

Instruction Sheet for the Candidate

Qualification	National Vocational Certificate in Metal Forming & Processing Level 2
Competency Standard	Identify Metal forming operations
Purpose of Assessment	Formative Assessment
Candidate Details	Name _____ Registration/Roll Number _____
Guidance for Candidate	<p>To meet this standard, you are required to complete the following within 04 Hrs. time frame (for practical demonstration & assessment):</p> <ul style="list-style-type: none"> • Identify Injection and Extrusion Process • Explore Rolling Operation • Explore Wire Drawing Operation • Explore Deep Drawing Operation • Explore Forging Operations • Explore Casting Operation • Explore Sheet Metal Operations
Time: 04 Hrs.	During a practical assessment, under observation by an assessor, you are required to
Minimum Evidence Required	<p>Identify Injection and Extrusion process</p> <ol style="list-style-type: none"> 1. Interpret drawings as per requirement 2. Identify the required tools used in the given process 3. Arrange types of dies as per requirement 4. Identify required material for given process 5. Arrange the required material as per given job 6. Identify inspection techniques for given process <p>Explore Rolling Operation</p> <ol style="list-style-type: none"> 1. Interpret drawings as per requirement 2. Identify the required tools used in the rolling process 3. Identify the engineering materials for rolling operation 4. Select the required rolling mill as per job requirement 5. Identify the operational parameters of rolling process 6. Identify inspection tools for rolling operation 7. Identify inspection techniques for rolling process

	<p>Explore Wire Drawing Operation</p> <ol style="list-style-type: none"> 1. Interpret drawings as per requirement 2. Identify the required tools used in the drawing process 3. Arrange raw material as per job requirement 4. Identify operational parameters (pre-heat treatment, draw force etc.) for drawing operation. 5. Arrange required die for drawing operation. 6. Identify inspection techniques for drawing process <p>Explore Deep Drawing Operation</p> <ol style="list-style-type: none"> 1. Interpret drawings as per requirement 2. Identify the required tools used in the deep drawing process 3. Arrange raw material as per job requirement 4. Identify operational parameters (pre-heat treatment, draw force etc.) for deep drawing operation. 5. Select the type of die for deep drawing operation 6. Identify inspection techniques for deep drawing process <p>Explore Forging operations</p> <ol style="list-style-type: none"> 1. Interpret drawings as per requirement 2. Identify the required tools used in the forging process 3. Arrange engineering raw material for forging operation 4. Identify operational parameters for forging operation. 5. Identify the handling of tools for forging process 6. Identify post-heat treatment techniques <p>Explore Casting operation</p> <ol style="list-style-type: none"> 1. Maintain safe work environment with molten metals handling 2. Interpret engineering drawings as per requirement 3. Identify the required tools used in the casting process 4. Identify desired melting furnace as per casting material 5. Arrange raw material for sampling 6. Arrange molds as per job requirement 7. Identify inspection techniques for casting process <p>Explore sheet metal operations</p> <ol style="list-style-type: none"> 1. Interpret engineering drawings as per requirement 2. Identify the required tools used in the given process 3. Arrange tools and equipment used in given operations. 4. Arrange raw materials for given operation 5. Identify inspection techniques for given process
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Self-Assessment Checklist

Candidate Name	
Registration No.	
Qualification	National Vocational Certificate in Metal Forming & Processing Level 2
Competency Standard	Identify Metal forming operations
Purpose of Assessment	Formative Assessment
Assessment Task	<ul style="list-style-type: none"> • Identify Injection and Extrusion Process • Explore Rolling Operation • Explore Wire Drawing Operation • Explore Deep Drawing Operation • Explore Forging Operations • Explore Casting Operation • Explore Sheet Metal Operations

I can.....

