सत्यमेव जयते
GOVERNMENT OF INDIA
MINISTRY OF SKILL DEVELOPMENT
& ENTREPRENEURSHIP

कौशल गुणवत्ता प्रगति

Qualification Pack

ASST. OPERATOR - CNC MILLING (TOOL ROOM)

QP Code: MSME/CSC/Q4701

Version: 1.0

NSQF Level: 3

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Qualification Pack

MSME/CSC/Q4701: ASST. OPERATOR - CNC MILLING (TOOL ROOM)

Brief Job Description

To be expertise in operating cum setting of CNC Milling Machine

Personal Attributes

To be expertise in operating cum setting of CNC Milling Machine

Applicable National Occupational Standards (NOS)

Compulsory NOS:

1. MSME/CSC/N4704: Create Part Drawing using Auto-CAD
2. MSME/CSC/N4703: Checking dimensions of CNC machined Part
3. MSME/CSC/N4702: Demonstrate the working Principle of Machine Tools
4. MSME/CSC/N4701: Assist in Operation of CNC Milling Machine
5. MSME/CSC/N4705: Employability skills 09

Qualification Pack (QP) Parameters

Sector	Capital Goods
Sub-Sector	Machine Tools
Occupation	Machine Operation 03
Country	India
NSQF Level	3
Credits	20
Aligned to NCO/ISCO/ISIC Code	(CNC Operator)

Minimum Educational Qualification & Experience	10th grade pass with NA of experience OR Previous relevant Qualification of NSQF Level (NSQF Level 2.5 in metal Working/ Machine Tool area) with 1.5 years of experience OR Previous relevant Qualification of NSQF Level (NSQF Level 2 in metal Working/ Machine Tool area) with 3 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	NA
Next Review Date	30/04/2027
NSQC Approval Date	30/04/2024
Version	1.0
Reference code on NQR	NCVET- QG-03-CG-02398-2024-V1-MSME
NQR Version	1.0

MSME/CSC/N4704: Create Part Drawing using Auto-CAD

Description

Explain the application of engineering drawing.

Scope

The scope covers the following :

- Explain the application of engineering drawing.

Elements and Performance Criteria

MSME/CCCM/04 & Version 1.0 Create Part Drawing using Auto-CAD

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

PC1. Explain the Importance of Engineering drawing,

PC2. Explanation the scope and objective of Engineering Drawing

PC3. • Demonstrate and explain drawing Standards: Size of drawing sheets – Layout of
• drawing sheet – Title Blocks – Types of lines – Folding of drawing sheets.

PC4. Use of dimensioning techniques according to Standard of dimensions

PC5. • Demonstrate orthographic & Isometric projection by using a viewing box and a
• model

PC6. Demonstrate first angle and third angle projection

PC7. Use of symbol in projections -Front view, top view and side view

PC8. Demonstrate the use of Auto CAD and Auto CAD interface

PC9. Apply coordinates systems in auto CAD

PC10. Demonstrate the use of tool bars.

PC11. Create solid field area (Hatching, Gradient)

PC12. Edit objects using the object property tool bar and various methods

PC13. Use sketch settings and Style toolbar (text style, Multileader style etc.)

PC14. Edit object using object property toolbar & various method

PC15. Create the replica of model using copy, array command

PC16. Identify the appropriate Tool to create and modify the model

PC17. Identify the appropriate Tool to create and modify the model

PC18. Change the orientation of the object by aligns, offset, rotate command

PC19. Apply standard dimension in a mechanical component

PC20. • Use of dimensioning Methods: Linear, Align, ordinates, Radius, Diameter, Arc
• length, angular etc,

PC21. Use of leader with text, block reference

PC22. Edit or modify the CAD Drawings

PC23. Use of layers Management and its applications

PC24. Apply GD& T Symbols in drawings

PC25. Develop proper drawing layout.

Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
MSME/CCCM/04 & Version 1.0 Create Part Drawing using Auto-CAD	-	**100**	-	-
PC1. Explain the Importance of Engineering drawing,	-	-	-	-
PC2. Explanation the scope and objective of Engineering Drawing	-	-	-	-
PC3. • Demonstrate and explain drawing Standards: Size of drawing sheets – Layout of • drawing sheet – Title Blocks – Types of lines – Folding of drawing sheets.	-	-	-	-
PC4. Use of dimensioning techniques according to Standard of dimensions	-	-	-	-
PC5. • Demonstrate orthographic & Isometric projection by using a viewing box and a • model	-	-	-	-
PC6. Demonstrate first angle and third angle projection	-	-	-	-
PC7. Use of symbol in projections -Front view, top view and side view	-	-	-	-
PC8. Demonstrate the use of Auto CAD and Auto CAD interface	-	-	-	-
PC9. Apply coordinates systems in auto CAD	-	-	-	-
PC10. Demonstrate the use of tool bars.	-	-	-	-
PC11. Create solid field area (Hatching, Gradient)	-	-	-	-
PC12. Edit objects using the object property tool bar and various methods	-	-	-	-
PC13. Use sketch settings and Style toolbar (text style, Multileader style etc.)	-	-	-	-

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
PC14. Edit object using object property toolbar & various method	-	-	-	-
PC15. Create the replica of model using copy, array command	-	-	-	-
PC16. Identify the appropriate Tool to create and modify the model	-	-	-	-
PC17. Identify the appropriate Tool to create and modify the model	-	-	-	-
PC18. Change the orientation of the object by aligns, offset, rotate command	-	-	-	-
PC19. Apply standard dimension in a mechanical component	-	-	-	-
PC20. • Use of dimensioning Methods: Linear, Align, ordinates, Radius, Diameter, Arc • length, angular etc,	-	-	-	-
PC21. Use of leader with text, block reference	-	-	-	-
PC22. Edit or modify the CAD Drawings	-	-	-	-
PC23. Use of layers Management and its applications	-	-	-	-
PC24. Apply GD& T Symbols in drawings	-	-	-	-
PC25. Develop proper drawing layout.	-	-	-	-
NOS Total	**-**	**100**	**-**	**-**

Qualification Pack

National Occupational Standards (NOS) Parameters

NOS Code	MSME/CSC/N4704
NOS Name	Create Part Drawing using Auto-CAD
Sector	Capital Goods
Sub-Sector	
Occupation	Machine Operation 03
NSQF Level	4
Credits	3
Version	1.0
Last Reviewed Date	30/04/2024
Next Review Date	30/04/2027
NSQC Clearance Date	30/04/2024

MSME/CSC/N4703: Checking dimensions of CNC machined Part

Description

Understand End and line Standard

Scope

The scope covers the following :

- Understand End and line Standard

Elements and Performance Criteria

MSME/CCCM/03 & Version 1.0 Checking dimensions of CNC machined Par

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

PC1. • Demonstrate the linear measurement by vernier Caliper (Digital, Analog and • Dial type)

PC2. Demonstrate the linear measurement by micrometer (Analog and Digital type)

PC3. • Demonstrate the linear Measurement by height gauges (Digital and Analog • type).

PC4. • Calculate the least count of various instruments (Vernier Caliper, Micrometer • and Height Gauge)

PC5. • Demonstrate the diametrical Measurement: inside diameter by inside • micrometer

PC6. • Demonstrate the Diametrical Measurement: depth of hole or recess by depth • micromete

PC7. Angle and taper measurements by bevel protractor and Sine bar.

PC8. To find out the flatness of Surface plate by use of spirit level and optical flat.

PC9. Measure surface roughness by roughness tester.

PC10. • Perform measurement of micro threads (British , Acme, Matric) by use of profile • projector

PC11. Apply limits, fits and tolerances for a given geometry

PC12. Check various dimensions using gauges (Go-No GO Type, plug, ring etc.)

PC13. Measurement of screw thread using various instruments

PC14. List Geometrical Dimensions & Tolerances used in manufacturing industries.

