



Qualification Pack

JR. TECHNICIAN WELDING

QP Code: MSME/CSC/Q2701

Version: 1.0

NSQF Level: 3.0

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Qualification Pack

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Qualification Pack

MSME/CSC/Q2701: JR. TECHNICIAN WELDING

Brief Job Description

The qualification containing different modules which is required for the job role Welding Technician, after completion of this course learner shall be able to Understand the various welding methods

Personal Attributes

The qualification containing different modules which is required for the job role Welding Technician, after completion of this course learner shall be able to Understand the various welding methods

Applicable National Occupational Standards (NOS)

Compulsory NOS:

1. [MSME/CSC/N2705: Carry out Welding Operations \(Arc and Gas Welding\)](#)
2. [MSME/CSC/N2704: Carry out Welding Operations \(Arc and Gas Welding\)](#)
3. [MSME/CSC/N2702: Perform Machining Operation on Conventional](#)
4. [MSME/CSC/N2701: Interpret Engineering Drawing](#)
5. [MSME/CSC/N2706: Employability skills 01](#)
6. [MSME/CSC/N2707: Perform Machining Operation on Conventional Machine](#)

Qualification Pack (QP) Parameters

Sector	Capital Goods
Sub-Sector	Machine Tools
Occupation	Welding
Country	India
NSQF Level	3.0
Credits	20
Aligned to NCO/ISCO/ISIC Code	Welding Assistant



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Minimum Educational Qualification & Experience	10th grade pass with NA of experience OR Previous relevant Qualification of NSQF Level 2.5 (NSQF Level 2.5 in metal Working/ Machine Tool area) with 1.5 years of experience OR Previous relevant Qualification of NSQF Level 2 (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
NSQF Approval Date	30/04/2024
Version	1.0
Reference code on NQR	NCVET- QG-03-CG-02400-2024-V1-MSME
NQR Version	1.0



Qualification Pack

MSME/CSC/N2705: Carry out Welding Operations (Arc and Gas Welding)

Description

After completion of course Trainee should be able to Understand Institute general discipline, safety precaution, importance of welding, types of welding & its application

Scope

The scope covers the following :

- After completion of course Trainee should be able to Understand Institute general discipline, safety precaution, importance of welding, types of welding & its application

Elements and Performance Criteria

Carry out Welding Operations (Arc and Gas Welding) MSME/CCWT/03

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

- PC1.** Describe Arc & Gas welding equipment
- PC2.** Describe various welding process & their application
- PC3.**
 - Describe use of electricity & various electric terms, application &
 - importance of heat & temperature in welding 31.3
- PC4.** Perform arc welding operation using various welding instrument
- PC5.** Differentiate AC & DC welding machines
- PC6.** Describe arc length & its effects
- PC7.** Describe importance of electrode, fluxes, coating, size & its coding
- PC8.**
 - Use the properties of calcium carbide, acetylene gas its purifier &
 - related terms.
- PC9.**
 - Use properties of oxygen its charging process & equipment use in with
 - oxygen gas.
- PC10.**
 - Describe and demonstrate working of oxy-acetylene low presser & high
 - presser in welding system
- PC11.** Demonstrate right & left ward welding technique
- PC12.** Identify defects, cause, remedies & controlling during Arc welding
- PC13.** Describe about filler rod, specification & size fluxes, types & its functions
- PC14.** Know about welds slop & rotation
- PC15.** Identify welding symbols
- PC16.** Apply safety in gas metal Arc welding & gas tungsten arc welding 36.2
- PC17.** Demonstrate use of equipment in GMAW/GTAW
- PC18.** Describe the difference between GMAW over SMAW
- PC19.** Describe wire feed system its type & maintenance
- PC20.** Identify various wire used in GMAW as per standard
- PC21.** Perform edge preparation for various metals



