



## Qualification Pack

# ASST. OPERATOR - CONVENTIONAL MACHINES

QP Code: MSME/CSC/Q5201

Version: 1.0

NSQF Level: 2.5

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



## Qualification Pack

### Contents

MSME/CSC/Q5201: ASST. OPERATOR - CONVENTIONAL MACHINES .....	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/CSC/N5207: Carry out Advance Machining Operation on Conventional Machine .....	5
MSME/CSC/N5206: Carry out Advance Machining Operation on Conventional Machine .....	9
MSME/CSC/N5205: Carry out Advance Machining Operation .....	13
MSME/CSC/N5204: Perform basic Mathematical calculation for machining .....	17
MSME/CSC/N5203: Read Simple Part Drawing .....	20
MSME/CSC/N5202: Carry out Basic Machining Operation on Conventional Machine .....	23
MSME/CSC/N5201: Carry out Basic Machining Operation on Conventional Machine .....	26
MSME/CSC/N5208: Employability Skill 00 .....	29
Assessment Guidelines and Weightage .....	33
<i>Assessment Guidelines</i> .....	33
<i>Assessment Weightage</i> .....	33
Acronyms .....	35
Glossary .....	36



## Qualification Pack

# MSME/CSC/Q5201: ASST. OPERATOR - CONVENTIONAL MACHINES

### Brief Job Description

Measure Dimensions using linear Measuring Instruments

### Personal Attributes

Measure Dimensions using linear Measuring Instruments

### Applicable National Occupational Standards (NOS)

#### Compulsory NOS:

1. [MSME/CSC/N5207: Carry out Advance Machining Operation on Conventional Machine](#)
2. [MSME/CSC/N5206: Carry out Advance Machining Operation on Conventional Machine](#)
3. [MSME/CSC/N5205: Carry out Advance Machining Operation](#)
4. [MSME/CSC/N5204: Perform basic Mathematical calculation for machining](#)
5. [MSME/CSC/N5203: Read Simple Part Drawing](#)
6. [MSME/CSC/N5202: Carry out Basic Machining Operation on Conventional Machine](#)
7. [MSME/CSC/N5201: Carry out Basic Machining Operation on Conventional Machine](#)
8. [MSME/CSC/N5208: Employability Skill 00](#)

### Qualification Pack (QP) Parameters

<b>Sector</b>	Capital Goods
<b>Sub-Sector</b>	Machine Tools
<b>Occupation</b>	ASST. OPERATOR - CONVENTIONAL MACHINES
<b>Country</b>	India
<b>NSQF Level</b>	2.5
<b>Credits</b>	40



## Qualification Pack

<b>Aligned to NCO/ISCO/ISIC Code</b>	7223.99 (Metal Working Machine Tool Setters and Operators, Others)
<b>Minimum Educational Qualification &amp; Experience</b>	8th Class (PASS) with NA of experience
<b>Minimum Level of Education for Training in School</b>	8th Class
<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-2.5-CG-02397-2024-V1-MSME
<b>NQR Version</b>	1.0



## Qualification Pack

# MSME/CSC/N5207: Carry out Advance Machining Operation on Conventional Machine

## Description

Describe working principle of conventional machine tools, function of various machine tools and their field of applications

## Scope

The scope covers the following :

- Describe working principle of conventional machine tools, function of various machine tools and their field of applications
- applications

## Elements and Performance Criteria

### *Carry out Advance Machining Operation on Conventional Machine MSME/CCMO/04 & Version 1.0*

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

- PC1.**
  - Describe working principle of conventional machine tools, function of various machine tools and their field of applications.
- PC2.** Identify method of machining and sequence of operations.
- PC3.**
  - Identify the function of instruments, accessories and attachments used.
- PC4.** Identify various machining operation techniques.
- PC5.**
  - Describe basic maintenance of machines, machineries, accessories, and instruments.
- PC6.**
  - Identify safe working practice and environment regulation and housekeeping.
- PC7.** Set machining parameter with all relevant calculation.
- PC8.**
  - Perform various drilling operation, reaming operations, tapping operation using suitable tools, accessories, and measuring instruments.
- PC9.**
  - Perform various machining operations on lathe machines for manufacturing job using suitable tools, accessories and measuring instruments.
- PC10.**
  - Perform various machining operations on Milling Machines for manufacturing of job using suitable tools, accessories and measuring instruments.



