b>	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.
<b>Performance Criteria (PC)</b>	Performance Criteria (PC) are statements that together specify the standard of performance required when carrying out a task.
<b>National Occupational Standards (NOS)</b>	NOS are occupational standards which apply uniquely in the Indian context.
<b>Qualifications Pack (QP)</b>	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.
<b>Unit Code</b>	Unit code is a unique identifier for an Occupational Standard, which is denoted by an 'N'
<b>Unit Title</b>	Unit title gives a clear overall statement about what the incumbent should be able to do.
<b>Description</b>	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.
<b>Scope</b>	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

<b>Knowledge and Understanding (KU)</b>	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.
<b>Organisational Context</b>	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.
<b>Technical Knowledge</b>	Technical knowledge is the specific knowledge needed to accomplish specific designated responsibilities.
<b>Core Skills/ Generic Skills (GS)</b>	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.
<b>Electives</b>	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.
<b>Options</b>	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.