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- PC22.** Perform pre heating & post weld treatment
- PC23.** Describe sub merged Arc welding process its principle, equipment, advantage & limitation.
- PC24.** Describe about GTAW process 36.15
- PC25.** Describe tungsten electrode type & its use
- PC26.** Identify various filler rod & its selection
- PC27.** • Identify various parameter of welding in GTAW and pulsed TIG welding
• Gas welding
- PC28.** Perform Weld of MS sheet with filler rod & without filler rod
- PC29.** • Demonstrate joining of MS sheet (3.15 mm) of fillet position in butt
• square welding
- PC30.** • Demonstrate joining of MS sheet (3.15 mm) of fillet position in Lap joint
• fillet weld
- PC31.** • Perform To Joint butt weld single 'V' butt right welding technique with
• fillet position on MS sheet 8 mm
- PC32.** Perform weld of vertical position with filler road on MS sheet 3.15 mm
- PC33.** • Perform Welding on cast iron, copper sheet, brass sheet, stainless steel
• sheet, aluminum sheet, brazing of MS sheet
- PC34.** • Perform straight bead, bevel bead, open corner, 'T', Lap, Open square,
• Single 'V' butt on 10 mm plate
- PC35.** • Perform horizontal straight bead & 'T' fillet joint on 10 mm MS plate,
• Overhead 'T' fillet, Lap fillet, Single 'V' butt & outside corner joint on 10
• mm MS plate
- PC36.** Perform joining of MS plate with MS pipe Perform hard facing
- PC37.** Perform square butt, arc glazing & arc cutting on MS/SS sheet
- PC38.** Perform fusion run with or without filler rod on MS sheet
- PC39.** Perform 'T' fillet butt joint on 3.15 mm MS sheet
- PC40.** • Perform fusion run 'T' fillet, but square & outside corner joint on 3 mm
• aluminum sheet
- PC41.** Perform Butt weld square joint on aluminum pipe
- PC42.** Perform fusion run with or without filler wire on SS sheet
- PC43.** • Perform fillet lap, Fillet 'T', fillet outside corner joint, butt square weld
• on 3.15 mm SS sheet
- PC44.** Perform straight bead on 10 mm MS plate
- PC45.** Perform 'T' fillet, Lap, single 'V' butt joint on 10 mm MS plate
- PC46.** Perform straight bead & 'T' weld on fillet position on 10 mm MS plate
- PC47.** • Perform straight bead, 'T' fillet, single butt & square butt joint in
• horizontal position on MS plate
- PC48.** Perform straight bead in overhead position
- PC49.** Perform 'T' joint in overhead condition on MS plate



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Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<i>Carry out Welding Operations (Arc and Gas Welding) MSME/CCWT/03</i>	-	100	-	-
PC1. Describe Arc & Gas welding equipment	-	-	-	-
PC2. Describe various welding process & their application	-	-	-	-
PC3. • Describe use of electricity & various electric terms, application & • importance of heat & temperature in welding 31.3	-	-	-	-
PC4. Perform arc welding operation using various welding instrument	-	-	-	-
PC5. Differentiate AC & DC welding machines	-	-	-	-
PC6. Describe arc length & its effects	-	-	-	-
PC7. Describe importance of electrode, fluxes, coating, size & its coding	-	-	-	-
PC8. • Use the properties of calcium carbide, acetylene gas its purifier & • related terms.	-	-	-	-
PC9. • Use properties of oxygen its charging process & equipment use in with • oxygen gas.	-	-	-	-
PC10. • Describe and demonstrate working of oxy-acetylene low presser & high • presser in welding system	-	-	-	-
PC11. Demonstrate right & left ward welding technique	-	-	-	-
PC12. Identify defects, cause, remedies & controlling during Arc welding	-	-	-	-
PC13. Describe about filler rod, specification & size fluxes, types & its functions	-	-	-	-



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Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
PC14. Know about welds slop & rotation	-	-	-	-
PC15. Identify welding symbols	-	-	-	-
PC16. Apply safety in gas metal Arc welding & gas tungsten arc welding 36.2	-	-	-	-
PC17. Demonstrate use of equipment in GMAW/GTAW	-	-	-	-
PC18. Describe the difference between GMAW over SMAW	-	-	-	-
PC19. Describe wire feed system its type & maintenance	-	-	-	-
PC20. Identify various wire used in GMAW as per standard	-	-	-	-
PC21. Perform edge preparation for various metals	-	-	-	-
PC22. Perform pre heating & post weld treatment	-	-	-	-
PC23. Describe sub merged Arc welding process its principle, equipment, advantage & limitation.	-	-	-	-
PC24. Describe about GTAW process 36.15	-	-	-	-
PC25. Describe tungsten electrode type & its use	-	-	-	-
PC26. Identify various filler rod & its selection	-	-	-	-
PC27. <ul style="list-style-type: none">Identify various parameter of welding in GTAW and pulsed TIG weldingGas welding	-	-	-	-
PC28. Perform Weld of MS sheet with filler rod & without filler rod	-	-	-	-
PC29. <ul style="list-style-type: none">Demonstrate joining of MS sheet (3.15 mm) of fillet position in buttsquare welding	-	-	-	-