## Qualification Pack

### Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<i>Carry out Advance Machining Operation on Conventional Machine MSME/CCMO/04 &amp; Version 1.0</i>	-	-	-	<b>100</b>
<b>PC1.</b> <ul style="list-style-type: none"><li>Describe working principle of conventional machine tools, function</li><li>of various machine tools and their field of applications.</li></ul>	-	-	-	-
<b>PC2.</b> Identify method of machining and sequence of operations.	-	-	-	-
<b>PC3.</b> <ul style="list-style-type: none"><li>Identify the function of instruments, accessories and attachments</li><li>used.</li></ul>	-	-	-	-
<b>PC4.</b> Identify various machining operation techniques.	-	-	-	-
<b>PC5.</b> <ul style="list-style-type: none"><li>Describe basic maintenance of machines, machineries, accessories,</li><li>and instruments.</li></ul>	-	-	-	-
<b>PC6.</b> <ul style="list-style-type: none"><li>Identify safe working practice and environment regulation and</li><li>housekeeping.</li></ul>	-	-	-	-
<b>PC7.</b> Set machining parameter with all relevant calculation.	-	-	-	-
<b>PC8.</b> <ul style="list-style-type: none"><li>Perform various drilling operation, reaming operations, tapping</li><li>operation using suitable tools, accessories, and measuring</li><li>instruments.</li></ul>	-	-	-	-
<b>PC9.</b> <ul style="list-style-type: none"><li>Perform various machining operations on lathe machines for</li><li>manufacturing job using suitable tools, accessories and measuring</li><li>instruments.</li></ul>	-	-	-	-



## Qualification Pack

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<b>PC10.</b> <ul style="list-style-type: none"><li>• Perform various machining operations on Milling Machines for</li><li>• manufacturing of job using suitable tools, accessories and</li><li>• measuring instruments.</li></ul>	-	-	-	-
<b>NOS Total</b>	-	-	-	<b>100</b>



## Qualification Pack

### National Occupational Standards (NOS) Parameters

<b>NOS Code</b>	MSME/CSC/N5207
<b>NOS Name</b>	Carry out Advance Machining Operation on Conventional Machine
<b>Sector</b>	Capital Goods
<b>Sub-Sector</b>	
<b>Occupation</b>	ASST. OPERATOR - CONVENTIONAL MACHINES
<b>NSQF Level</b>	2.5
<b>Credits</b>	5
<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/N5206: Carry out Advance Machining Operation on Conventional Machine

## Description

Describe working principle of conventional machine tools, function of various machine tools and their field of applications

## Scope

The scope covers the following :

- Describe working principle of conventional machine tools, function of various machine tools and their field of applications
- applications

## Elements and Performance Criteria

### *Carry out Advance Machining Operation on Conventional Machine MSME/CCMO/04 & Version 1.0*

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

- PC1.**
  - Describe working principle of conventional machine tools, function of various machine tools and their field of applications.
- PC2.** Identify method of machining and sequence of operations.
- PC3.**
  - Identify the function of instruments, accessories and attachments used.
- PC4.** Identify various machining operation techniques.
- PC5.**
  - Describe basic maintenance of machines, machineries, accessories, and instruments.
- PC6.**
  - Identify safe working practice and environment regulation and housekeeping.
- PC7.** Set machining parameter with all relevant calculation.
- PC8.**
  - Perform various drilling operation, reaming operations, tapping operation using suitable tools, accessories, and measuring instruments.
- PC9.**
  - Perform various machining operations on lathe machines for manufacturing job using suitable tools, accessories and measuring instruments.
- PC10.**
  - Perform various machining operations on Milling Machines for manufacturing of job using suitable tools, accessories and measuring instruments.



