

Instruction Sheet for the Candidate

Qualification	National Vocational Certificate in Metal Forming & Processing Level 3
Competency Standard	Perform Forging 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"> • Arrange the raw material • Calculate material requirement • Pre-heat the Job • Perform forging operation • Inspect the product
Time: 04 Hrs.	During a practical assessment, under observation by an assessor, you are required to
Minimum Evidence Required	<p>Arrange the raw material</p> <ol style="list-style-type: none"> 1. Select the raw material according to job requirements. 2. Select form/shape of raw material on near net Shape principle <p>Calculate material requirement</p> <ol style="list-style-type: none"> 1. Interpret Engineering Drawing / Job sheet of the product. 2. Determine the dimensions of the finish product. 3. Measure the stock dimensions & weight. 4. Calculate Material volume as per job requirements <p>Pre-heat the Job</p> <ol style="list-style-type: none"> 1. Select the heating equipment as per Job requirement. 2. Energize the heating equipment as per SOPs 3. Focus the heat on job specified area. 4. Heat-up the work piece to the specified working temperature range <p>Perform forging operation</p> <ol style="list-style-type: none"> 1. Arrange forging tools as per requirement according to open or closed Die Forging

	<ol style="list-style-type: none"> 2. Perform safe handling of tools 3. Maintain allowances for material shrinkage and oxidation 4. Apply the force several times to get the desired shape of the Job. 5. Perform finishing operation as per requirement <p>Inspect the product</p> <ol style="list-style-type: none"> 1. Check all dimensions of the product 2. Perform measurements and calculations of the product. 3. Report the error, if any, in the final product. 4. Recommend corrective action(s) as per required specifications
--	---

Self-Assessment Checklist

Candidate Name	
Registration No.	
Qualification	National Vocational Certificate in Metal Forming & Processing Level 3
Competency Standard	Perform Forging Operations
Purpose of Assessment	Formative Assessment
Assessment Task	<ul style="list-style-type: none"> Arrange the raw material Calculate material requirement Pre-heat the Job Perform forging operation Inspect the product

I can.....

Performance Criteria	Yes	No
1. Select the raw material according to job requirements.	<input type="checkbox"/>	<input type="checkbox"/>
2. Select form/shape of raw material on near net Shape principle	<input type="checkbox"/>	<input type="checkbox"/>
3. Interpret Engineering Drawing / Job sheet of the product.	<input type="checkbox"/>	<input type="checkbox"/>
4. Determine the dimensions of the finish product.	<input type="checkbox"/>	<input type="checkbox"/>
5. Measure the stock dimensions & weight.	<input type="checkbox"/>	<input type="checkbox"/>
6. Calculate Material volume as per job requirements	<input type="checkbox"/>	<input type="checkbox"/>
7. Select the heating equipment as per Job requirement.	<input type="checkbox"/>	<input type="checkbox"/>
8. Energize the heating equipment as per SOPs	<input type="checkbox"/>	<input type="checkbox"/>
9. Focus the heat on job specified area.	<input type="checkbox"/>	<input type="checkbox"/>
10. Heat-up the work piece to the specified working temperature range	<input type="checkbox"/>	<input type="checkbox"/>
11. Arrange forging tools as per requirement according to open or closed Die Forging.	<input type="checkbox"/>	<input type="checkbox"/>
12. Perform safe handling of tools	<input type="checkbox"/>	<input type="checkbox"/>
13. Maintain allowances for material shrinkage and oxidation	<input type="checkbox"/>	<input type="checkbox"/>
14. Apply the force several times to get the desired shape of the Job.	<input type="checkbox"/>	<input type="checkbox"/>
15. Perform finishing operation as per requirement	<input type="checkbox"/>	<input type="checkbox"/>
16. Check all dimensions of the product	<input type="checkbox"/>	<input type="checkbox"/>
17. Perform measurements and calculations of the product.	<input type="checkbox"/>	<input type="checkbox"/>
18. Report the error, if any, in the final product.	<input type="checkbox"/>	<input type="checkbox"/>

19. Recommend corrective action(s) as per required specifications	<input type="text"/>	<input type="text"/>
---	----------------------	----------------------

Candidate's Signature_____ Assessor's Signature_____

Date: _____

Assessors Judgment Guide

Qualification	National Vocational Certificate in Metal Forming & Processing Level 3
Competency Standard	Perform Forging Operations
Purpose of Assessment	Formative Assessment
Candidate Details	Name: _____ Registration/Roll Number: _____ Signature: _____
Assessment Outcome	COMPETENT <input type="checkbox"/> NOT YET COMPETENT <input type="checkbox"/> 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">• Arrange the raw material• Calculate material requirement• Pre-heat the Job• Perform forging operation• Inspect the product		
During the practical assessment, candidate demonstrated the following:		Yes	No	Remarks
1.	Select the raw material according to job requirements.			
2.	Select form/shape of raw material on near net Shape principle			
3.	Interpret Engineering Drawing / Job sheet of the product.			
4.	Determine the dimensions of the finish product.			
5.	Measure the stock dimensions & weight.			
6.	Calculate Material volume as per job requirements			
7.	Select the heating equipment as per Job requirement.			
8.	Energize the heating equipment as per SOPs			
9.	Focus the heat on job specified area.			
10.	Heat-up the work piece to the specified working temperature range			
11.	Arrange forging tools as per requirement according to open or closed Die Forging.			
12.	Perform safe handling of tools			
13.	Maintain allowances for material shrinkage and oxidation			
14.	Apply the force several times to get the desired shape of the Job.			
15.	Perform finishing operation as per requirement			
16.	Check all dimensions of the product			
17.	Perform measurements and calculations of the product.			
18.	Report the error, if any, in the final product.			
19.	Recommend corrective action(s) as per required specifications			

Competent

☐

Not Yet Competent

☐

Knowledge Assessment

Qualification	National Vocational Certificate in Metal Forming & Processing Level 3
Competency Standard	Perform Forging Operations
Purpose of Assessment	Formative Assessment
Candidate Details	Name: _____ Registration/Roll Number: _____ Candidate Signature: _____
Assessment Outcome	<div style="display: flex; justify-content: space-around; align-items: center;"> COMPETENT <input type="checkbox"/> NOT YET COMPETENT <input type="checkbox"/> </div> 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 forging processes		
2.	Define open die forging		
3.	Define closed die forging		

4.	Enlist heat treatment furnaces		
5.	Enlist hand tools used for forging		

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