



Qualification Pack

Jr. Technician Tool & Die

QP Code: MSME/CSC/Q3701

Version: 1.0

NSQF Level: 3.5

MSME TECHNOLOGY CENTRE ||
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Qualification Pack

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Qualification Pack

MSME/CSC/Q3701: Jr. Technician Tool & Die

Brief Job Description

The qualification containing different modules which is required for the job role Tool & Die Maker.

Personal Attributes

The qualification containing different modules which is required for the job role Tool & Die Maker.

Applicable National Occupational Standards (NOS)

Compulsory NOS:

1. [MSME/CSC/N3718: PROJECT WORK-TOOL & DIE MAKING-II A](#)
2. [MSME/CSC/N3712: WORKSHOP PRACTICE-II](#)
3. [MSME/CSC/N3711: WORKSHOP TECHNOLOGY-II](#)
4. [MSME/CSC/N3710: ENGINEERING DRAWING - II](#)
5. [MSME/CSC/N3709: PROJECT WORK-TOOL & DIE MAKING](#)
6. [MSME/CSC/N3703: WORKSHOP PRACTICE-I](#)
7. [MSME/CSC/N3702: WORKSHOP TECHNOLOGY - I](#)
8. [MSME/CSC/N3701: ENGINEERING DRAWING-I](#)
9. [MSME/CSC/N3717: EMPLOYABILITY SKILL 00](#)
10. [MSME/CSC/N3715: MECHANICAL MEASUREMENT AND METROLOGY](#)
11. [MSME/CSC/N3714: MATHEMATICS-II](#)
12. [MSME/CSC/N3713: APPLIED MECHANICS](#)
13. [MSME/CSC/N3708: EMPLOYABILITY SKILL 00](#)
14. [MSME/CSC/N3706: APPLIED SCIENCE-I](#)
15. [MSME/CSC/N3705: MATHEMATICS-I](#)
16. [MSME/CSC/N3704: COMPUTER APPLICATION](#)



Qualification Pack

Qualification Pack (QP) Parameters

Sector	Capital Goods
Sub-Sector	Machine Tools
Occupation	Tool & Die Making 01
Country	India
NSQF Level	3.5
Credits	40
Aligned to NCO/ISCO/ISIC Code	3115.13 (Tool Room Supervisor)
Minimum Educational Qualification & Experience	10th grade pass
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	QG-3.5-CG-02412-2024-V1-MSME
NQR Version	1.0



Qualification Pack

MSME/CSC/N3718: PROJECT WORK-TOOL & DIE MAKING-II A

Description

PROJECT WORK-

Scope

The scope covers the following :

- PROJECT
- WORK-

Elements and Performance Criteria

MSME/DTE/15 PROJECT WORK-TOOL & DIE MAKING (ELECTIVE)

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

- PC1.**
- Project 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 faces if any with the solution.
 - ☐ Technical Books referred during the OJT
 - ☐ Conclusion



Qualification Pack

Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<i>MSME/DTE/15 PROJECT WORK-TOOL & DIE MAKING (ELECTIVE)</i>	-	100	-	-
PC1. <ul style="list-style-type: none">• Project 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:<ul style="list-style-type: none">• □ Details of Department/ Organization• □ Brief Job description & work activity• □ Specific problem faces if any with the solution.• □ Technical Books referred during the OJT• □ Conclusion	-	-	-	-
NOS Total	-	100	-	-



Qualification Pack

National Occupational Standards (NOS) Parameters

NOS Code	MSME/CSC/N3718
NOS Name	PROJECT WORK-TOOL & DIE MAKING-II A
Sector	Capital Goods
Sub-Sector	
Occupation	Tool & Die Making 01
NSQF Level	3.5
Credits	3
Version	1.0
Last Reviewed Date	30/04/2024
Next Review Date	30/04/2027
NSQC Clearance Date	30/04/2024



Qualification Pack

MSME/CSC/N3712: WORKSHOP PRACTICE-II

Description

Get knowledge about practical work in workshop.

Scope

The scope covers the following :

- Get knowledge about practical work in workshop.

Elements and Performance Criteria

MSME/DTE/11 WORKSHOP PRACTICE-II

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

- PC1.** Understand different types of machining process.
- PC2.** Understand different machines
- PC3.**
 - Understand different parameter for use of different
 - machines.
- PC4.** Different process regarding workshop and store



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Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<i>MSME/DTE/11 WORKSHOP PRACTICE-II</i>	-	100	-	-
PC1. Understand different types of machining process.	-	-	-	-
PC2. Understand different machines	-	-	-	-
PC3. <ul style="list-style-type: none">• Understand different parameter for use of different• machines.	-	-	-	-
PC4. Different process regarding workshop and store	-	-	-	-
NOS Total	-	100	-	-



Qualification Pack

National Occupational Standards (NOS) Parameters

NOS Code	MSME/CSC/N3712
NOS Name	WORKSHOP PRACTICE-II
Sector	Capital Goods
Sub-Sector	
Occupation	Tool & Die Making 01
NSQF Level	3.5
Credits	6
Version	1.0
Last Reviewed Date	30/04/2024
Next Review Date	30/04/2027
NSQC Clearance Date	30/04/2024



Qualification Pack

MSME/CSC/N3711: WORKSHOP TECHNOLOGY-II

Description

Use and application of different machine as per requirement

Scope

The scope covers the following :

- Use and application of different machine as per requirement

Elements and Performance Criteria

MSME/DTE/10 WORKSHOP TECHNOLOGY-II

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

- PC1.**
- Student should be able to Selection & use of drilling machine
 - Use of drilling operation & methods of drilling
 - Function of drilling machine
 - Use of work holding devices
 - Vice, angle plate, 'V' block, 'C' clamp
 - Application & use of drill chuck, sleeves, drifts, tapping, attachment
 - Selection & use of lathe machine
 - Parts of lathe machine
 - Types of work holding device & it's material
 - Types of cutting tool
 - Types of cutting tool/holder & it's classification
 - Selecting & use of milling machine
- PC2.**
- Understand Pantograph machine and operations, Concept of main parts and functions of machine, Work holding devices, single lip grinder machine and operations, Concept of main parts and functions of machine, Work holding