## Qualification Pack

### Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<i>Carry out Advance Machining Operation on Conventional Machine MSME/CCMO/04 &amp; Version 1.0</i>	-	100	-	-
<b>PC1.</b> <ul style="list-style-type: none"><li>Describe working principle of conventional machine tools, function</li><li>of various machine tools and their field of applications.</li></ul>	-	-	-	-
<b>PC2.</b> Identify method of machining and sequence of operations.	-	-	-	-
<b>PC3.</b> <ul style="list-style-type: none"><li>Identify the function of instruments, accessories and attachments</li><li>used.</li></ul>	-	-	-	-
<b>PC4.</b> Identify various machining operation techniques.	-	-	-	-
<b>PC5.</b> <ul style="list-style-type: none"><li>Describe basic maintenance of machines, machineries, accessories,</li><li>and instruments.</li></ul>	-	-	-	-
<b>PC6.</b> <ul style="list-style-type: none"><li>Identify safe working practice and environment regulation and</li><li>housekeeping.</li></ul>	-	-	-	-
<b>PC7.</b> Set machining parameter with all relevant calculation.	-	-	-	-
<b>PC8.</b> <ul style="list-style-type: none"><li>Perform various drilling operation, reaming operations, tapping</li><li>operation using suitable tools, accessories, and measuring</li><li>instruments.</li></ul>	-	-	-	-
<b>PC9.</b> <ul style="list-style-type: none"><li>Perform various machining operations on lathe machines for</li><li>manufacturing job using suitable tools, accessories and measuring</li><li>instruments.</li></ul>	-	-	-	-



## Qualification Pack

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<b>PC10.</b> <ul style="list-style-type: none"><li>• Perform various machining operations on Milling Machines for</li><li>• manufacturing of job using suitable tools, accessories and</li><li>• measuring instruments.</li></ul>	-	-	-	-
<b>NOS Total</b>	-	<b>100</b>	-	-



## Qualification Pack

### National Occupational Standards (NOS) Parameters

<b>NOS Code</b>	MSME/CSC/N5206
<b>NOS Name</b>	Carry out Advance Machining Operation on Conventional Machine
<b>Sector</b>	Capital Goods
<b>Sub-Sector</b>	
<b>Occupation</b>	ASST. OPERATOR - CONVENTIONAL MACHINES
<b>NSQF Level</b>	2.5
<b>Credits</b>	9
<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/N5205: Carry out Advance Machining Operation

#### Description

Describe working principle of conventional machine tools, function of various machine tools and their field of applications

#### Scope

The scope covers the following :

- Describe working principle of conventional machine tools, function of various machine tools and their field of
- applications

#### Elements and Performance Criteria

*Carry out Advance Machining Operation on Conventional Machine MSME/CCMO/04 & Version 1.0*

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

- PC1.**                   • Describe working principle of conventional machine tools, function  
• of various machine tools and their field of applications.
- PC2.**                   Identify method of machining and sequence of operations.
- PC3.**                   • Identify the function of instruments, accessories and attachments  
• used.
- PC4.**                   Identify various machining operation techniques.
- PC5.**                   • Describe basic maintenance of machines, machineries, accessories,  
• and instruments.
- PC6.**                   • Identify safe working practice and environment regulation and  
• housekeeping.
- PC7.**                   Set machining parameter with all relevant calculation.
- PC8.**                   • Perform various drilling operation, reaming operations, tapping  
• operation using suitable tools, accessories, and measuring  
• instruments.
- PC9.**                   • Perform various machining operations on lathe machines for  
• manufacturing job using suitable tools, accessories and measuring  
• instruments.
- PC10.**                  • Perform various machining operations on Milling Machines for  
• manufacturing of job using suitable tools, accessories and  
• measuring instruments.