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Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
PC30. <ul style="list-style-type: none">• Demonstrate joining of MS sheet (3.15 mm) of fillet position in Lap joint• fillet weld	-	-	-	-
PC31. <ul style="list-style-type: none">• Perform To Joint butt weld single 'V' butt right welding technique with• fillet position on MS sheet 8 mm	-	-	-	-
PC32. Perform weld of vertical position with filler rod on MS sheet 3.15 mm	-	-	-	-
PC33. <ul style="list-style-type: none">• Perform Welding on cast iron, copper sheet, brass sheet, stainless steel• sheet, aluminum sheet, brazing of MS sheet	-	-	-	-
PC34. <ul style="list-style-type: none">• Perform straight bead, bevel bead, open corner, 'T', Lap, Open square,• Single 'V' butt on 10 mm plate	-	-	-	-
PC35. <ul style="list-style-type: none">• Perform horizontal straight bead & 'T' fillet joint on 10 mm MS plate,• Overhead 'T' fillet, Lap fillet, Single 'V' butt & outside corner joint on 10• mm MS plate	-	-	-	-
PC36. Perform joining of MS plate with MS pipe Perform hard facing	-	-	-	-
PC37. Perform square butt, arc glazing & arc cutting on MS/SS sheet	-	-	-	-
PC38. Perform fusion run with or without filler rod on MS sheet	-	-	-	-
PC39. Perform 'T' fillet butt joint on 3.15 mm MS sheet	-	-	-	-
PC40. <ul style="list-style-type: none">• Perform fusion run 'T' fillet, but square & outside corner joint on 3 mm• aluminum sheet	-	-	-	-
PC41. Perform Butt weld square joint on aluminum pipe	-	-	-	-



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Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
PC42. Perform fusion run with or without filler wire on SS sheet	-	-	-	-
PC43. <ul style="list-style-type: none">Perform fillet lap, Fillet 'T', fillet outside corner joint, butt square weldon 3.15 mm SS sheet	-	-	-	-
PC44. Perform straight bead on 10 mm MS plate	-	-	-	-
PC45. Perform 'T' fillet, Lap, single 'V' butt joint on 10 mm MS plate	-	-	-	-
PC46. Perform straight bead & 'T' weld on fillet position on 10 mm MS plate	-	-	-	-
PC47. <ul style="list-style-type: none">Perform straight bead, 'T' fillet, single butt & square butt joint inhorizontal position on MS plate	-	-	-	-
PC48. Perform straight bead in overhead position	-	-	-	-
PC49. Perform 'T' joint in overhead condition on MS plate	-	-	-	-
NOS Total	-	100	-	-



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National Occupational Standards (NOS) Parameters

NOS Code	MSME/CSC/N2705
NOS Name	Carry out Welding Operations (Arc and Gas Welding)
Sector	Capital Goods
Sub-Sector	
Occupation	Welding
NSQF Level	3.0
Credits	11
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/N2704: Carry out Welding Operations (Arc and Gas Welding)

Description

After completion of course Trainee should be able to Understand Institute general discipline, safety precaution, importance of welding, types of welding & its application

Scope

The scope covers the following :

- After completion of course Trainee should be able to Understand Institute general discipline, safety precaution, importance of welding, types of welding & its application

Elements and Performance Criteria

Carry out Welding Operations (Arc and Gas Welding) MSME/CCWT/03

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

- PC1.** Describe Arc & Gas welding equipment
- PC2.** Describe various welding process & their application
- PC3.**
 - Describe use of electricity & various electric terms, application &
 - importance of heat & temperature in welding 31.3
- PC4.** Perform arc welding operation using various welding instrument
- PC5.** Differentiate AC & DC welding machines
- PC6.** Describe arc length & its effects
- PC7.** Describe importance of electrode, fluxes, coating, size & its coding
- PC8.**
 - Use the properties of calcium carbide, acetylene gas its purifier &
 - related terms.
- PC9.**
 - Use properties of oxygen its charging process & equipment use in with
 - oxygen gas.
- PC10.**
 - Describe and demonstrate working of oxy-acetylene low presser & high
 - presser in welding system
- PC11.** Demonstrate right & left ward welding technique
- PC12.** Identify defects, cause, remedies & controlling during Arc welding
- PC13.** Describe about filler rod, specification & size fluxes, types & its functions
- PC14.** Know about welds slop & rotation
- PC15.** Identify welding symbols
- PC16.** Apply safety in gas metal Arc welding & gas tungsten arc welding 36.2
- PC17.** Demonstrate use of equipment in GMAW/GTAW
- PC18.** Describe the difference between GMAW over SMAW
- PC19.** Describe wire feed system its type & maintenance
- PC20.** Identify various wire used in GMAW as per standard
- PC21.** Perform edge preparation for various metals