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Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<i>MSME/DTE/10 WORKSHOP TECHNOLOGY-II</i>	100	-	-	-
PC1. <ul style="list-style-type: none">• Student should be able to Selection & use of drilling machine• Use of drilling operation & methods of drilling• Function of drilling machine• Use of work holding devices• Vice, angle plate, 'V' block, 'C' clamp• Application & use of drill chuck, sleeves, drifts, tapping, attachment• Selection & use of lathe machine• Parts of lathe machine• Types of work holding device & it's material• Types of cutting tool• Types of cutting tool/holder & it's classification• Selecting & use of milling machine	-	-	-	-
PC2. <ul style="list-style-type: none">• Understand Pantograph machine and operations, Concept• of main parts and functions of machine, Work holding devices, single lip grinder machine and operations, Concept of main parts and functions of machine, Work holding	-	-	-	-
NOS Total	100	-	-	-



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National Occupational Standards (NOS) Parameters

NOS Code	MSME/CSC/N3711
NOS Name	WORKSHOP TECHNOLOGY-II
Sector	Capital Goods
Sub-Sector	
Occupation	Tool & Die Making 01
NSQF Level	3.5
Credits	2
Version	1.0
Last Reviewed Date	30/04/2024
Next Review Date	30/04/2027
NSQF Clearance Date	30/04/2024



Qualification Pack

MSME/CSC/N3710: ENGINEERING DRAWING - II

Description

Understand different types of development of surface and its importance in drawing.

Scope

The scope covers the following :

- Understand different types of development of surface and its importance in drawing.

Elements and Performance Criteria

MSME/DTE/09 ENGINEERING DRAWING - II

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

- PC1.** • Understand about Tolerances, limits, fits and Surface
• texture.
- PC2.** Geometric tolerance symbols and characteristics.
- PC3.** • Understand the Different Section view drawing and its
• detail view
- PC4.** Development of different types of surfaces
- PC5.** Interpenetration of solids
- PC6.** • Understand the Practical drawing in different temporary
• joints as per BIS standard which is used for assembly
- PC7.** Understand the Assembly and detail drawing any object.



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Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<i>MSME/DTE/09 ENGINEERING DRAWING - II</i>	-	100	-	-
PC1. <ul style="list-style-type: none">Understand about Tolerances, limits, fits and Surfacetexture.	-	-	-	-
PC2. Geometric tolerance symbols and characteristics.	-	-	-	-
PC3. <ul style="list-style-type: none">Understand the Different Section view drawing and itsdetail view	-	-	-	-
PC4. Development of different types of surfaces	-	-	-	-
PC5. Interpenetration of solids	-	-	-	-
PC6. <ul style="list-style-type: none">Understand the Practical drawing in different temporaryjoints as per BIS standard which is used for assembly	-	-	-	-
PC7. Understand the Assembly and detail drawing any object.	-	-	-	-
NOS Total	-	100	-	-



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National Occupational Standards (NOS) Parameters

NOS Code	MSME/CSC/N3710
NOS Name	ENGINEERING DRAWING - II
Sector	Capital Goods
Sub-Sector	
Occupation	Tool & Die Making 01
NSQF Level	3.5
Credits	2
Version	1.0
Last Reviewed Date	30/04/2024
Next Review Date	30/04/2027
NSQC Clearance Date	30/04/2024



Qualification Pack

MSME/CSC/N3709: PROJECT WORK-TOOL & DIE MAKING

Description

PROJECT WORK-

Scope

The scope covers the following :

- PROJECT
- WORK-

Elements and Performance Criteria

MSME/DTE/07 PROJECT WORK-TOOL & DIE MAKING

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

PC1. Skill Development



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Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<i>MSME/DTE/07 PROJECT WORK-TOOL & DIE MAKING</i>	-	100	-	-
PC1. Skill Development	-	-	-	-
NOS Total	-	100	-	-



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National Occupational Standards (NOS) Parameters

NOS Code	MSME/CSC/N3709
NOS Name	PROJECT WORK-TOOL & DIE MAKING
Sector	Capital Goods
Sub-Sector	
Occupation	Tool & Die Making 01
NSQF Level	3.5
Credits	3
Version	1.0
Last Reviewed Date	30/04/2024
Next Review Date	30/04/2027
NSQF Clearance Date	30/04/2024



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MSME/CSC/N3703: WORKSHOP PRACTICE-I

Description

Get knowledge about practical work in workshop.

Scope

The scope covers the following :

- Get knowledge about practical work in workshop.

Elements and Performance Criteria

MSME/DTE/03 WORKSHOP PRACTICE-I

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

- PC1.**
- Able to understand different types of machining process.
 - Turning
 - Milling
 - Surface grinding
 - Maintenance of machine tools



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Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<i>MSME/DTE/03 WORKSHOP PRACTICE-I</i>	-	100	-	-
PC1. <ul style="list-style-type: none">• Able to understand different types of machining process.• Turning• Milling• Surface grinding• Maintenance of machine tools	-	-	-	-
NOS Total	-	100	-	-



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National Occupational Standards (NOS) Parameters

NOS Code	MSME/CSC/N3703
NOS Name	WORKSHOP PRACTICE-I
Sector	Capital Goods
Sub-Sector	
Occupation	Tool & Die Making 01
NSQF Level	3.5
Credits	6
Version	1.0
Last Reviewed Date	30/04/2024
Next Review Date	30/04/2027
NSQC Clearance Date	30/04/2024



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MSME/CSC/N3702: WORKSHOP TECHNOLOGY - I

Description

Use and application of different machine as per requirement

Scope

The scope covers the following :