## Qualification Pack

### Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<i>Carry out Advance Machining Operation on Conventional Machine MSME/CCMO/04 &amp; Version 1.0</i>	100	-	-	-
<b>PC1.</b> <ul style="list-style-type: none"><li>Describe working principle of conventional machine tools, function</li><li>of various machine tools and their field of applications.</li></ul>	-	-	-	-
<b>PC2.</b> Identify method of machining and sequence of operations.	-	-	-	-
<b>PC3.</b> <ul style="list-style-type: none"><li>Identify the function of instruments, accessories and attachments</li><li>used.</li></ul>	-	-	-	-
<b>PC4.</b> Identify various machining operation techniques.	-	-	-	-
<b>PC5.</b> <ul style="list-style-type: none"><li>Describe basic maintenance of machines, machineries, accessories,</li><li>and instruments.</li></ul>	-	-	-	-
<b>PC6.</b> <ul style="list-style-type: none"><li>Identify safe working practice and environment regulation and</li><li>housekeeping.</li></ul>	-	-	-	-
<b>PC7.</b> Set machining parameter with all relevant calculation.	-	-	-	-
<b>PC8.</b> <ul style="list-style-type: none"><li>Perform various drilling operation, reaming operations, tapping</li><li>operation using suitable tools, accessories, and measuring</li><li>instruments.</li></ul>	-	-	-	-
<b>PC9.</b> <ul style="list-style-type: none"><li>Perform various machining operations on lathe machines for</li><li>manufacturing job using suitable tools, accessories and measuring</li><li>instruments.</li></ul>	-	-	-	-



## Qualification Pack

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<b>PC10.</b> <ul style="list-style-type: none"><li>• Perform various machining operations on Milling Machines for</li><li>• manufacturing of job using suitable tools, accessories and</li><li>• measuring instruments.</li></ul>	-	-	-	-
<b>NOS Total</b>	<b>100</b>	-	-	-



## Qualification Pack

### National Occupational Standards (NOS) Parameters

<b>NOS Code</b>	MSME/CSC/N5205
<b>NOS Name</b>	Carry out Advance Machining Operation
<b>Sector</b>	Capital Goods
<b>Sub-Sector</b>	
<b>Occupation</b>	ASST. OPERATOR - CONVENTIONAL MACHINES
<b>NSQF Level</b>	2.5
<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/N5204: Perform basic Mathematical calculation for machining

## Description

Demonstrate basic arithmetic to derive value of unknown quantity / variable.

## Scope

The scope covers the following :

- Demonstrate basic arithmetic to derive value of unknown quantity / variable.

## Elements and Performance Criteria

*Perform basic Mathematical calculation for machining MSME/CCMO/03 & Version 1.0*

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

- PC1.** • Demonstrate basic arithmetic to derive value of unknown quantity / variable
- PC2.** • Understand & apply engineering material, their classification, properties and applications in the day to day technical application  
• heat treatment & their advantages.
- PC3.** • Explain & apply speed, velocity, work, power & energy for application in field of work.
- PC4.** • Demonstrate basic algebraic, mensuration, trigonometric facts and formulas to derive value of unknown quantity / variable.
- PC5.** • Explain & apply principles of simple machine & levers for mechanical advantage, efficiency for practical application.
- PC6.** • Demonstrate & apply calculation of area of cut-out regular & irregular surfaces, Volume of geometrical shapes and their cut section in related shop floor problems.
- PC7.** Calculate value of unknown sides and angles of geometrical shapes by trigonometrically methods and apply in shop floor problems.
- PC8.** Understand & apply transmission of power



