



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

**Qualification Code** : 071606T4MCT  
**Qualification** : Mechatronics Level 6  
**Unit Code** : ENG/OS/MC/CR/04/6/A  
**Unit of Competency** : Perform Mechatronics Systems Instrumentation and Control

**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 video clips at critical points
3. Ensure the candidate has a name tag and registration code at the back and front
4. The candidate should not have any written material.

**OBSERVATION CHECKLIST**

<b>Candidate's name &amp; Registration No.</b>			
<b>Assessor's name &amp; Id code</b>			
<b>Unit(s) of Competency</b>	Perform mechatronics systems instrumentation and control		
<b>Venue of Assessment</b>			
<b>Date of assessment</b>			
<b>Items to be evaluated:</b>	<b>Marks allocated</b>	<b>Marks obtained</b>	<b>Comments</b>
1. <i>Used Personal protective equipment (PPE)</i> according to OSHA 2007	<b>2</b>		
2. Stored and maintained <i>Tools and equipment</i> correctly according to manufacturer's specifications	<b>2</b>		
3. Used tools and equipment correctly according to designated purpose	<b>3</b>		
4. Maintained workspace housekeeping according to Standard operating procedures (SOPs)	<b>1</b>		
5. Planned workplace according to design specifications.	<b>1</b>		
6. Modelled circuit diagrams for the control system according to the functionality of the mechatronic systems	<b>5</b>		
7. Analysed resulting models and their properties determined according to system functionality	<b>3</b>		
8. Decided control variables (outputs) to be controlled according to the prescribed mechatronic system functionality	<b>2</b>		
9. Selected measurement and manipulated variables according to system functionality	<b>2</b>		
10. Selected controller type and its configuration according to the system performance	<b>3</b>		
11. Designed controller according to the system specifications	<b>2</b>		
12. Selected, acquired and inspected <i>Controller components</i> and their specifications according to the prescribed system functionality	<b>2</b>		

13. Selected tools and equipment according to the control system circuit diagram	<b>2</b>		
14. Analysed mechatronic system to test compatibility with the designed controller according to system specifications	<b>3</b>		
15. Simulated controlled mechatronic system according to system specifications	<b>2</b>		
16. Selected hardware and software and implemented controller according to prescribed system specification	<b>2</b>		
17. Did testing and validation of the control system and did tuning according to system specification.	<b>3</b>		
<b>TOTAL</b>	<b>40</b>		
<p><b>The candidate was found to be:</b>    <b>Competent</b>    <input type="checkbox"/>    <b>Not yet competent</b>    <input type="checkbox"/></p> <p><b>(Please tick as appropriate)</b></p> <p><b>(The candidate is competent if s/he gets 50% marks and above)</b></p>			
<b>Feedback from candidate:</b>			
<b>Feedback to candidate:</b>			
<b>Candidate's signature:</b>	<b>Date:</b>		
<b>Assessor's signature:</b>	<b>Date:</b>		