Performance Criteria	Yes	No
1. Interpret drawings as per requirement	<input type="checkbox"/>	<input type="checkbox"/>
2. Identify the required tools used in the given process	<input type="checkbox"/>	<input type="checkbox"/>
3. Arrange types of dies as per requirement	<input type="checkbox"/>	<input type="checkbox"/>
4. Identify required material for given process	<input type="checkbox"/>	<input type="checkbox"/>
5. Arrange the required material as per given job	<input type="checkbox"/>	<input type="checkbox"/>
6. Identify inspection techniques for given process	<input type="checkbox"/>	<input type="checkbox"/>
7. Interpret drawings as per requirement	<input type="checkbox"/>	<input type="checkbox"/>
8. Identify the required tools used in the rolling process	<input type="checkbox"/>	<input type="checkbox"/>
9. Identify the engineering materials for rolling operation	<input type="checkbox"/>	<input type="checkbox"/>
10. Select the required rolling mill as per job requirement	<input type="checkbox"/>	<input type="checkbox"/>
11. Identify the operational parameters of rolling process	<input type="checkbox"/>	<input type="checkbox"/>
12. Identify inspection tools for rolling operation	<input type="checkbox"/>	<input type="checkbox"/>
13. Identify inspection techniques for rolling process	<input type="checkbox"/>	<input type="checkbox"/>
14. Interpret drawings as per requirement	<input type="checkbox"/>	<input type="checkbox"/>
15. Identify the required tools used in the drawing process	<input type="checkbox"/>	<input type="checkbox"/>

16. Arrange raw material as per job requirement	<input type="checkbox"/>	<input type="checkbox"/>
17. Identify operational parameters (pre-heat treatment, draw force etc.) for drawing operation.	<input type="checkbox"/>	<input type="checkbox"/>
18. Arrange required die for drawing operation.	<input type="checkbox"/>	<input type="checkbox"/>
19. Identify inspection techniques for drawing process	<input type="checkbox"/>	<input type="checkbox"/>
20. Interpret drawings as per requirement	<input type="checkbox"/>	<input type="checkbox"/>
21. Identify the required tools used in the deep drawing process	<input type="checkbox"/>	<input type="checkbox"/>
22. Arrange raw material as per job requirement	<input type="checkbox"/>	<input type="checkbox"/>
23. Identify operational parameters (pre-heat treatment, draw force etc.) for deep drawing operation.	<input type="checkbox"/>	<input type="checkbox"/>
24. Select the type of die for deep drawing operation	<input type="checkbox"/>	<input type="checkbox"/>
25. Identify inspection techniques for deep drawing process	<input type="checkbox"/>	<input type="checkbox"/>
26. Interpret drawings as per requirement	<input type="checkbox"/>	<input type="checkbox"/>
27. Identify the required tools used in the forging process	<input type="checkbox"/>	<input type="checkbox"/>
28. Arrange engineering raw material for forging operation	<input type="checkbox"/>	<input type="checkbox"/>
29. Identify operational parameters for forging operation.	<input type="checkbox"/>	<input type="checkbox"/>
30. Identify the handling of tools for forging process	<input type="checkbox"/>	<input type="checkbox"/>
31. Identify post-heat treatment techniques	<input type="checkbox"/>	<input type="checkbox"/>
32. Maintain safe work environment with molten metals handling	<input type="checkbox"/>	<input type="checkbox"/>
33. Interpret engineering drawings as per requirement	<input type="checkbox"/>	<input type="checkbox"/>
34. Identify the required tools used in the casting process	<input type="checkbox"/>	<input type="checkbox"/>
35. Identify desired melting furnace as per casting material	<input type="checkbox"/>	<input type="checkbox"/>
36. Arrange raw material for sampling	<input type="checkbox"/>	<input type="checkbox"/>
37. Arrange molds as per job requirement	<input type="checkbox"/>	<input type="checkbox"/>
38. Identify inspection techniques for casting process	<input type="checkbox"/>	<input type="checkbox"/>
39. Interpret engineering drawings as per requirement	<input type="checkbox"/>	<input type="checkbox"/>
40. Identify the required tools used in the given process	<input type="checkbox"/>	<input type="checkbox"/>
41. Arrange tools and equipment used in given operations.	<input type="checkbox"/>	<input type="checkbox"/>
42. Arrange raw materials for given operation		
43. Identify inspection techniques for given process	<input type="checkbox"/>	<input type="checkbox"/>