- Use and application of different machine as per requirement

Elements and Performance Criteria

Understand tools and materials required and their use in industry

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

- PC1.** • Understand tools and materials required and their use in industry
- PC2.** Type of material-ferrous & non-ferrous
- PC3.** Safety application, safety rules, precaution of accidents
- PC4.** Safety precaution and safety rule
- PC5.** At the end of this unit student should be able to
- PC6.** Types of hand tools
- PC7.** Use & application of hand tools
- PC8.** Use & application & use of filing methods
- PC9.** Use & application & use of chisel
- PC10.** Use & application of marking tool
- PC11.** Working principle of welding, soldering and brazing
- PC12.** • Able to select & use of drilling machine
• Use of drilling operation & methods of drilling
• Function of drilling machine
• Use of work holding devices,
• Vice, angle plate, 'v' block, 'c' clamp
• Application & use of drills
• Centre drill counter base, counter sink
• Application & use of drill chuck, sleeves, drifts, tapping, attachment
• Use & application of drilling, tapping, counter sink, counter boring, and their calculation of speed, feed, depth of cut.
- PC13.** • Selection & use of lathe machine, parts of lathe machine. Types of work holding device & its material
• Types of cutting tool of lathe machine, parts of lathe machine. Types of cutting tool/holder & its classification
• What is speed feed
• Types of operation construction
• Types of cutting fluid



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- PC14.**
- Selecting & use of milling machine
 - Function of milling machine & it's part
 - Type of work holding devices
 - Design & types of cutting tools construction
 - Cutting tool holder
 - Tool geometry speed feed & depth of cut



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Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<i>Understand tools and materials required and their use in industry</i>	100	-	-	-
PC1. • Understand tools and materials required and their use in • industry	-	-	-	-
PC2. Type of material-ferrous & non-ferrous	-	-	-	-
PC3. Safety application, safety rules, precaution of accidents	-	-	-	-
PC4. Safety precaution and safety rule	-	-	-	-
PC5. At the end of this unit student should be able to	-	-	-	-
PC6. Types of hand tools	-	-	-	-
PC7. Use & application of hand tools	-	-	-	-
PC8. Use & application & use of filing methods	-	-	-	-
PC9. Use & application & use of chisel	-	-	-	-
PC10. Use & application of marking tool	-	-	-	-
PC11. Working principle of welding, soldering and brazing	-	-	-	-



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Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
PC12. <ul style="list-style-type: none">• Able to select & use of drilling machine• Use of drilling operation & methods of drilling• Function of drilling machine• Use of work holding devices,• Vice, angle plate, 'v' block, 'c' clamp• Application & use of drills• Centre drill counter base, counter sink• Application & use of drill chuck, sleeves, drifts, tapping,• attachment• Use & application of drilling, tapping, counter sink,• counter boring, and their calculation of speed, feed,• depth of cut.	-	-	-	-
PC13. <ul style="list-style-type: none">• Selection & use of lathe machine, parts of lathe• machine.Types of work holding device & it's material• Types of cutting toolse of lathe machine, parts of lathe• machine.Types of cutting tool/holder & it's classification• What is speed feed• Types of operation construction• Types of cutting fluid	-	-	-	-
PC14. <ul style="list-style-type: none">• Selecting & use of milling machine• Function of milling machine & it's part• Type of work holding devices• Design & types of cutting tools construction• Cutting tool holder• Tool geometry speed feed & depth of cut	-	-	-	-
NOS Total	100	-	-	-



Qualification Pack

National Occupational Standards (NOS) Parameters

NOS Code	MSME/CSC/N3702
NOS Name	WORKSHOP TECHNOLOGY - I
Sector	Capital Goods
Sub-Sector	
Occupation	Tool & Die Making 01
NSQF Level	3.5
Credits	2
Version	1.0
Last Reviewed Date	30/04/2024
Next Review Date	30/04/2027
NSQF Clearance Date	30/04/2024



Qualification Pack

MSME/CSC/N3701: ENGINEERING DRAWING-I

Description

Use the fundamentals of drawing and understand the importance of Scale, lines and lettering.

Scope

The scope covers the following :

- Use the fundamentals of drawing and understand the importance of Scale, lines and lettering.

Elements and Performance Criteria

MSME/DTE/01 ENGINEERING DRAWING-1

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

- PC1.**
- Understand the scientific facts, concepts, principle and procedure of engineering drawing used in tool design, process planning, estimation, inspection and QC including supervisory management to express the ideas, conveying instructions for carrying out jobs in tool and die technology.
- PC2.** Understand the media used for engineering drawing
- PC3.**
- Student should be able to understand how to represent the drawing using the rules followed with the help of geometric dimensions and tolerances.
- PC4.**
- To scale, line and lettering drawing and practical in different lines and lettering. Drawing of different line and letters in drawing book.
- PC5.**
- Procedure for drawing, straight line, angles, polygons, circle, all drawing drawn in sketch book.
- PC6.**
- Drawing of object as per 1st & 3rd angle projection method, Procedure for drawing different view in 1st & 3rd angle.
- PC7.** Procedure of indication of dimension
- PC8.**
- Able to understand how to project a drawing using the following projections:
- PC9.** Drawing projection of plane and point
- PC10.** Drawing of isometric view of different object.
- PC11.** Conversion of Isometric view to orthographic projection



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Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<i>MSME/DTE/01 ENGINEERING DRAWING-1</i>	-	100	-	-
PC1. <ul style="list-style-type: none">Understand the scientific facts, concepts, principle andprocedure of engineering drawing used in tool design,process planning, estimation, inspection and QC includingsupervisory management to express the ideas, conveyinginstructions for carrying out jobs in tool and dietechnology.	-	-	-	-
PC2. Understand the media used for engineering drawing	-	-	-	-
PC3. <ul style="list-style-type: none">Student should be able to understand how to representthe drawing using the rules followed with the help ofgeometric dimensions and tolerances.	-	-	-	-
PC4. <ul style="list-style-type: none">To scale, line and lettering drawing and practical indifferent lines and lettering. Drawing of different lineand letters in drawing book.	-	-	-	-
PC5. <ul style="list-style-type: none">Procedure for drawing, straight line, angles, polygons,circle, all drawing drawn in sketch book.	-	-	-	-
PC6. <ul style="list-style-type: none">Drawing of object as per 1st & 3rd angle projectionmethod, Procedure for drawing different view in 1st &3rd angle.	-	-	-	-
PC7. Procedure of indication of dimension	-	-	-	-



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Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
PC8. <ul style="list-style-type: none">• Able to understand how to project a drawing using the• following projections:	-	-	-	-
PC9. Drawing projection of plane and point	-	-	-	-
PC10. Drawing of isometric view of different object.	-	-	-	-
PC11. Conversion of Isometric view to orthographic projection	-	-	-	-
NOS Total	-	100	-	-



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National Occupational Standards (NOS) Parameters

NOS Code	MSME/CSC/N3701
NOS Name	ENGINEERING DRAWING-I
Sector	Capital Goods
Sub-Sector	
Occupation	Tool & Die Making 01
NSQF Level	3.5
Credits	2
Version	1.0
Last Reviewed Date	30/04/2024
Next Review Date	30/04/2027
NSQC Clearance Date	30/04/2024



Qualification Pack

MSME/CSC/N3717: EMPLOYABILITY SKILL 00

Description

Understand about employability .