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- PC22.** Perform pre heating & post weld treatment
- PC23.** Describe sub merged Arc welding process its principle, equipment, advantage & limitation.
- PC24.** Describe about GTAW process 36.15
- PC25.** Describe tungsten electrode type & its use
- PC26.** Identify various filler rod & its selection
- PC27.** • Identify various parameter of welding in GTAW and pulsed TIG welding
• Gas welding
- PC28.** Perform Weld of MS sheet with filler rod & without filler rod
- PC29.** • Demonstrate joining of MS sheet (3.15 mm) of fillet position in butt
• square welding
- PC30.** • Demonstrate joining of MS sheet (3.15 mm) of fillet position in Lap joint
• fillet weld
- PC31.** • Perform To Joint butt weld single 'V' butt right welding technique with
• fillet position on MS sheet 8 mm
- PC32.** Perform weld of vertical position with filler rod on MS sheet 3.15 mm
- PC33.** • Perform Welding on cast iron, copper sheet, brass sheet, stainless steel
• sheet, aluminum sheet, brazing of MS sheet
- PC34.** • Perform straight bead, bevel bead, open corner, 'T', Lap, Open square,
• Single 'V' butt on 10 mm plate
- PC35.** • Perform horizontal straight bead & 'T' fillet joint on 10 mm MS plate,
• Overhead 'T' fillet, Lap fillet, Single 'V' butt & outside corner joint on 10
• mm MS plate
- PC36.** Perform joining of MS plate with MS pipe Perform hard facing
- PC37.** Perform square butt, arc glazing & arc cutting on MS/SS sheet
- PC38.** Perform fusion run with or without filler rod on MS sheet
- PC39.** Perform 'T' fillet butt joint on 3.15 mm MS sheet
- PC40.** • Perform fusion run 'T' fillet, but square & outside corner joint on 3 mm
• aluminum sheet
- PC41.** Perform Butt weld square joint on aluminum pipe
- PC42.** Perform fusion run with or without filler wire on SS sheet
- PC43.** • Perform fillet lap, Fillet 'T', fillet outside corner joint, butt square weld
• on 3.15 mm SS sheet
- PC44.** Perform straight bead on 10 mm MS plate
- PC45.** Perform 'T' fillet, Lap, single 'V' butt joint on 10 mm MS plate
- PC46.** Perform straight bead & 'T' weld on fillet position on 10 mm MS plate
- PC47.** • Perform straight bead, 'T' fillet, single butt & square butt joint in
• horizontal position on MS plate
- PC48.** Perform straight bead in overhead position
- PC49.** Perform 'T' joint in overhead condition on MS plate



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Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<i>Carry out Welding Operations (Arc and Gas Welding) MSME/CCWT/03</i>	100	-	-	-
PC1. Describe Arc & Gas welding equipment	-	-	-	-
PC2. Describe various welding process & their application	-	-	-	-
PC3. • Describe use of electricity & various electric terms, application & • importance of heat & temperature in welding 31.3	-	-	-	-
PC4. Perform arc welding operation using various welding instrument	-	-	-	-
PC5. Differentiate AC & DC welding machines	-	-	-	-
PC6. Describe arc length & its effects	-	-	-	-
PC7. Describe importance of electrode, fluxes, coating, size & its coding	-	-	-	-
PC8. • Use the properties of calcium carbide, acetylene gas its purifier & • related terms.	-	-	-	-
PC9. • Use properties of oxygen its charging process & equipment use in with • oxygen gas.	-	-	-	-
PC10. • Describe and demonstrate working of oxy-acetylene low presser & high • presser in welding system	-	-	-	-
PC11. Demonstrate right & left ward welding technique	-	-	-	-
PC12. Identify defects, cause, remedies & controlling during Arc welding	-	-	-	-
PC13. Describe about filler rod, specification & size fluxes, types & its functions	-	-	-	-



