



**TVET CURRICULUM DEVELOPMENT, ASSESSMENT AND CERTIFICATION
COUNCIL (TVET CDACC)**

Qualification Code : 071606T4MCT
Qualification : Mechatronic Technician Level 6
Unit Code : ENG/OS/MC/CC/05/6/A
Unit of Competency : Apply material science principles

PRACTICAL ASSESSMENT

INSTRUCTIONS TO THE ASSESSOR

1. You are required to mark the practical as the candidate perform the tasks.
2. You are required to take photos and/or video clips at critical points.
3. Ensure the candidate has a name tag and registration code at the back and front.

OBSERVATION CHECKLIST

Candidate's name & Registration No.	
Assessor's name & Reg. Code	
Unit(s) of Competency	Apply material science principles
Venue of Assessment	
Date of assessment	

(Indicate the marks available and marks obtained respectively. Award marks appropriately as guided for in the items for evaluation indicated. Give a brief comment where necessary)

Items to be evaluated:	Marks Allocated	Marks Obtained	Comments
1. Identify type of engineering materials as per prescribed procedures (specimen as low carbon steel)	1		
2. Determined physical properties of engineering material according material specifications	1		
3. Identified mechanical properties of engineering materials according to material specifications (as ductile and fairly rigid)	2		
4. Identify and select engineering material according to production requirements.	2		
5. Developed operation plan.	1		
6. Set up machine appropriately according to manufacturer manual	3		
7. Observed safety in material testing procedures according to OSHA, 2007	2		
8. Identified material testing according to work requirement	2		
9. Followed procedure of material testing as per material testing	3		

method			
10. Tabulated, presented, calculated and interpreted material testing results according to testing results (max load, cross section area, TS, elastic limit, upper yield point, TS)	6		
11. Maintained material testing equipment according to manufacturer specifications.	2		

PRODUCT CHECKLIST

Items to be evaluated:	Marks Allocated	Marks Obtained	Comments
12. Correct setting of machine	1		
13. Specimen stressed to breaking point	1		
14. Housekeeping performed	1		
15. Stress – strain curve generated and is correct	2		
TOTAL	30		

The candidate was found to be: Competent Not yet competent

(Please tick as appropriate)

(The candidate is competent if s/he gets 15 marks (50%) of the 30 marks on the observation and product checklist)

Feedback from candidate:

Feedback to candidate:		
Candidate's signature:	Date:	
Assessor's signature:	Date:	

Expected stress – strain curve