Scope

The scope covers the following :

- Understand about employability .

Elements and Performance Criteria

MSME/DTE/16 EMPLOYABILITY SKILL

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

PC1. Read English text

PC2. • Write a brief note/paragraph / letter/e -mail using correct
• English



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Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<i>MSME/DTE/16 EMPLOYABILITY SKILL</i>	100	-	-	-
PC1. Read English text	-	-	-	-
PC2. <ul style="list-style-type: none">• Write a brief note/paragraph / letter/e-mail using correct English	-	-	-	-
NOS Total	100	-	-	-



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National Occupational Standards (NOS) Parameters

NOS Code	MSME/CSC/N3717
NOS Name	EMPLOYBILITY SKILL 00
Sector	Capital Goods
Sub-Sector	
Occupation	Tool & Die Making 01
NSQF Level	3.5
Credits	2
Version	1.0
Last Reviewed Date	30/04/2024
Next Review Date	30/04/2027
NSQC Clearance Date	30/04/2024



Qualification Pack

MSME/CSC/N3715: MECHANICAL MEASUREMENT AND METROLOGY

Description

Types of Measurements

Scope

The scope covers the following :

- Types of Measurements

Elements and Performance Criteria

MSME/DTE/14 MECHANICAL MEASUREMENT AND METROLOGY

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

- PC1.** Importance of Accurate Measurements
- PC2.** Types of Measurements
- PC3.** Measurement Standards and Units
- PC4.** Metrology in Industry
- PC5.** Role of Measurement in Quality Control
- PC6.**
 - Linear Measurement Instruments:
 - Vernier Calipers, Micrometers, Dial Indicators, Height
 - Gauges
- PC7.**
 - Angular Measurement Instruments:
 - Vernier Calipers, Micrometers, Dial Indicators, Height
 - Gauges
- PC8.** Calibration Methods
- PC9.** Sources of Errors in Measurement
- PC10.** Systematic and Random Errors
- PC11.** Precision and Accuracy
- PC12.** Uncertainty in Measurement
- PC13.** Error Analysis
- PC14.** Measurement of Length, Width, and Height
- PC15.** Measurement of Angles and Tapers
- PC16.** Measurement of Surface Roughness
- PC17.** Measurement of Straightness, Flatness, and Roundness
- PC18.** Measurement of Hardness
- PC19.** Measurement of Tensile Strength
- PC20.** Measurement of Impact Strength
- PC21.** Measurement of Fatigue Strength
- PC22.** Coordinate Measuring Machines (CMM)
- PC23.** Optical Measurement Techniques



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- PC24.** Laser Interferometry
- PC25.** X-ray and CT Scanning
- PC26.** 3D Scanning and Non-Contact Measurement
- PC27.** Introduction to Statistical Process Control (SPC)
- PC28.** Control Charts and Process Capability Analysis
- PC29.** Gage R&R (Repeatability and Reproducibility)
- PC30.** ISO Standards for Quality Assurance
- PC31.** Nano metrology
- PC32.** 3D Printing and Additive Manufacturing
- PC33.** Industry 4.0 and Metrology
- PC34.** Future Challenges and Innovations in Metrology



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Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<i>MSME/DTE/14 MECHANICAL MEASUREMENT AND METROLOGY</i>	100	-	-	-
PC1. Importance of Accurate Measurements	-	-	-	-
PC2. Types of Measurements	-	-	-	-
PC3. Measurement Standards and Units	-	-	-	-
PC4. Metrology in Industry	-	-	-	-
PC5. Role of Measurement in Quality Control	-	-	-	-
PC6. <ul style="list-style-type: none">• Linear Measurement Instruments:• Vernier Calipers, Micrometers, Dial Indicators, Height• Gauges	-	-	-	-
PC7. <ul style="list-style-type: none">• Angular Measurement Instruments:• Vernier Calipers, Micrometers, Dial Indicators, Height• Gauges	-	-	-	-
PC8. Calibration Methods	-	-	-	-
PC9. Sources of Errors in Measurement	-	-	-	-
PC10. Systematic and Random Errors	-	-	-	-
PC11. Precision and Accuracy	-	-	-	-
PC12. Uncertainty in Measurement	-	-	-	-
PC13. Error Analysis	-	-	-	-
PC14. Measurement of Length, Width, and Height	-	-	-	-
PC15. Measurement of Angles and Tapers	-	-	-	-
PC16. Measurement of Surface Roughness	-	-	-	-
PC17. Measurement of Straightness, Flatness, and Roundness	-	-	-	-



Qualification Pack

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
PC18. Measurement of Hardness	-	-	-	-
PC19. Measurement of Tensile Strength	-	-	-	-
PC20. Measurement of Impact Strength	-	-	-	-
PC21. Measurement of Fatigue Strength	-	-	-	-
PC22. Coordinate Measuring Machines (CMM)	-	-	-	-
PC23. Optical Measurement Techniques	-	-	-	-
PC24. Laser Interferometry	-	-	-	-
PC25. X-ray and CT Scanning	-	-	-	-
PC26. 3D Scanning and Non-Contact Measurement	-	-	-	-
PC27. Introduction to Statistical Process Control (SPC)	-	-	-	-
PC28. Control Charts and Process Capability Analysis	-	-	-	-
PC29. Gage R&R (Repeatability and Reproducibility)	-	-	-	-
PC30. ISO Standards for Quality Assurance	-	-	-	-
PC31. Nano metrology	-	-	-	-
PC32. 3D Printing and Additive Manufacturing	-	-	-	-
PC33. Industry 4.0 and Metrology	-	-	-	-
PC34. Future Challenges and Innovations in Metrology	-	-	-	-
NOS Total	100	-	-	-



Qualification Pack

National Occupational Standards (NOS) Parameters

NOS Code	MSME/CSC/N3715
NOS Name	MECHANICAL MEASUREMENT AND METROLOGY
Sector	Capital Goods
Sub-Sector	
Occupation	Tool & Die Making 01
NSQF Level	3.5
Credits	2
Version	1.0
Last Reviewed Date	30/04/2024
Next Review Date	30/04/2027
NSQF Clearance Date	30/04/2024



Qualification Pack

MSME/CSC/N3714: MATHEMATICS-II

Description

Understanding facts, concept, of mathematical needs in technical subjects.

