

071506T4MTP

MECHANICAL TECHNICIAN LEVEL 6

ENG/OS/ME/CR/2/06/A

FABRICATE SHEET METAL PARTS

March/April 2025



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

PRACT MENT

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

OBSERVATION CHECKLIST			
1. Adhered to prescribed safety as per workplace procedures a. Wore PPEs i. Safety boots ii. Apron/dustcoat iii. Clear goggles iv. Leather Gloves b. Observed tool safety i. Held sheet metal with a prop device while drilling ii. Used bending machine correctly <i>(Award 1 mark for each safety precaution observed)</i>	1 1 1 1 1 1		
2. Prepared operation plan as per the work drawing <i>(Award $\frac{1}{2}$ mark for each operation and $\frac{1}{2}$ mark for correct tools used as per the Appendix 2 attached on the assessor tool)</i>	8		
3. Fabricated sheet metal parts as per the working drawing a. Performed measuring and marking out i. Used appropriate tools to measure the workpieces ii. Marked out dimensions on the	1 1		

PRODUCT CHECK LIST			
6. Produced components as per the drawing specifications:			
All dimensions are in mm			
Tolerance ± 0.5			
a. Tray			
i. Linear Dimension			
• 200	(2×1)	2	
• 180	(2×1)	2	
• Squareness	$(4 \times \frac{1}{2})$	2	
b. Door			
• 180	(2×1)	2	
• 170	(2×1)	2	
• 50	(4×1)	4	
• 80	(2×1)	2	
• Squareness	$(4 \times \frac{1}{2})$	2	
c. Handle			
• 100	(2×1)	2	
• 30	(2×1)	2	
• 25	(2×1)	2	
• 50	(2×1)	2	
• Squareness	$(4 \times \frac{1}{2})$	2	
d. Sides			
• 200	(4×1)	4	
• 230	(4×1)	4	
• Squareness	$(8 \times \frac{1}{2})$	4	
e. Top Cover			
• 200	(2×1)	2	
• 180	(2×1)	2	

• Squareness $(4 \times \frac{1}{2})$	2		
f. Back Cover			
• 180 (2×1)	2		
• 160 (2×1)	2		
<i>(Award full marks or zero)</i>			
Sub total	50		
7. Assembled Parts as Per the working Drawing			
a. Performed Brazing			
i. Brazed the edges as per the working diagram (3×4) <i>(Award 4 marks for each brazed edge)</i>	12		
ii. Made quality brazed joints			
• Complete fusion of joints.	3		
• No distortion of parts.	3		
• Uniform brazed bead in al	3		
b. Performed Riveting			
i. Drilled appropriate holes for riveting $(14 \times \frac{1}{2})$	7		
ii. Riveted joints as per the working diagram $(14 \times \frac{1}{2})$	7		
iii. Quality of riveted Joint			
• Joints not misaligned	2		
• Rivet head shaped uniformly $(14 \times \frac{1}{2})$	7		
c. Fastened the tray to the sides using nuts and bolts	2		
<i>(Award full marks or zero)</i>			
Sub total	46		

8. Overall finishing of the Assembly			
a. Assembly aligned according to working drawing	2		
b. No clamp marks	2		
Smooth sharp edges and hems of every part (6 × 1)	6		
(Award full marks or zero)			
Sub total	10		
9. Functionality			
a. Door Locking aligned	2		
b. Door Hinges functioning	2		
c. Overall assembly stands vertically on the ground	2		
(Award 2 marks or zero)			
Sub total	6		
Sub-Total 2	112		
GRAND TOTAL	146		
Candidate Overall Score = $\frac{x}{146} \times 100\%$			
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 Plan

Serial No.	OPERATION	TOOLS AND EQUIPMENT USED
1.	Measuring and marking the work piece	Vernier calipers, steel rule, try square, scribe,
2.	Cutting	Snips, chisel, Sheet metal cutting equipment
3.	Holding the work piece	Bench vice
4.	Bending	Bending machine, Stakes, Hammer
5.	Drilling	Drill bits, drilling machine
6.	Brazing	Oxy acetylene gas welding equipment
7.	Riveting	Ball Pein Hammer, Anvil
8.	Finishing and inspection	square, files