PC15. Evaluate and do analysis of parameters of screw threads Measurement

Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
MSME/CCCM/03 & Version 1.0 Checking dimensions of CNC machined Par	-	**100**	-	-
PC1. • Demonstrate the linear measurement by vernier Caliper (Digital, Analog and • Dial type)	-	-	-	-
PC2. Demonstrate the linear measurement by micrometer (Analog and Digital type)	-	-	-	-
PC3. • Demonstrate the linear Measurement by height gauges (Digital and Analog • type).	-	-	-	-
PC4. • Calculate the least count of various instruments (Vernier Caliper, Micrometer • and Height Gauge)	-	-	-	-
PC5. • Demonstrate the diametrical Measurement: inside diameter by inside • micrometer	-	-	-	-
PC6. • Demonstrate the Diametrical Measurement: depth of hole or recess by depth • micromete	-	-	-	-
PC7. Angle and taper measurements by bevel protractor and Sine bar.	-	-	-	-
PC8. To find out the flatness of Surface plate by use of spirit level and optical flat.	-	-	-	-
PC9. Measure surface roughness by roughness tester.	-	-	-	-
PC10. • Perform measurement of micro threads (British , Acme, Matric) by use of profile • projector	-	-	-	-
PC11. Apply limits, fits and tolerances for a given geometry	-	-	-	-

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
PC12. Check various dimensions using gauges (Go-No GO Type, plug, ring etc.)	-	-	-	-
PC13. Measurement of screw thread using various instruments	-	-	-	-
PC14. List Geometrical Dimensions & Tolerances used in manufacturing industries.	-	-	-	-
PC15. Evaluate and do analysis of parameters of screw threads Measurement	-	-	-	-
NOS Total	**-**	**100**	**-**	**-**

Qualification Pack

National Occupational Standards (NOS) Parameters

NOS Code	MSME/CSC/N4703
NOS Name	Checking dimensions of CNC machined Part
Sector	Capital Goods
Sub-Sector	
Occupation	Machine Operation 03
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

MSME/CSC/N4702: Demonstrate the working Principle of Machine Tools

Description

Understand about the basic norms of an organization

Scope

The scope covers the following :

- Understand about the basic norms of an organization

Elements and Performance Criteria

MSME/CCCM/02 & Version 1.0 Demonstrate the working Principle of Machine Tools

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. Using 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.

PC10. Explain the concept of 5S

PC11. the 5S cycle, activities and 5S program overview

PC12. Describe 5S program steps

PC13. Explain different types of machine tools (Milling machines)

PC14. Explain the Parts of a Milling machine

PC15. Explain various job holding device on Milling machine

PC16. Explain the function of Milling machine

PC17. Explain various operations performed on Milling Machine.

PC18. Explain Methods of performing tapper Milling operation

PC19. Explain Taper Milling, step Milling, radius making and parting-off.

PC20. Explain Different types of fitting tools and marking tools used in fitting practice.

PC21. Explain the systems of unit - FPS, CGS, MKS/SI unit

PC22. unit of length, Mass and time and Conversion of units

PC23. • Mensuration: Area and perimeter of square, rectangle, parallelogram, triangle, • circle, semi-circle, Volume of solids and cylinder

PC24. • Explain quality policy and quality organization: Indian and international
• organization

PC25. Explain the concept of quality Assurance and 7 QC Tools

Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
MSME/CCCM/02 & Version 1.0 Demonstrate the working Principle of Machine Tools	**100**	**-**	**-**	**-**
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. Using 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.	-	-	-	-
PC10. Explain the concept of 5S	-	-	-	-
PC11. the 5S cycle, activities and 5S program overview	-	-	-	-
PC12. Describe 5S program steps	-	-	-	-
PC13. Explain different types of machine tools (Milling machines)	-	-	-	-
PC14. Explain the Parts of a Milling machine	-	-	-	-

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
PC15. Explain various job holding device on Milling machine	-	-	-	-
PC16. Explain the function of Milling machine	-	-	-	-
PC17. Explain various operations performed on Milling Machine.	-	-	-	-
PC18. Explain Methods of performing tapper Milling operation	-	-	-	-
PC19. Explain Taper Milling, step Milling, radius making and parting-off.	-	-	-	-
PC20. Explain Different types of fitting tools and marking tools used in fitting practice.	-	-	-	-
PC21. Explain the systems of unit - FPS, CGS, MKS/SI unit	-	-	-	-
PC22. unit of length, Mass and time and Conversion of units	-	-	-	-
PC23. • Mensuration: Area and perimeter of square, rectangle, parallelogram, triangle, • circle, semi-circle, Volume of solids and cylinder	-	-	-	-
PC24. • Explain quality policy and quality organization: Indian and international • organization	-	-	-	-
PC25. Explain the concept of quality Assurance and 7 QC Tools	-	-	-	-
NOS Total	**100**	**-**	**-**	**-**