Scope

The scope covers the following :

- Understanding facts, concept, of mathematical needs in technical subjects.

Elements and Performance Criteria

MSME/DTE/13 MATHEMATICS-II

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

- PC1.** Transformation of co-ordinates
- PC2.** Standards form, general equations
- PC3.** Scalar and vector product of two vectors.
- PC4.** Definition, fundamental and properties of integration
- PC5.** Matrix, different types of matrix
- PC6.** Reversal laws, inverse laws



Qualification Pack

Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<i>MSME/DTE/13 MATHEMATICS-II</i>	100	-	-	-
PC1. Transformation of co-ordinates	-	-	-	-
PC2. Standards form, general equations	-	-	-	-
PC3. Scalar and vector product of two vectors.	-	-	-	-
PC4. Definition, fundamental and properties of integration	-	-	-	-
PC5. Matrix, different types of matrix	-	-	-	-
PC6. Reversal laws, inverse laws	-	-	-	-
NOS Total	100	-	-	-



Qualification Pack

National Occupational Standards (NOS) Parameters

NOS Code	MSME/CSC/N3714
NOS Name	MATHEMATICS-II
Sector	Capital Goods
Sub-Sector	
Occupation	Tool & Die Making 01
NSQF Level	3.5
Credits	2
Version	1.0
Last Reviewed Date	30/04/2024
Next Review Date	30/04/2027
NSQC Clearance Date	30/04/2024



Qualification Pack

MSME/CSC/N3713: APPLIED MECHANICS

Description

Understand different principle of mechanics.

Scope

The scope covers the following :

- Understand different principle of mechanics.

Elements and Performance Criteria

MSME/DTE/12 APPLIED MECHANICS

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

- PC1.**
 - Able to understand Scalar and vector quantities
 - System of units Principle of abbreviation, symbols, units of quantities.
- PC2.**
 - Able to understand
 - Principle of statics
 - Equilibrium of coplanar concurrent forces.
 - Lami's theorem.
 - Resolution and resultant, graphical methods.
 - Newton's third law.
- PC3.**
 - Able to understand
 - Moments
 - Lami's theory.
 - Principle of parallel forces, unlike parallel forces, nonconcurrent force, couple, resultant force.
 - Condition of equilibrium.
 - Varignon 's principle
- PC4.**
 - Able to understand
 - Concept of centre of gravity,
 - Centroid,
 - Symmetry consideration
 - Theorem of moments,
 - Axis of symmetry.
 - State of equilibrium and application.
- PC5.** Friction in engineering field.
- PC6.** Terms related to motion
- PC7.** Laws of motion
- PC8.** Application.
- PC9.** Angular displacement
- PC10.** Velocity
- PC11.** Acceleration
- PC12.** Centrifugal forces
- PC13.** Centripetal forces



Qualification Pack

- PC14.** • The application of work done, work done by torque,
• horse power, torque, speed relationship.
- PC15.** • The application of horse power, kinetic energy & potential
• energy.
- PC16.** • The mechanical advantages and velocity ratio in simple
• machine.



Qualification Pack

Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<i>MSME/DTE/12 APPLIED MECHANICS</i>	100	-	-	-
PC1. <ul style="list-style-type: none"> • Able to understand Scalar and vector quantities • System of units Principle of abbreviation, symbols, units • of quantities. 	-	-	-	-
PC2. <ul style="list-style-type: none"> • Able to understand • Principle of statics • Equilibrium of coplanar concurrent forces. • Lami's theorem. • Resolution and resultant, graphical methods. • Newton's third law. 	-	-	-	-
PC3. <ul style="list-style-type: none"> • Able to understand • Moments • Lami's theory. • Principle of parallel forces, unlike parallel forces, nonconcurrent force, couple, resultant force. • Condition of equilibrium. • Varignon 's principle 	-	-	-	-
PC4. <ul style="list-style-type: none"> • Able to understand • Concept of centre of gravity, • Centroid, • Symmetry consideration • Theorem of moments, • Axis of symmetry. • State of equilibrium and application. 	-	-	-	-
PC5. Friction in engineering field.	-	-	-	-
PC6. Terms related to motion	-	-	-	-
PC7. Laws of motion	-	-	-	-
PC8. Application.	-	-	-	-
PC9. Angular displacement	-	-	-	-



Qualification Pack

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
PC10. Velocity	-	-	-	-
PC11. Acceleration	-	-	-	-
PC12. Centrifugal forces	-	-	-	-
PC13. Centripetal forces	-	-	-	-
PC14. <ul style="list-style-type: none">• The application of work done, work done by torque,• horse power, torque, speed relationship.	-	-	-	-
PC15. <ul style="list-style-type: none">• The application of horse power, kinetic energy & potential• energy.	-	-	-	-
PC16. <ul style="list-style-type: none">• The mechanical advantages and velocity ratio in simple• machine.	-	-	-	-
NOS Total	100	-	-	-



Qualification Pack

National Occupational Standards (NOS) Parameters

NOS Code	MSME/CSC/N3713
NOS Name	APPLIED MECHANICS
Sector	Capital Goods
Sub-Sector	
Occupation	Tool & Die Making 01
NSQF Level	3.5
Credits	1
Version	1.0
Last Reviewed Date	30/04/2024
Next Review Date	30/04/2027
NSQC Clearance Date	30/04/2024



Qualification Pack

MSME/CSC/N3708: EMPLOYABILITY SKILL 00

Description

Understand about employability .

