

Assessment Evidence Guide

For

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Level-4

Destructive Testing Technician
(Formative Assessment)

8th -12th March 2021



**National Vocational & Technical
Training Commission**

Title of Qualification: Destructive Testing Technician	CS Code:	Level: 4	Version:
Competency Standard Title: Perform Hardness Tests	Assessment Date (DD/MM/YY): Assessment Time:		

Candidate Details	Name: Registration/Roll Number:.....
Guidance for Candidate	<p>To meet this standard, you are required to complete the following within the given time frame (for practical demonstration & assessment):</p> <p>Assessment Task 1: Candidate is required to: Measure hardness of the specimen by using Brinell Hardness Test</p> <p>Assessment Task 2: Candidate is required to: Measure hardness of the specimen by using Rockwell Hardness Test</p> <p>Assessment Task 3: Candidate is required to: Measure hardness of the specimen by using Vickers Hardness Test</p> <p>And complete:</p> <ol style="list-style-type: none"> 1. Knowledge assessment test (Written or Oral) 2. Portfolios at the time of assessment (if any)
Minimum Evidence Required	<p>During a practical assessment, under observation by an assessor, you will complete:</p> <p>Assessment Task 1</p> <ul style="list-style-type: none"> • Prepare the surface of standard specimen as per requirement. . • Select the indenter and Load as per standard. • Place the specimen on anvil with safety precautions. • Apply load on the specimen for standard time period. • Calculate the Brinell Hardness number with formula

	<p>During a practical assessment, under observation by an assessor, you will complete:</p> <p>Assessment Task 2</p> <ul style="list-style-type: none"> • Prepare the surface of standard specimen as per requirement. • Select the Scale of the machine (A, B or C) depending upon the material. • Place the specimen on anvil with safety precautions and apply minor load. • Apply major load on the specimen according to the scale of the machine. • Note the Rockwell Hardness number from gauge.
	<p>During a practical assessment, under observation by an assessor, you will complete:</p> <p>Assessment Task 3</p> <ul style="list-style-type: none"> • Prepare the surface of standard specimen as per requirement. • Select the Load as per standard depending upon the material. • Place the specimen on anvil with safety precautions. • Apply load on the specimen for standard time period. • Note the Vickers Hardness number from the gauge.
	<p>Portfolios required at the time of assessment (if any) for</p>

Continued on following page

Assessors Judgment Guide (to be completed by the Assessor and signed both by the assessor and the candidate after the 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:

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							

Each Assessment Task (with performance criteria)				
Assessment Task 1		Description of assessment task 1		
During the practical assessment, candidate demonstrated the following:		Yes	No	Remarks
	Prepare the surface of standard specimen as per requirement. .			
	Select the indenter and Load as per standard.			
	Place the specimen on anvil with safety precautions.			
	Apply load on the specimen for standard time period.			
	Calculate the Brinell Hardness number with formula			
Competent <input type="checkbox"/>		Not Yet Competent <input type="checkbox"/>		

Assessment Task 2		Description of assessment task 2		
During the practical assessment, candidate demonstrated the following:		Yes	No	Remarks
	Prepare the surface of standard specimen as per requirement.			
	Select the Scale of the machine (A, B or C) depending upon the material.			
	Place the specimen on anvil with safety precautions and apply minor load.			
	Apply major load on the specimen according to the scale of the machine.			
	Note the Rockwell Hardness number from gauge.			
Competent <input type="checkbox"/>		Not Yet Competent <input type="checkbox"/>		
Each Assessment Task (with performance criteria)				
Assessment Task 3		Description of assessment task 3		
During the practical assessment, candidate demonstrated the following:		Yes	No	Remarks
	Prepare the surface of standard specimen as per requirement.			
	Select the Load as per standard depending upon the material.			
	Place the specimen on anvil with safety precautions.			
	Apply load on the specimen for standard time period.			
	Note the Vickers Hardness number from the gauge.			
Competent <input type="checkbox"/>		Not Yet Competent <input type="checkbox"/>		

Title of Qualification:	CS Code:	Level:	Version: 01
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Competency Standard Title:	Assessment Date (DD/MM/YY):
	Assessment Time: 30 min

Guidance for Candidate	To complete your assessment for this Competency Standard, you need to answer the questions on the following pages successfully.
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Assessors Guide (to be completed by the Assessor and signed both by the assessor and the candidate after the assessment)

Candidate Details	Name:.....Registration/Roll Number: Candidate Signature:
Written Assessment Outcome	COMPETENT <input type="checkbox"/> NOT YET COMPETENT <input type="checkbox"/> Name of the Assessor:Assessor's code: Signature of the Assessor:

Title of Qualification:	CS Code:	Level:	Version: 01
Competency Standard Title:	Assessment Date (DD/MM/YY): Assessment Time: 30 min		

WRITTEN ASSESSMENT

Question	Candidate's answer
1. Define hardness.	Hardness is the resistance of a material against indentation, penetration, scratching, wear and machining.
2. Enlist important limitations of Brinell hardness test.	<p>This test is not applicable for very hard materials.</p> <p>This test is not applicable for very thin materials like coatings etc.</p> <p>This test cannot be performed near the corners of the work piece.</p>
3. Describe the indenter of Brinell hardness tests.	A steel ball of diameter 10 mm is used as indenter for Brinell hardness test.
4. Describe the indenters of Rockwell hardness test.	<p>Two types of indenters are used for Rockwell hardness test according to the scale used.</p> <p>I. Steel ball of 1/16 inch diameter.</p> <p>II. Diamond cone with angle of 120 degree</p>
5. Describe the indenter of Vickers hardness test.	Diamond indenter of pyramid shape with square base is used for Vickers hardness test.