

071505T4MTP

MECHANICAL PRODUCTION TECHNICIAN LEVEL 5

ENG/OS/ME/CR/02/5/A

PERFORM GRINDING OPERATIONS

March/April 2025



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

PRACTICAL ASSESSMENT

INSTRUCTIONS TO ASSESSOR

1. Assess the candidate as the practical progresses observing the critical areas
2. You are required to mark the practical as the candidate perform the tasks
3. You are required to take video clips at critical points
4. Ensure the candidate has a name tag and registration code at the back and front

Candidate's Name & Registration Code			
Assessors Name & Registration Code			
Venue of Assessment			
Date of Assessment			
Items to be Evaluated: Please award marks as appropriate. Give a brief comment on your observation.	Marks Available	Marks Obtained	Comments
Observation:			
1. Adhered to safety measures: a. Wore personal protective equipment: i. Apron/dust coat ii. Leather gloves iii. Clear safety goggles/ face shield iv. Safety boots b. Machine safety i. Placed on the machine guards ii. No changing of speed while the machine is running (Award 1 mark or zero)	1 		
2. Prepared operation work Plan as per the working drawing. (Steps as in attached appendix 2.) (Award ½ mark for the operation and ½ mark for the tool given)	4		
3. Performed grinding operation as per the operation plan:			
a. Marked out the work piece (Award 2 marks or zero)	2		

b. Set and locked the table movement (X,Y and Z axis) and set the magnetic vice appropriately <i>(Award 3 marks or zero)</i>	3		
c. Mounted the work piece securely on the grinding machine table <i>(Award 3 marks or zero)</i>	3		
d. Ground the work piece to the specified depressions and crest. <i>(Award 2 marks or zero for each surfaces 3×2=6)</i>	6		
4. Inspected the finished product. <i>(As per attached candidate inspection checklist appendix 1.)</i> <i>(Award ½ Mark for every inspected dim</i>	6		
5. Performed housekeeping: a. Cleaned the machine and tools b. Cleaned the working area c. Retuned the tools and other accessories used to their designated areas d. Segregated waste and disposed to the designated bins. <i>(Award ½ marks for each observation or zero)</i>	½ ½ ½ ½		
Sub-Total 1	32		
PRODUCT CHECK LIST			
Items to be Evaluated: <i>Award marks as appropriate. Give a brief comment where less or no marks are awarded.</i>	Marks Allocated	Marks Obtained	Comments

6. Produced the component as per the working drawing. All dimensions are in mm Tolerance ± 0.02			
a. Dimensions Linear 40 (2×2) 4 20 (4×2) 8 9 (3×2) 6 2 (3×2) 6			
b. Quality of the finished product i. Finished edge - No Burrs at the edges (12 edges) (12×1) 12 - No sharp edges (8×1) 8 - Right angles (4 angles) (4×2) 8 (Award marks as indicated)			
c. Finished surface No tool marks on the product surface 4 (Award 4 marks)			
Observation Sub-Total	32		
Product Sub-Total	56		
GRAND TOTAL	88		
Candidate Overall Score $\frac{x}{88} \times 100$			
ASSESSMENT OUTCOME			
The candidate was found to be: Competent ☐ Not yet Competent ☐ (Please tick as appropriate)			

(The candidate is competent if the candidate obtains at least 50%)	
Feedback from the Candidate:	
Feedback to the Candidate:	
Candidate Signature	Date:
_____	_____
Assessor's Signature	Date
_____	_____

Appendix 2: OPERATION PROCEDURE SHEET

No.	OPERATION	TOOLS AND EQUIPMENT USED
1.	Measuring	Vernier callipers, steel rule, try square,
2.	Marking out	Scriber, try square,
3.	Mounting/Clamping the work piece	Magnetic vice/ machine vice/angle plates
4.	Grinding	Grinding wheel