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Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
PC14. Know about welds slop & rotation	-	-	-	-
PC15. Identify welding symbols	-	-	-	-
PC16. Apply safety in gas metal Arc welding & gas tungsten arc welding 36.2	-	-	-	-
PC17. Demonstrate use of equipment in GMAW/GTAW	-	-	-	-
PC18. Describe the difference between GMAW over SMAW	-	-	-	-
PC19. Describe wire feed system its type & maintenance	-	-	-	-
PC20. Identify various wire used in GMAW as per standard	-	-	-	-
PC21. Perform edge preparation for various metals	-	-	-	-
PC22. Perform pre heating & post weld treatment	-	-	-	-
PC23. Describe sub merged Arc welding process its principle, equipment, advantage & limitation.	-	-	-	-
PC24. Describe about GTAW process 36.15	-	-	-	-
PC25. Describe tungsten electrode type & its use	-	-	-	-
PC26. Identify various filler rod & its selection	-	-	-	-
PC27. • Identify various parameter of welding in GTAW and pulsed TIG welding • Gas welding	-	-	-	-
PC28. Perform Weld of MS sheet with filler rod & without filler rod	-	-	-	-
PC29. • Demonstrate joining of MS sheet (3.15 mm) of fillet position in butt • square welding	-	-	-	-



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Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
PC30. <ul style="list-style-type: none">• Demonstrate joining of MS sheet (3.15 mm) of fillet position in Lap joint• fillet weld	-	-	-	-
PC31. <ul style="list-style-type: none">• Perform To Joint butt weld single 'V' butt right welding technique with• fillet position on MS sheet 8 mm	-	-	-	-
PC32. Perform weld of vertical position with filler rod on MS sheet 3.15 mm	-	-	-	-
PC33. <ul style="list-style-type: none">• Perform Welding on cast iron, copper sheet, brass sheet, stainless steel• sheet, aluminum sheet, brazing of MS sheet	-	-	-	-
PC34. <ul style="list-style-type: none">• Perform straight bead, bevel bead, open corner, 'T', Lap, Open square,• Single 'V' butt on 10 mm plate	-	-	-	-
PC35. <ul style="list-style-type: none">• Perform horizontal straight bead & 'T' fillet joint on 10 mm MS plate,• Overhead 'T' fillet, Lap fillet, Single 'V' butt & outside corner joint on 10• mm MS plate	-	-	-	-
PC36. Perform joining of MS plate with MS pipe Perform hard facing	-	-	-	-
PC37. Perform square butt, arc glazing & arc cutting on MS/SS sheet	-	-	-	-
PC38. Perform fusion run with or without filler rod on MS sheet	-	-	-	-
PC39. Perform 'T' fillet butt joint on 3.15 mm MS sheet	-	-	-	-
PC40. <ul style="list-style-type: none">• Perform fusion run 'T' fillet, but square & outside corner joint on 3 mm• aluminum sheet	-	-	-	-
PC41. Perform Butt weld square joint on aluminum pipe	-	-	-	-



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Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
PC42. Perform fusion run with or without filler wire on SS sheet	-	-	-	-
PC43. <ul style="list-style-type: none">• Perform fillet lap, Fillet 'T', fillet outside corner joint, butt square weld• on 3.15 mm SS sheet	-	-	-	-
PC44. Perform straight bead on 10 mm MS plate	-	-	-	-
PC45. Perform 'T' fillet, Lap, single 'V' butt joint on 10 mm MS plate	-	-	-	-
PC46. Perform straight bead & 'T' weld on fillet position on 10 mm MS plate	-	-	-	-
PC47. <ul style="list-style-type: none">• Perform straight bead, 'T' fillet, single butt & square butt joint in• horizontal position on MS plate	-	-	-	-
PC48. Perform straight bead in overhead position	-	-	-	-
PC49. Perform 'T' joint in overhead condition on MS plate	-	-	-	-
NOS Total	100	-	-	-



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National Occupational Standards (NOS) Parameters

NOS Code	MSME/CSC/N2704
NOS Name	Carry out Welding Operations (Arc and Gas Welding)
Sector	Capital Goods
Sub-Sector	
Occupation	Welding
NSQF Level	3.0
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/N2702: Perform Machining Operation on Conventional

Description

After completion of course Student should be able to Explain various machine tools and their principle functions.

Scope

The scope covers the following :

- After completion of course Student should be able to Explain various machine tools and their principle functions.