National Occupational Standards (NOS) Parameters

NOS Code	MSME/CSC/N4702
NOS Name	Demonstrate the working Principle of Machine Tools
Sector	Capital Goods
Sub-Sector	
Occupation	Machine Operation 03
NSQF Level	3
Credits	1
Version	1.0
Last Reviewed Date	30/04/2024
Next Review Date	30/04/2027
NSQC Clearance Date	30/04/2024

MSME/CSC/N4701: Assist in Operation of CNC Milling Machine

Description

Explain applications and advantages of CNC machines

Scope

The scope covers the following :

- Explain applications and advantages of CNC machines

Elements and Performance Criteria

MSME/CCCM/01 & Version 1.0 Assist in Operation of CNC Milling Machine

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

PC1. • Explain the types of CNC Machines, Advantages & Limitations of CNC • applications.

PC2. • Explain CNC interpolation, open loop & close loop control systems with • feedback devices

PC3. Explain co-ordinate systems & points mode.

PC4. Identify Cutting Tools and Tool Holders from the standard (ISO Standard)

PC5. Discuss operations of single & Multi point cutting tool

PC6. Selection of standard tools/ cutters/Tool Holders as per requirement

PC7. Explain Tool Holder Types

PC8. Define Milling Insert Shapes

PC9. Describe Operating Conditions

PC10. Explain Work holding methods

PC11. Identify and Explain Tool holding Devices

PC12. Explain Cutting parameters

PC13. Discuss the need of different oils & lubricants used

PC14. • Describe standard mathematical formulae used in calculation required for • machine tool operation.

PC15. • Calculations of machining parameters like cutting speed, cutting feed, depth of • cut etc

PC16. Explain Coordinate System and Machine Geometry

PC17. Explain Axis – Orientation

PC18. Define Work sketch and Calculation

PC19. • Use appropriate sources to obtain the required information e.g. Numerical • control on CNC machine, types of CNC control

PC20. • Check that all the equipment is correctly connected and in a safe and usable • working condition

PC21. • Select Appropriate Raw Material as per size of the Parts to be manufactured • mentioned in drawing and specification

PC22. Calculate parameters & set a references for the various operations

PC23. • Use appropriate techniques to create CNC program that are sufficiently and
• clearly detailed

PC24. Use codes and other references that follow the required conventions

PC25. Plan the machining activities before starting them.

PC26. Set up the suitable template/folder

PC27. • Set up and check that all peripheral devices are connected and correctly
• operating

PC28. • Confirm that the program is as per job specifications and contains all relevant
• information

PC29. Make sure that programs are checked and approved by the appropriate person

PC30. Save the program in the appropriate file type and location

PC31. • Prepare programs, demonstrate, simulate and operate CNC Milling, machines
• for various machining operations.

PC32. Execute program and inspect simple geometrical forms / standard parts

PC33. Explain the type of maintenance and Maintenance checklist

PC34. Carry out Routine Maintenance activity as per standard / checklist

PC35. • Safe handling of tools, equipment & CNC Machines & Personal safety tool as per
• company product requirement

PC36. Use protective clothing / equipment for specific tasks on CNC Machine

PC37. • OJT Report:
• Mentioning the process and procedure carried by the trainee for completing the
• assign task duly endorsed by the authorized personnel and The report must
• contain:
• □ Details of Department/ Organization
• □ Brief Job description & work activity
• □ Specific problem face if any with the solution.
• □ Technical Books referred during the OJT
• □ Conclusion

Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
MSME/CCCM/01 & Version 1.0 Assist in Operation of CNC Milling Machine	-	100	-	-
PC1. • Explain the types of CNC Machines, Advantages & Limitations of CNC • applications.	-	-	-	-
PC2. • Explain CNC interpolation, open loop & close loop control systems with • feedback devices	-	-	-	-
PC3. Explain co-ordinate systems & points mode.	-	-	-	-
PC4. Identify Cutting Tools and Tool Holders from the standard (ISO Standard)	-	-	-	-
PC5. Discuss operations of single & Multi point cutting tool	-	-	-	-
PC6. Selection of standard tools/ cutters/Tool Holders as per requirement	-	-	-	-
PC7. Explain Tool Holder Types	-	-	-	-
PC8. Define Milling Insert Shapes	-	-	-	-
PC9. Describe Operating Conditions	-	-	-	-
PC10. Explain Work holding methods	-	-	-	-
PC11. Identify and Explain Tool holding Devices	-	-	-	-
PC12. Explain Cutting parameters	-	-	-	-
PC13. Discuss the need of different oils & lubricants used	-	-	-	-
PC14. • Describe standard mathematical formulae used in calculation required for • machine tool operation.	-	-	-	-

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
PC15. • Calculations of machining parameters like cutting speed, cutting feed, depth of • cut etc	-	-	-	-
PC16. Explain Coordinate System and Machine Geometry	-	-	-	-
PC17. Explain Axis – Orientation	-	-	-	-
PC18. Define Work sketch and Calculation	-	-	-	-
PC19. • Use appropriate sources to obtain the required information e.g. Numerical • control on CNC machine, types of CNC control	-	-	-	-
PC20. • Check that all the equipment is correctly connected and in a safe and usable • working condition	-	-	-	-
PC21. • Select Appropriate Raw Material as per size of the Parts to be manufactured • mentioned in drawing and specification	-	-	-	-
PC22. Calculate parameters & set a references for the various operations	-	-	-	-
PC23. • Use appropriate techniques to create CNC program that are sufficiently and • clearly detailed	-	-	-	-
PC24. Use codes and other references that follow the required conventions	-	-	-	-
PC25. Plan the machining activities before starting them.	-	-	-	-
PC26. Set up the suitable template/folder	-	-	-	-
PC27. • Set up and check that all peripheral devices are connected and correctly • operating	-	-	-	-

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
PC28. • Confirm that the program is as per job specifications and contains all relevant • information	-	-	-	-
PC29. Make sure that programs are checked and approved by the appropriate person	-	-	-	-
PC30. Save the program in the appropriate file type and location	-	-	-	-
PC31. • Prepare programs, demonstrate, simulate and operate CNC Milling, machines • for various machining operations.	-	-	-	-
PC32. Execute program and inspect simple geometrical forms / standard parts	-	-	-	-
PC33. Explain the type of maintenance and Maintenance checklist	-	-	-	-
PC34. Carry out Routine Maintenance activity as per standard / checklist	-	-	-	-
PC35. • Safe handling of tools, equipment & CNC Machines & Personal safety tool as per • company product requirement	-	-	-	-
PC36. Use protective clothing / equipment for specific tasks on CNC Machine	-	-	-	-
PC37. • OJT Report: • Mentioning the process and procedure carried by the trainee for completing the • assign task duly endorsed by the authorized personnel and The report must • contain: • □ Details of Department/ Organization • □ Brief Job description & work activity • □ Specific problem face if any with the solution. • □ Technical Books referred during the OJT • □ Conclusion	-	-	-	-
NOS Total	**-**	**100**	**-**	**-**

National Occupational Standards (NOS) Parameters

NOS Code	MSME/CSC/N4701
NOS Name	Assist in Operation of CNC Milling Machine
Sector	Capital Goods
Sub-Sector	
Occupation	Machine Operation 03
NSQF Level	3
Credits	14
Version	1.0
Last Reviewed Date	30/04/2024
Next Review Date	30/04/2027
NSQC Clearance Date	30/04/2024

MSME/CSC/N4705: Employability skills 09

Description

This unit is about employability skills, Constitutional values, becoming a professional in the 21st Century, digital, financial, and legal literacy, diversity and Inclusion, English and communication skills, customer service, entrepreneurship, and getting ready for jobs and apprenticeship.

Scope

The scope covers the following :

- This unit is about employability skills, Constitutional values, becoming a professional in the 21st Century,
- digital, financial, and legal literacy, diversity and Inclusion, English and communication skills, customer service,
- entrepreneurship, and getting ready for jobs and apprenticeship.