## Qualification Pack

### Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<i>Perform basic Mathematical calculation for machining MSME/CCMO/03 &amp; Version 1.0</i>	<b>100</b>	-	-	-
<b>PC1.</b> <ul style="list-style-type: none"><li>• Demonstrate basic arithmetic to derive value of unknown quantity /</li><li>• variable</li></ul>	-	-	-	-
<b>PC2.</b> <ul style="list-style-type: none"><li>• Understand &amp; apply engineering material, their classification,</li><li>• properties and applications in the day to day technical application</li><li>• heat treatment &amp; their advantages.</li></ul>	-	-	-	-
<b>PC3.</b> <ul style="list-style-type: none"><li>• Explain &amp; apply speed, velocity, work, power &amp; energy for</li><li>• application in field of work.</li></ul>	-	-	-	-
<b>PC4.</b> <ul style="list-style-type: none"><li>• Demonstrate basic algebraic, mensuration, trigonometric facts and</li><li>• formulas to derive value of unknown quantity / variable.</li></ul>	-	-	-	-
<b>PC5.</b> <ul style="list-style-type: none"><li>• Explain &amp; apply principles of simple machine &amp; levers for mechanical</li><li>• advantage, efficiency for practical application.</li></ul>	-	-	-	-
<b>PC6.</b> <ul style="list-style-type: none"><li>• Demonstrate &amp; apply calculation of area of cut-out regular &amp;</li><li>• irregular surfaces, Volume of geometrical shapes and their cut</li><li>• section in related shop floor problems.</li></ul>	-	-	-	-
<b>PC7.</b> Calculate value of unknown sides and angles of geometrical shapes by trigonometrically methods and apply in shop floor problems.	-	-	-	-
<b>PC8.</b> Understand & apply transmission of power	-	-	-	-
<b>NOS Total</b>	<b>100</b>	-	-	-



## Qualification Pack

### National Occupational Standards (NOS) Parameters

<b>NOS Code</b>	MSME/CSC/N5204
<b>NOS Name</b>	Perform basic Mathematical calculation for machining
<b>Sector</b>	Capital Goods
<b>Sub-Sector</b>	
<b>Occupation</b>	ASST. OPERATOR - CONVENTIONAL MACHINES
<b>NSQF Level</b>	2.5
<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/N5203: Read Simple Part Drawing

#### 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 Simple Part Drawing MSME/CCMO/02 & Version*

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.**
  - Layout of drawing sheet as per B.I.S. Block letters & numerals,
  - Single & double stroke as per BIS.
- PC7.** Use of 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 Simple Part Drawing MSME/CCMO/02 &amp; Version</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, 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 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 assessable outcome and also tested during theory and practical examination</li></ul>	-	-	-	-
<b>PC6.</b> <ul style="list-style-type: none"><li>Layout of drawing sheet as per B.I.S. Block letters &amp; numerals,</li><li>Single &amp; double stroke as per BIS.</li></ul>	-	-	-	-
<b>PC7.</b> Use of different types of lines as per BIS.	-	-	-	-
<b>PC8.</b> <ul style="list-style-type: none"><li>Construct simple geometrical figures like triangle, polygons, 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/N5203
<b>NOS Name</b>	Read Simple Part Drawing
<b>Sector</b>	Capital Goods
<b>Sub-Sector</b>	
<b>Occupation</b>	ASST. OPERATOR - CONVENTIONAL MACHINES
<b>NSQF Level</b>	2.5
<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>NSQF Clearance Date</b>	30/04/2024



## Qualification Pack

# MSME/CSC/N5202: Carry out Basic Machining Operation on Conventional Machine

## Description

Explain various machine tools and their principle functions.

## Scope

The scope covers the following :

- Explain various machine tools and their principle functions.