Candidate's Signature _____ Assessor's Signature _____

Date: _____

Assessors Judgment Guide

Qualification	National Vocational Certificate in Metal Forming & Processing Level 2
Competency Standard	Identify Metal forming operations
Purpose of Assessment	Formative Assessment
Candidate Details	Name: _____ Registration/Roll Number: _____ Signature: _____
Assessment Outcome	<div style="display: flex; justify-content: space-between; align-items: center;"> COMPETENT <input type="checkbox"/> NOT YET COMPETENT <input type="checkbox"/> </div> Name of the Assessor _____ Assessor's code: _____ Signature: _____

Assessment Summary (to be filled by the assessor)							
Activity	Method					Result	
Nature of Activity	Written	Oral	Observation	Portfolio	Role Play	Competent	Not Yet Competent
Practical Skill Demonstration			✓				
Knowledge Assessment		✓					
Other Requirement							

Observation Checklist

Assessment Task		<ul style="list-style-type: none">• Identify Injection and Extrusion Process• Explore Rolling Operation• Explore Wire Drawing Operation• Explore Deep Drawing Operation• Explore Forging Operations• Explore Casting Operation• Explore Sheet Metal Operations		
During the practical assessment, candidate demonstrated the following:		Yes	No	Remarks
1.	Interpret drawings as per requirement			
2.	Identify the required tools used in the given process			
3.	Arrange types of dies as per requirement			
4.	Identify required material for given process			
5.	Arrange the required material as per given job			
6.	Identify inspection techniques for given process			
7.	Interpret drawings as per requirement			
8.	Identify the required tools used in the rolling process			
9.	Identify the engineering materials for rolling operation			
10.	Select the required rolling mill as per job requirement			
11.	Identify the operational parameters of rolling process			
12.	Identify inspection tools for rolling operation			
13.	Identify inspection techniques for rolling process			
14.	Interpret drawings as per requirement			
15.	Identify the required tools used in the drawing process			
16.	Arrange raw material as per job requirement			
17.	Identify operational parameters (pre-heat treatment, draw force etc.) for drawing operation.			

18.	Arrange required die for drawing operation.			
19.	Identify inspection techniques for drawing process			
20.	Interpret drawings as per requirement			
21.	Identify the required tools used in the deep drawing process			
22.	Arrange raw material as per job requirement			
23.	Identify operational parameters (pre-heat treatment, draw force etc.) for deep drawing operation.			
24.	Select the type of die for deep drawing operation			
25.	Identify inspection techniques for deep drawing process			
26.	Interpret drawings as per requirement			
27.	Identify the required tools used in the forging process			
28.	Arrange engineering raw material for forging operation			
29.	Identify operational parameters for forging operation.			
30.	Identify the handling of tools for forging process			
31.	Identify post-heat treatment techniques			
32.	Maintain safe work environment with molten metals handling			
33.	Interpret engineering drawings as per requirement			
34.	Identify the required tools used in the casting process			
35.	Identify desired melting furnace as per casting material			
36.	Arrange raw material for sampling			
37.	Arrange molds as per job requirement			
38.	Identify inspection techniques for casting process			
39.	Interpret engineering drawings as per requirement			
40.	Identify the required tools used in the given process			
41.	Arrange tools and equipment used in given operations.			

42.	Arrange raw materials for given operation			
43.	Identify inspection techniques for given process			
Competent <input type="checkbox"/>		Not Yet Competent <input type="checkbox"/>		

Knowledge Assessment

Qualification	National Vocational Certificate in Metal Forming & Processing Level 2
Competency Standard	Identify Metal forming operations
Purpose of Assessment	Formative Assessment
Candidate Details	Name: _____ Registration/Roll Number: _____ Candidate Signature: _____
Assessment Outcome	COMPETENT <input type="checkbox"/> NOT YET COMPETENT <input type="checkbox"/> Name of the Assessor: _____ Assessor's code: _____ Signature of the Assessor: _____

Candidate's response is not required to be identical, but similar concepts and/or keywords must be used. Oral questioning may be used to clarify candidate understanding of topic and its application.

Questions (Candidate confidently answered questions correctly and demonstrated understanding of the topics and their application)		Satisfactory	Not Satisfactory
1.	Enlist types of rolling process		
2.	Define extrusion process		
3.	What is the difference between hot forging and cold forging		

4.	Enlist types of metal bending		
5.	Define punching		

Feedback to the Candidate	
Candidate's Signature_____	Assessor's Signature _____