Elements and Performance Criteria

MSME/ES/01 Employability skills

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

Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
MSME/ES/01 Employability skills	**100**	**-**	**-**	**-**
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	-	-	-	-

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
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	-	-	-	-
PC23. Differentiate between fixed and variable costs	-	-	-	-
PC24. Describe the different types of insurance products	-	-	-	-
PC25. Discuss the main types of electronic funds transfers	-	-	-	-
NOS Total	**100**	**-**	**-**	**-**

National Occupational Standards (NOS) Parameters

NOS Code	MSME/CSC/N4705
NOS Name	Employability skills 09
Sector	Capital Goods
Sub-Sector	
Occupation	Machine Operation 03
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.)

Assessment Weightage

Compulsory NOS

Qualification Pack

National Occupational Standards	Theory Marks	Practical Marks	Project Marks	Viva Marks	Total Marks	Weightage
MSME/CSC/N4704.Create Part Drawing using Auto-CAD	-	100	-	-	100	20
MSME/CSC/N4703.Checking dimensions of CNC machined Part	-	100	-	-	100	20
MSME/CSC/N4702.Demonstrate the working Principle of Machine Tools	100	-	-	-	100	20
MSME/CSC/N4701.Assist in Operation of CNC Milling Machine	-	100	-	-	100	20
MSME/CSC/N4705.Employability skills 09	100	-	-	-	100	20
Total	**200**	**300**	**-**	**-**	**500**	**100**

Acronyms

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

Glossary

Sector	Sector is a conglomeration of different business operations having similar business and interests. It may also be defined as a distinct subset of the economy whose components share similar characteristics and interests.
Sub-sector	Sub-sector is derived from a further breakdown based on the characteristics and interests of its components.
Occupation	Occupation is a set of job roles, which perform similar/ related set of functions in an industry.
Job role	Job role defines a unique set of functions that together form a unique employment opportunity in an organisation.
Occupational Standards (OS)	OS specify the standards of performance an individual must achieve when carrying out a function in the workplace, together with the Knowledge and Understanding (KU) they need to meet that standard consistently. Occupational Standards are applicable both in the Indian and global contexts.
Performance Criteria (PC)	Performance Criteria (PC) are statements that together specify the standard of performance required when carrying out a task.
National Occupational Standards (NOS)	NOS are occupational standards which apply uniquely in the Indian context.
Qualifications Pack (QP)	QP comprises the set of OS, together with the educational, training and other criteria required to perform a job role. A QP is assigned a unique qualifications pack code.
Unit Code	Unit code is a unique identifier for an Occupational Standard, which is denoted by an 'N'
Unit Title	Unit title gives a clear overall statement about what the incumbent should be able to do.
Description	Description gives a short summary of the unit content. This would be helpful to anyone searching on a database to verify that this is the appropriate OS they are looking for.
Scope	Scope is a set of statements specifying the range of variables that an individual may have to deal with in carrying out the function which have a critical impact on quality of performance required.

Knowledge and Understanding (KU)	Knowledge and Understanding (KU) are statements which together specify the technical, generic, professional and organisational specific knowledge that an individual needs in order to perform to the required standard.
Organisational Context	Organisational context includes the way the organisation is structured and how it operates, including the extent of operative knowledge managers have of their relevant areas of responsibility.
Technical Knowledge	Technical knowledge is the specific knowledge needed to accomplish specific designated responsibilities.
Core Skills/ Generic Skills (GS)	Core skills or Generic Skills (GS) are a group of skills that are the key to learning and working in today's world. These skills are typically needed in any work environment in today's world. These skills are typically needed in any work environment. In the context of the OS, these include communication related skills that are applicable to most job roles.
Electives	Electives are NOS/set of NOS that are identified by the sector as contributive to specialization in a job role. There may be multiple electives within a QP for each specialized job role. Trainees must select at least one elective for the successful completion of a QP with Electives.
Options	Options are NOS/set of NOS that are identified by the sector as additional skills. There may be multiple options within a QP. It is not mandatory to select any of the options to complete a QP with Options.