## Elements and Performance Criteria

*Carry out Basic Machining Operation on Conventional Machine MSME/CCMO/01 & Version 1.0*

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

- PC1.** Describe various machine tools and their principle functions.
- PC2.**
  - Describe proper safety rules and environment regulation and
  - housekeeping in machine shop.
- PC3.** Identify different cutting tools, accessories, instruments used.
- PC4.** Identify and use measuring tools and instruments.
- PC5.** Describe and plan sequence of machining operations.
- PC6.**
  - Describe working of conventional machines (Bench Work- filling,
  - layout, sawing, punching, using of tools & instruments.
- PC7.**
  - Perform bench work filling, layout, sawing, punching, using of tools & instruments.
  - Describe and classify hand tools
  - Describe and classify machine tools
  - Describe and classify measuring instruments



## Qualification Pack

### Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<i>Carry out Basic Machining Operation on Conventional Machine MSME/CCMO/01 &amp; Version 1.0</i>	-	<b>100</b>	-	-
<b>PC1.</b> Describe various machine tools and their principle functions.	-	-	-	-
<b>PC2.</b> <ul style="list-style-type: none"><li>• Describe proper safety rules and environment regulation and</li><li>• housekeeping in machine shop.</li></ul>	-	-	-	-
<b>PC3.</b> Identify different cutting tools, accessories, instruments used.	-	-	-	-
<b>PC4.</b> Identify and use measuring tools and instruments.	-	-	-	-
<b>PC5.</b> Describe and plan sequence of machining operations.	-	-	-	-
<b>PC6.</b> <ul style="list-style-type: none"><li>• Describe working of conventional machines (Bench Work- filling,</li><li>• layout, sawing, punching, using of tools &amp; instruments.</li></ul>	-	-	-	-
<b>PC7.</b> <ul style="list-style-type: none"><li>• Perform bench work filling, layout, sawing, punching, using of tools &amp; instruments.</li><li>• <input type="checkbox"/> Describe and classify hand tools</li><li>• <input type="checkbox"/> Describe and classify machine tools</li><li>• <input type="checkbox"/> Describe and classify measuring instruments</li></ul>	-	-	-	-
<b>NOS Total</b>	-	<b>100</b>	-	-



## Qualification Pack

### National Occupational Standards (NOS) Parameters

<b>NOS Code</b>	MSME/CSC/N5202
<b>NOS Name</b>	Carry out Basic Machining Operation on Conventional Machine
<b>Sector</b>	Capital Goods
<b>Sub-Sector</b>	
<b>Occupation</b>	ASST. OPERATOR - CONVENTIONAL MACHINES
<b>NSQF Level</b>	2.5
<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/N5201: Carry out Basic Machining Operation on Conventional Machine

## Description

Explain various machine tools and their principle functions.

## Scope

The scope covers the following :

- Explain various machine tools and their principle functions.

## Elements and Performance Criteria

*Carry out Basic Machining Operation on Conventional Machine MSME/CCMO/01 & Version 1.0*

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

- PC1.** Describe various machine tools and their principle functions.
- PC2.**
  - Describe proper safety rules and environment regulation and
  - housekeeping in machine shop.
- PC3.** Identify different cutting tools, accessories, instruments used.
- PC4.** Identify and use measuring tools and instruments.
- PC5.** Describe and plan sequence of machining operations.
- PC6.**
  - Describe working of conventional machines (Bench Work- filling,
  - layout, sawing, punching, using of tools & instruments.
- PC7.**
  - Perform bench work filling, layout, sawing, punching, using of tools & instruments.
  - Describe and classify hand tools
  - Describe and classify machine tools
  - Describe and classify measuring instruments



