

071605T4MCT

MECHATRONICS TECHNOLOGY LEVEL 5

ENG/OS/MC/CR/04/5/A

Operate Robotic and Automated Systems

Nov/Dec 2024



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

PRACTICAL ASSESSMENT

OBSERVATION CHECKLIST

Candidate's Name & Registration Code			
Assessor Name & Registration Code			
Venue of Assessment			
Date of Assessment			
Items to be Evaluated: <i>Please award marks as appropriate. Give a brief comment on your observation.</i>	Marks allocated	Marks obtained	Comments
1. Personal protective gears worn according to Standard Operating Procedures. ● Overall ● Safety boots. <i>(Award 2 mark for each PPE worn: 2x2 = 4 marks)</i>	4		
SUB TOTAL 1	4		

TASK 1: Wired the components to the PLC

2. Connected wiring of components to the PLC.

(Award 2 marks for each correctly wired input: $3 \times 2 = 6$ marks)

(Award 2 marks for each correctly wired output: $4 \times 2 = 8$ marks)

6**8****6**

3. Terminated cables correctly.

- Wired inputs to PLC correctly
Push button, sensor 1, sensor 2
- Wired the outputs correctly
Motor 1, motor 2, green LED, red LED
- Cables correctly terminated

(Award 1 mark for each correctly terminated cable: $6 \times 1 = 6$ marks)

SUB TOTAL**TASK 2: Programmed the PLC**

4. Developed a PLC program that can execute the function required.

(Award 2 marks for each input: $3 \times 2 = 6$ marks)

(Award 2 marks for each output: $4 \times 2 = 8$ marks)

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5. Tested the program.

(Award 6 marks for testing the program online)

6. Downloaded the PLC program into the PLC:

- Connected programming cable correctly
- Downloaded the PLC program

successful

4

(Award 2 marks for each correct procedure: $2 \times 2 = 4$ marks)			
SUB TOTAL	24		
TASK 3: Tested and operated			
7. Turned ON the system for testing using the right procedure. (Award 3 marks for 0 for correct procedure)	3 3		
8. The system operated as required: a) When start PB is pressed and green indicator lamp turns ON. b) When photoelectric sensor 1B1 is triggered, motor 1 and motor 2 runs and red indicator lamp turns ON. c) When Photoelectric sensor 1B2 is triggered, motor 1 and motor 2 stops and both indicator lamps turn OFF. (Award 3 marks or 0 for each correct working)	3 3		
9. Disconnected the components after the practical. (Award 2 marks for proper procedure)	2		
10. Maintained proper housekeeping. (Award 2 marks for proper housekeeping)	2		
SUB TOTAL	16		
GRAND TOTAL $\left(\frac{x}{64} \times 100\%\right)$	64		
ASSESMENT OUTCOMES			
The candidate was found to be: Competent ☐ Not yet competent ☐ (Please tick as appropriate) (The candidate is competent if s/he gets 50% or higher)			

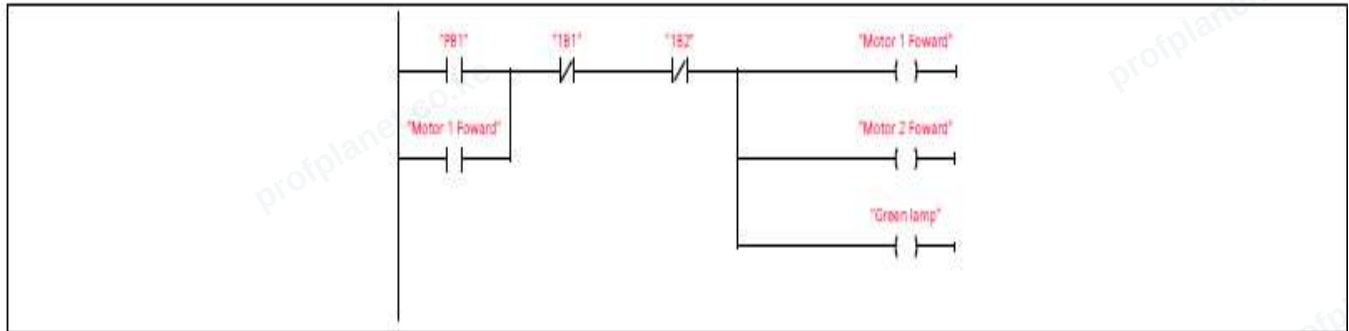
Feedback from candidate:		
Feedback to candidate:		
Candidate's signature: _____	Date:	_____
Assessor's signature: _____	Date:	_____

APPENDIX I:

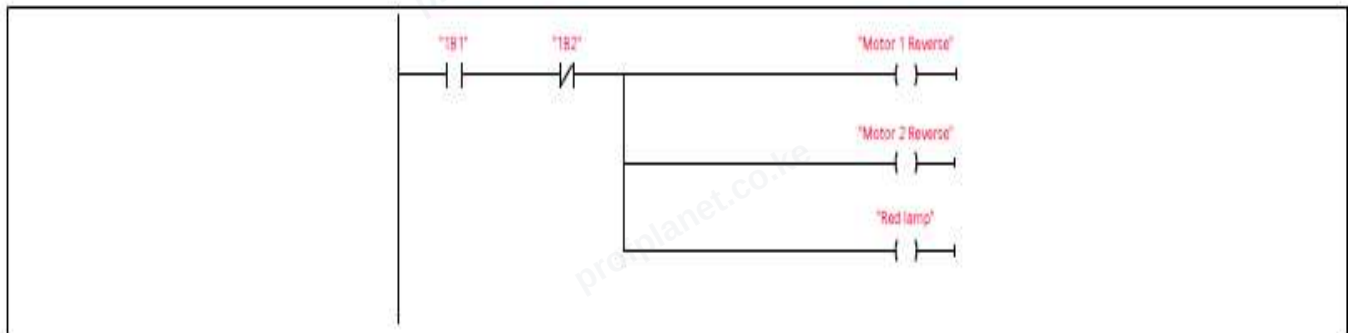
Expected program

Accept other correct programs.

Network 1:



Network 2:



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