Scope

The scope covers the following :

- Understand about employability .

Elements and Performance Criteria

MSME/DTE/08 EMPLOYABILITY SKILL

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

- PC1.** • The importance of Employability Skills for the current job
 - market and future of work
- PC2.** • List different learning and employability related GOI and
 - private portals and their usage
- PC3.** • Research and prepare a note on different industries,
 - trends, required skills and the available opportunities
- PC4.** • Constitutional values, including civic rights and duties,
 - citizenship, responsibility towards society etc.
- PC5.** • Skills required for employment.(i.e. Self-Awareness,
 - Behaviour Skills, time management, critical and adaptive
 - thinking, problem-solving, creative thinking, social and
 - cultural awareness, emotional awareness, learning to
 - learn)



Qualification Pack

Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<i>MSME/DTE/08 EMPLOYABILITY SKILL</i>	100	-	-	-
PC1. <ul style="list-style-type: none">The importance of Employability Skills for the current jobmarket and future of work	-	-	-	-
PC2. <ul style="list-style-type: none">List different learning and employability related GOI andprivate portals and their usage	-	-	-	-
PC3. <ul style="list-style-type: none">Research and prepare a note on different industries,trends, required skills and the available opportunities	-	-	-	-
PC4. <ul style="list-style-type: none">Constitutional values, including civic rights and duties,citizenship, responsibility towards society etc.	-	-	-	-
PC5. <ul style="list-style-type: none">Skills required for employment.(i.e. Self-Awareness,Behaviour Skills, time management, critical and adaptivethinking, problem-solving, creative thinking, social andcultural awareness, emotional awareness, learning tolearn)	-	-	-	-
NOS Total	100	-	-	-



Qualification Pack

National Occupational Standards (NOS) Parameters

NOS Code	MSME/CSC/N3708
NOS Name	EMPLOYABILITY SKILL 00
Sector	Capital Goods
Sub-Sector	
Occupation	Tool & Die Making 01
NSQF Level	3.5
Credits	2
Version	1.0
Last Reviewed Date	30/04/2024
Next Review Date	30/04/2027
NSQC Clearance Date	30/04/2024



Qualification Pack

MSME/CSC/N3706: APPLIED SCIENCE-I

Description

Understanding facts, concept, of physics to develop new technology.

Scope

The scope covers the following :

- Understanding facts, concept, of physics to develop new technology.

Elements and Performance Criteria

MSME/DTE/06 APPLIED SCIENCE

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

- PC1.** Able to understand importance of fundamental science
- PC2.** Purpose of learning physics, Applications in daily life
- PC3.** Able to understand types of unit and its importance
- PC4.**
 - Able to understand distinction between rotary and circular motion, velocity, time and distance graph
- PC5.**
 - Able to understand centripetal and centrifugal forces, banking of roads and bending of cyclist
- PC6.**
 - Able to understand examples of periodic motion
 - necessary conditions for the appearance and pursuance of periodic motion
- PC7.** Able to understand wave equation
- PC8.** Able to understand what is gravity
- PC9.** Newton's principle
- PC10.**
 - Principle and technique of launching of artificial satellite, natural and man-made satellite
- PC11.**
 - Able to understand what is matter, its classifications and properties
- PC12.**
 - Kinetic theory of matter relation of internal energy with quantity of heat and temperature.
- PC13.**
 - Able to understand kinetic interpretation of temperature, absolute zero, Gaslaw's, Conceptof kinetic theory.
- PC14.**
 - Able to understand the effect of temperature on ST of liquids and gases
- PC15.**
 - Experimental determination of ST of liquid by capillary rise
- PC16.**
 - Able to understand by experimental determination by Posethic's method,
- PC17.**
 - Dependence of viscosity of liquids on temperature, application



Qualification Pack

- PC18.** Able to understand first law of thermodynamics
- PC19.** Mechanical equivalent of heat,
- PC20.** • Concept of latent heat of fusion of ice & vaporization of
• water
- PC21.** Able to understand natural and forced convection
- PC22.** Ventilation of buildings
- PC23.** Radiation, Good and bad radiations, Absorbers
- PC24.** Provo'st's theory, Stefan-Boltzmann law
- PC25.** • Able to understand importance of fundamental
• chemistry Radioactivity, Alfa gamma & beta rays
- PC26.** Able to understand effect of temperature catalysis.
- PC27.** • Able to understand Le- chateliers principle Effect of
• temperature, pressure & concentration in NH₃
- PC28.** • Able to understand classification on basis of, p, d, f
• model Actinide and lanthanide series.
- PC29.** • Able to understand Redox Reactions Calculation of
• chemical equivalents on its basis.
- PC30.** Able to understand electroplating of Cu and Ni.
- PC31.** • Able to understand their sheet diagram for manufacture
• of sodium bicarbonates and ammonia
- PC32.** • Able to understand composition & uses of steel, brass,
• bronze and duralumin alloy
- PC33.** • Able to understand modification of environmental
• properties of metal Use of protective coatings anodic
• & cathode protection, Modification in design and choice of
• material.
- PC34.** • Able to understand modification of environmental
• properties of metal
• Use of protective coatings anodic & cathode protection
• Modification in design and choice of material.
- PC35.** Able to understand protection against corrosion.
- PC36.** • Able to understand laboratory preparation properties
• and uses of acetylene
• Laboratory preparation properties and uses of ethyl alcohol.
- PC37.** • Able to understand different types of high polymers and
• their application.
- PC38.** • Able to understand definition of electroplating, principles
• and factors influencing electroplating
- PC39.** • Able to understand effect of waste and waste products
• in the environment.