## Qualification Pack

### Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<i>Carry out Basic Machining Operation on Conventional Machine MSME/CCMO/01 &amp; Version 1.0</i>	<b>100</b>	-	-	-
<b>PC1.</b> Describe various machine tools and their principle functions.	-	-	-	-
<b>PC2.</b> <ul style="list-style-type: none"><li>• Describe proper safety rules and environment regulation and</li><li>• housekeeping in machine shop.</li></ul>	-	-	-	-
<b>PC3.</b> Identify different cutting tools, accessories, instruments used.	-	-	-	-
<b>PC4.</b> Identify and use measuring tools and instruments.	-	-	-	-
<b>PC5.</b> Describe and plan sequence of machining operations.	-	-	-	-
<b>PC6.</b> <ul style="list-style-type: none"><li>• Describe working of conventional machines (Bench Work- filling,</li><li>• layout, sawing, punching, using of tools &amp; instruments.</li></ul>	-	-	-	-
<b>PC7.</b> <ul style="list-style-type: none"><li>• Perform bench work filling, layout, sawing, punching, using of tools &amp; instruments.</li><li>• <input type="checkbox"/> Describe and classify hand tools</li><li>• <input type="checkbox"/> Describe and classify machine tools</li><li>• <input type="checkbox"/> Describe and classify measuring instruments</li></ul>	-	-	-	-
<b>NOS Total</b>	<b>100</b>	-	-	-



## Qualification Pack

### National Occupational Standards (NOS) Parameters

<b>NOS Code</b>	MSME/CSC/N5201
<b>NOS Name</b>	Carry out Basic Machining Operation on Conventional Machine
<b>Sector</b>	Capital Goods
<b>Sub-Sector</b>	
<b>Occupation</b>	ASST. OPERATOR - CONVENTIONAL MACHINES
<b>NSQF Level</b>	2.5
<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/N5208: Employability Skill 00

#### Description

Understanding Employability Skills

#### Scope

The scope covers the following :

- Understanding Employability Skills

#### Elements and Performance Criteria

##### *Employability Skills MSME/ES/04 & Version 1.0*

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 e-commerce
  - 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 selfemployment 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



## Qualification Pack

- 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/04 &amp; Version 1.0</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 e-commerce • in India	-	-	-	-
<b>PC5.</b> Write applications pertaining to various matters.	-	-	-	-
<b>PC6.</b> Explain power of positive attitude and Importance of Commitment	-	-	-	-
<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> • Explain communication and Significance of technical • communication?	-	-	-	-
<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	-	-	-	-



## Qualification Pack

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<b>PC15.</b> How to Minimize the team conflicts	-	-	-	-
<b>PC16.</b> Explain Ethics & values	-	-	-	-
<b>PC17.</b> <ul style="list-style-type: none"><li>• Explain the concept of entrepreneurship, and entrepreneurship v/s</li><li>• Management</li></ul>	-	-	-	-
<b>PC18.</b> <ul style="list-style-type: none"><li>• Explain the process of project report preparation for setting up a</li><li>• new business</li></ul>	-	-	-	-
<b>PC19.</b> Explain the role of various schemes and institute for selfemployment 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/N5208
<b>NOS Name</b>	Employability Skill 00
<b>Sector</b>	Capital Goods
<b>Sub-Sector</b>	
<b>Occupation</b>	ASST. OPERATOR - CONVENTIONAL MACHINES
<b>NSQF Level</b>	2.5
<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/N5207.Carry out Advance Machining Operation on Conventional Machine	-	-	-	100	100	10
MSME/CSC/N5206.Carry out Advance Machining Operation on Conventional Machine	-	100	-	-	100	10
MSME/CSC/N5205.Carry out Advance Machining Operation	100	-	-	-	100	10
MSME/CSC/N5204.Perform basic Mathematical calculation for machining	100	-	-	-	100	10
MSME/CSC/N5203.Read Simple Part Drawing	-	100	-	-	100	10
MSME/CSC/N5202.Carry out Basic Machining Operation on Conventional Machine	-	100	-	-	100	10
MSME/CSC/N5201.Carry out Basic Machining Operation on Conventional Machine	100	-	-	-	100	10
MSME/CSC/N5208.Employability Skill 00	100	-	-	-	100	30
<b>Total</b>	<b>400</b>	<b>300</b>	<b>-</b>	<b>100</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.