Elements and Performance Criteria

Perform Machining Operation on Conventional Machine MSME/CCWT/02

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

PC1. -NIL-



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Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<i>Perform Machining Operation on Conventional Machine MSME/CCWT/02</i>	100	-	-	-
PC1. -NIL-	-	-	-	-
NOS Total	100	-	-	-



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National Occupational Standards (NOS) Parameters

NOS Code	MSME/CSC/N2702
NOS Name	Perform Machining Operation on Conventional
Sector	Capital Goods
Sub-Sector	
Occupation	Welding
NSQF Level	3.0
Credits	1
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/N2701: Interpret Engineering Drawing

Description

After completion of course Student should be able to 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 :

- After completion of course Student should be able to 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

Interpret Engineering Drawing MSME/CCWT/01

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

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



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Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<i>Interpret Engineering Drawing MSME/CCWT/01</i>	-	100	-	-
PC1. Describe the various dimensioning techniques.	-	-	-	-
PC2. • Identify orthographic views of objects: Front, top, left side, right side • using lines.	-	-	-	-
PC3. Draw elements and simple assembly	-	-	-	-
PC4. • Assessment examination (Written + Practical) to test basic skills on • engineering drawing.	-	-	-	-
PC5. • Their applications will also be assessed during execution of assessable • outcome and also tested during theory and practical examination.	-	-	-	-
PC6. • Describe Layout of drawing sheet as per B.I.S. Block letters & numerals, • Single & double stroke as per BIS	-	-	-	-
PC7. Describe different types of lines as per BIS.	-	-	-	-
PC8. • Construct simple geometrical figures like triangle, polygons, circle, ellipse • etc.	-	-	-	-
PC9. Draw Projection of points, lines and plain figures.	-	-	-	-
PC10. Provide dimension on object as per BIS	-	-	-	-
NOS Total	-	100	-	-



Qualification Pack

National Occupational Standards (NOS) Parameters

NOS Code	MSME/CSC/N2701
NOS Name	Interpret Engineering Drawing
Sector	Capital Goods
Sub-Sector	
Occupation	Welding
NSQF Level	3.0
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/N2706: Employability skills 01

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 apprenticeship, getting ready for jobs and career development.

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 apprenticeship, getting ready for jobs and career development.

Elements and Performance Criteria

Employability skills MSME/ES/01

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

- PC1.** Explain the major applications of MS Office
- PC2.** Explain the different types of e-commerce
- PC3.** List the benefits of e-commerce for retailers and customers
- PC4.**
 - Discuss how the Digital India campaign will help boost 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



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- 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



Qualification Pack

Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<i>Employability skills MSME/ES/01</i>	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	-	-	-	-



Qualification Pack

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
PC15. How to Minimize the team conflicts	-	-	-	-
PC16. Explain Ethics & values	-	-	-	-
PC17. <ul style="list-style-type: none">• Explain the concept of entrepreneurship, and entrepreneurship v/s Management	-	-	-	-
PC18. <ul style="list-style-type: none">• Explain the process of project report preparation for setting up a new business	-	-	-	-
PC19. <ul style="list-style-type: none">• 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	-	-	-



Qualification Pack

National Occupational Standards (NOS) Parameters

NOS Code	MSME/CSC/N2706
NOS Name	Employability skills 01
Sector	Capital Goods
Sub-Sector	
Occupation	Welding
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



Qualification Pack

MSME/CSC/N2707: Perform Machining Operation on Conventional Machine

Description

After completion of course Student should be able to Explain various machine tools and their principle functions.

Scope

The scope covers the following :

- After completion of course Student should be able to Explain various machine tools and their principle functions.

Elements and Performance Criteria

Perform Machining Operation on Conventional Machine MSME/CCWT/02

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

PC1. -NIL-



Qualification Pack

Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<i>Perform Machining Operation on Conventional Machine MSME/CCWT/02</i>	-	100	-	-
PC1. -NIL-	-	-	-	-
NOS Total	-	100	-	-



Qualification Pack

National Occupational Standards (NOS) Parameters

NOS Code	MSME/CSC/N2707
NOS Name	Perform Machining Operation on Conventional Machine
Sector	Capital Goods
Sub-Sector	
Occupation	Welding
NSQF Level	3.0
Credits	3
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/N2705.Carry out Welding Operations (Arc and Gas Welding)	-	100	-	-	100	20
MSME/CSC/N2704.Carry out Welding Operations (Arc and Gas Welding)	100	-	-	-	100	20
MSME/CSC/N2702.Perform Machining Operation on Conventional	100	-	-	-	100	20
MSME/CSC/N2701.Interpret Engineering Drawing	-	100	-	-	100	20
MSME/CSC/N2706.Employability skills 01	100	-	-	-	100	10
MSME/CSC/N2707.Perform Machining Operation on Conventional Machine	-	100	-	-	100	10
Total	300	300	-	-	600	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.