Qualification Pack

Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<i>MSME/DTE/06 APPLIED SCIENCE</i>	100	-	-	-
PC1. Able to understand importance of fundamental science	-	-	-	-
PC2. Purpose of learning physics, Applications in daily life	-	-	-	-
PC3. Able to understand types of unit and its importance	-	-	-	-
PC4. <ul style="list-style-type: none">• Able to understand distinction between rotary and• circular motion, velocity, time and distance graph	-	-	-	-
PC5. <ul style="list-style-type: none">• Able to understand centripetal and centrifugal forces,• banking of roads and bending of cyclist	-	-	-	-
PC6. <ul style="list-style-type: none">• Able to understand examples of periodic motion• necessary conditions for the appearance and pursuance of• periodic motion	-	-	-	-
PC7. Able to understand wave equation	-	-	-	-
PC8. Able to understand what is gravity	-	-	-	-
PC9. Newton's principle	-	-	-	-
PC10. <ul style="list-style-type: none">• Principle and technique of launching of artificial satellite,• natural and man-made satellite	-	-	-	-
PC11. <ul style="list-style-type: none">• Able to understand what is matter, its classifications• and properties	-	-	-	-



Qualification Pack

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
PC12. <ul style="list-style-type: none">• Kinetic theory of matter relation of internal energy with• quantity of heat and temperature.	-	-	-	-
PC13. <ul style="list-style-type: none">• Able to understand kinetic interpretation of• temperature, absolute zero, Gaslaw's, Conceptof kinetic• theory.	-	-	-	-
PC14. <ul style="list-style-type: none">• Able to understand the effect of temperature on ST of• liquids and gases	-	-	-	-
PC15. <ul style="list-style-type: none">• Experimental determination of ST of liquid by capillary• rise	-	-	-	-
PC16. <ul style="list-style-type: none">• Able to understand by experimental determination by• Posethic's method,	-	-	-	-
PC17. <ul style="list-style-type: none">• Dependence of viscosity of liquids on temperature,• application	-	-	-	-
PC18. Able to understand first law of thermodynamics	-	-	-	-
PC19. Mechanical equivalent of heat,	-	-	-	-
PC20. <ul style="list-style-type: none">• Concept of latent heat of fusion of ice & vaporization of• water	-	-	-	-
PC21. Able to understand natural and forced convection	-	-	-	-
PC22. Ventilation of buildings	-	-	-	-
PC23. Radiation, Good and bad radiations, Absorbers	-	-	-	-



Qualification Pack

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
PC24. Provo's theory, Stefan-Boltzmann law	-	-	-	-
PC25. <ul style="list-style-type: none">• Able to understand importance of fundamental chemistry Radioactivity, Alfa gamma & beta rays	-	-	-	-
PC26. Able to understand effect of temperature catalysis.	-	-	-	-
PC27. <ul style="list-style-type: none">• Able to understand Le- chateliers principle Effect of temperature, pressure & concentration in NH₃	-	-	-	-
PC28. <ul style="list-style-type: none">• Able to understand classification on basis of, p, d, f• model Actinide and lanthanide series.	-	-	-	-
PC29. <ul style="list-style-type: none">• Able to understand Redox Reactions Calculation of chemical equivalents on its basis.	-	-	-	-
PC30. Able to understand electroplating of Cu and Ni.	-	-	-	-
PC31. <ul style="list-style-type: none">• Able to understand their sheet diagram for manufacture• of sodium bicarbonates and ammonia	-	-	-	-
PC32. <ul style="list-style-type: none">• Able to understand composition& uses of steel, brass,• bronze and duralumin alloy	-	-	-	-
PC33. <ul style="list-style-type: none">• Able to understand modification of environmental properties of metal Use of protective coatings anodic & cathode protection, Modification in design and choice of material.	-	-	-	-



Qualification Pack

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
PC34. <ul style="list-style-type: none">• Able to understand modification of environmental• properties of metal• Use of protective coatings anodic & cathode protection• Modification in design and choice of material.	-	-	-	-
PC35. Able to understand protection against corrosion.	-	-	-	-
PC36. <ul style="list-style-type: none">• Able to understand laboratory preparation properties• and uses of acetylene• Laboratory preparation properties and uses of ethyl alcohol.	-	-	-	-
PC37. <ul style="list-style-type: none">• Able to understand different types of high polymers and• their application.	-	-	-	-
PC38. <ul style="list-style-type: none">• Able to understand definition of electroplating, principles• and factors influencing electroplating	-	-	-	-
PC39. <ul style="list-style-type: none">• Able to understand effect of waste and waste products• in the environment.	-	-	-	-
NOS Total	100	-	-	-



Qualification Pack

National Occupational Standards (NOS) Parameters

NOS Code	MSME/CSC/N3706
NOS Name	APPLIED SCIENCE-I
Sector	Capital Goods
Sub-Sector	
Occupation	Tool & Die Making 01
NSQF Level	3.5
Credits	2
Version	1.0
Last Reviewed Date	30/04/2024
Next Review Date	30/04/2027
NSQC Clearance Date	30/04/2024



Qualification Pack

MSME/CSC/N3705: MATHEMATICS-I

Description

Understanding facts, concept, of mathematical needs in technical subjects.

Scope

The scope covers the following :

- Understanding facts, concept, of mathematical needs in technical subjects.

Elements and Performance Criteria

MSME/DTE/05 MATHEMATICS-I

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

- PC1.**
- Able to understand what is sequence and series.
 - General terms of a series,
 - Formulation of series.
 - Factorial notation.
 - Principle of partial fraction.
 - Determinants and matrices
 - Permutation and combination
 - Exponents and its series.
- PC2.**
- Able to understand the properties of triangle.
 - Relation between sides & angle of triangle.
 - Sums & difference formula.
- PC3.**
- Able to understand definition of function, constant,
 - variable, limit & evaluation of limits
 - Logarithm function
 - Trigonometric functions
 - Partial differentiations



Qualification Pack

Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<i>MSME/DTE/05 MATHEMATICS-I</i>	100	-	-	-
PC1. <ul style="list-style-type: none">• Able to understand what is sequence and series.• General terms of a series,• Formulation of series.• Factorial notation.• Principle of partial fraction.• Determinants and matrices• Permutation and combination• Exponents and its series.	-	-	-	-
PC2. <ul style="list-style-type: none">• Able to understand the properties of triangle.• Relation between sides & angle of triangle.• Sums & difference formula.	-	-	-	-
PC3. <ul style="list-style-type: none">• Able to understand definition of function, constant,• variable, limit & evaluation of limits• Logarithm function• Trigonometric functions• Partial differentiations	-	-	-	-
NOS Total	100	-	-	-



Qualification Pack

National Occupational Standards (NOS) Parameters

NOS Code	MSME/CSC/N3705
NOS Name	MATHEMATICS-I
Sector	Capital Goods
Sub-Sector	
Occupation	Tool & Die Making 01
NSQF Level	3.5
Credits	2
Version	1.0
Last Reviewed Date	30/04/2024
Next Review Date	30/04/2027
NSQC Clearance Date	30/04/2024



Qualification Pack

MSME/CSC/N3704: COMPUTER APPLICATION

Description

Use the fundamental features and history of computer

Scope

The scope covers the following :

- Use the fundamental features and history of computer

Elements and Performance Criteria

MSME/DTE/04 COMPUTER APPLICATION

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

- PC1.** • Use of applications of the computer components of
• computer
- PC2.** Principles of computer operations
- PC3.** Classification of Computers
- PC4.** Input devices
- PC5.** Output devices
- PC6.** Storage devices
- PC7.** Microprocessor unit
- PC8.** Overview of the various computer systems
- PC9.** Number system
- PC10.** Algorithm & flowchart
- PC11.** • Computer codes, machine code, assemble code and
• Machine Code
- PC12.** operating system
- PC13.** Disk operating system
- PC14.** different type of operating system
- PC15.** Ms word page design with column, tables & using graphics
- PC16.** Ms word of page design with columns tables & graphics
- PC17.** • Excel files, work books, mathematical operations used in
• excel sheet printing workbook and graphs generation
- PC18.** Ms excel -Text, borders, colours
- PC19.** Ms excel graphics & objects
- PC20.** • PowerPoint wizard presentation perspective sliders auto
• layout, text objects clipart and pictures text object
- PC21.** Power point presentation PowerPoint with drawing



Qualification Pack

Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<i>MSME/DTE/04 COMPUTER APPLICATION</i>	100	-	-	-
PC1. <ul style="list-style-type: none">• Use of applications of the computer components of• computer	-	-	-	-
PC2. Principles of computer operations	-	-	-	-
PC3. Classification of Computers	-	-	-	-
PC4. Input devices	-	-	-	-
PC5. Output devices	-	-	-	-
PC6. Storage devices	-	-	-	-
PC7. Microprocessor unit	-	-	-	-
PC8. Overview of the various computer systems	-	-	-	-
PC9. Number system	-	-	-	-
PC10. Algorithm & flowchart	-	-	-	-
PC11. <ul style="list-style-type: none">• Computer codes, machine code, assemble code and• Machine Code	-	-	-	-
PC12. operating system	-	-	-	-
PC13. Disk operating system	-	-	-	-
PC14. different type of operating system	-	-	-	-
PC15. Ms word page design with column, tables & using graphics	-	-	-	-
PC16. Ms word of page design with columns tables & graphics	-	-	-	-



Qualification Pack

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
PC17. <ul style="list-style-type: none">Excel files, work books, mathematical operations used inexcel sheet printing workbook and graphs generation	-	-	-	-
PC18. Ms excel -Text, borders, colours	-	-	-	-
PC19. Ms excel graphics & objects	-	-	-	-
PC20. <ul style="list-style-type: none">PowerPoint wizard presentation perspective sliders autolayout, text objects clipart and pictures text object	-	-	-	-
PC21. Power point presentation PowerPoint with drawing	-	-	-	-
NOS Total	100	-	-	-



Qualification Pack

National Occupational Standards (NOS) Parameters

NOS Code	MSME/CSC/N3704
NOS Name	COMPUTER APPLICATION
Sector	Capital Goods
Sub-Sector	
Occupation	Tool & Die Making 01
NSQF Level	3.5
Credits	1
Version	1.0
Last Reviewed Date	30/04/2024
Next Review Date	30/04/2027
NSQC Clearance Date	30/04/2024

Assessment Guidelines and Assessment Weightage

Assessment Guidelines

As per QP

Minimum Aggregate Passing % at QP Level : 40

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

Minimum Passing % at NOS Level: 40

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

Assessment Weightage

Compulsory NOS



Qualification Pack

National Occupational Standards	Theory Marks	Practical Marks	Project Marks	Viva Marks	Total Marks	Weightage
MSME/CSC/N3718.PROJECT WORK-TOOL & DIE MAKING-II A	-	100	-	-	100	5
MSME/CSC/N3712.WORKSHOP PRACTICE-II	-	100	-	-	100	5
MSME/CSC/N3711.WORKSHOP TECHNOLOGY-II	100	-	-	-	100	5
MSME/CSC/N3710.ENGINEERING DRAWING - II	-	100	-	-	100	5
MSME/CSC/N3709.PROJECT WORK-TOOL & DIE MAKING	-	100	-	-	100	5
MSME/CSC/N3703.WORSHOP PRACTICE-I	-	100	-	-	100	5
MSME/CSC/N3702.WORKSHOP TECHNOLOGY - I	100	-	-	-	100	5
MSME/CSC/N3701.ENGINEERING DRAWING-I	-	100	-	-	100	5
MSME/CSC/N3717.EMPLOYBILITY SKILL 00	100	-	-	-	100	5
MSME/CSC/N3715.MECHANICAL MEASUREMENT AND METROLOGY	100	-	-	-	100	5
MSME/CSC/N3714.MATHEMATICS-II	100	-	-	-	100	5
MSME/CSC/N3713.APPLIED MECHANICS	100	-	-	-	100	5
MSME/CSC/N3708.EMPLOYBILITY SKILL 00	100	-	-	-	100	5
MSME/CSC/N3706.APPLIED SCIENCE-I	100	-	-	-	100	5
MSME/CSC/N3705.MATHEMATICS-I	100	-	-	-	100	10
MSME/CSC/N3704.COMPUTER APPLICATION	100	-	-	-	100	20
Total	1000	600	-	-	1600	100



Qualification Pack

Acronyms

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



Qualification Pack

Glossary

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



Qualification Pack

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