

071306T4ELC

ELECTRONICS ENGINEERING LEVEL 6

ENG/OS/ET/CR/05/6/A

Perform Industrial Automation

Nov/Dec 2024



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

PRACTICE

OBSERVATION CHECKLIST

Candidate's Name & Registration Code			
Assessors Name & Registration Code			
Venue of Assessment			
Date of assessment			
Items to be evaluated: <i>(Award appropriate marks for each item evaluated)</i>	Marks allocated	Marks obtained	Comments
OBSERVATION CHECKLIST			
1. Wore Personal Protective Equipment			
(i) Dustcoat/Overall <i>(Award 1 or 0)</i>	1		
(ii) Safety boots <i>(Award 1 or 0)</i>	1		

2. Applied good housekeeping practice			
(i) Ensured clean working area before beginning working. (Award 1 or 0)	1		
(ii) Tidy working area arrangement (Award 1 or 0)	1		
(iii) Proper Waste disposal (Award 2 or 0)	2		
3. Identified and correct use of tools and equipment			
(i) Pliers (Award 1 or 0)	1		
(ii) Phase tester (Award 1 or 0)	1		
(iii) Power supply (Award 1 or 0)	1		
(iv) Hand held PLC (Award 1 or 0)	1		
4. Labelling the installation for identification			
(i) Road A bulbs (Award 2 or 0)	2		
(ii) Road B bulbs (Award 1 or 0)	1		
5. Observed colour code (Award 2 or 0)	2		
Sub total	15		
PRO KLIST			
Block Diagram			
6. Drew block diagram correctly.			
(i) PLC inputs (Award 2 or 0)	2		
(ii) PLC outputs (Award 2 or 0)	2		
(iii) Termination of the bulbs (Award 1 mark for each of the 6 bulbs if connected to the PLC outputs)	6		
(iv) PLC connection (Award 2 or 0 for correct input and output use)	2		
Sub-Total	12		
Circuit Installation			
7. Fixed components			
(i) Level (Award 2 or 0 marks for each road)	4		
(ii) Firmness (Award 4 or 0)	4		

8. Correct wiring connection at the PLC logo soft -DC supply and inputs: AC to outputs (Award 5 or 0)	5		
Sub- total	13		
PLC Program			
9. Writing the PLC program			
(i) Good choice of language. (Award 5 or 0)	5		
(ii) Wrote the program (Award 10 or 0)	10		
(iii) Load the program to the system. (Award 5 or 0)	5		
(iv) Debug and run the program (Award 5 or 0)	5		
Sub – Total	25		
Program Simulation			
10. Functionality of the installed system			
(i) When activated, Green light in road A goes ON for 25 s (Award 5 or 0)	5		
(ii) After 20 seconds, the Yellow lights in Road A and B goes ON for 5 seconds. (Award 5 or 0)	5		
(iii) The Red light in road A and Green light in road B goes ON for 25 seconds. (Award 5 or 0)	5		
(iv) After 20 seconds, the Yellow lights in Road A and B goes ON for 5 seconds. (Award 5 or 0)	5		
(v) The cycle continues. (Award 5 or 0)	5		
Sub - Total	25		
GRAND TOTAL	90		
Percentage = $\frac{x}{90} \times 100$			

ASSESSMENT OUTCOMES		
The candidate was found to be: (Please tick (✓) as appropriate)		
Competent ☐	Not yet competent ☐	
<i>(The candidate is competent if the candidate scores 50% and above)</i>		
Feedback from candidate:		
Feedback to candidate:		
Candidate's signature:		
Assessor's signature:		

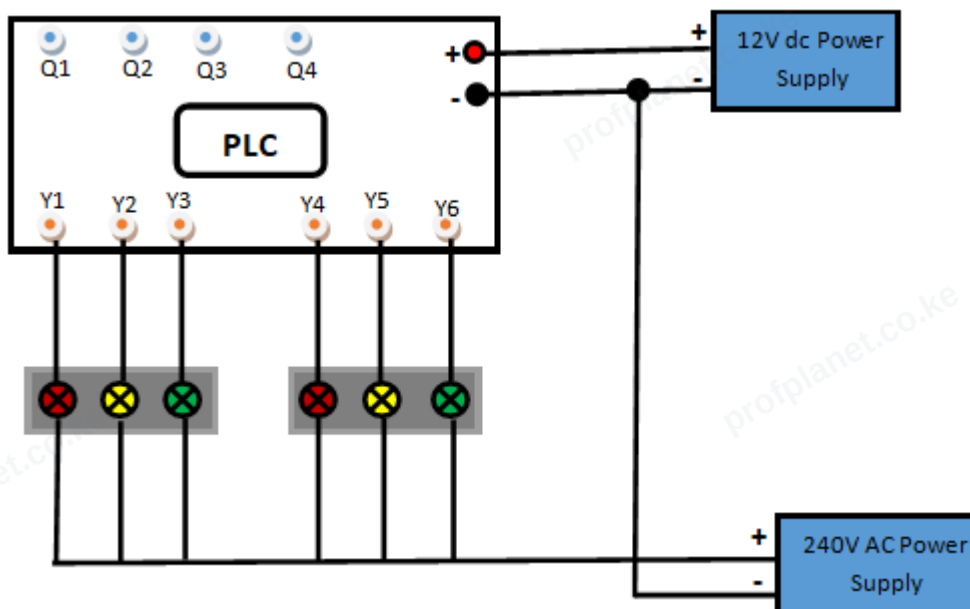
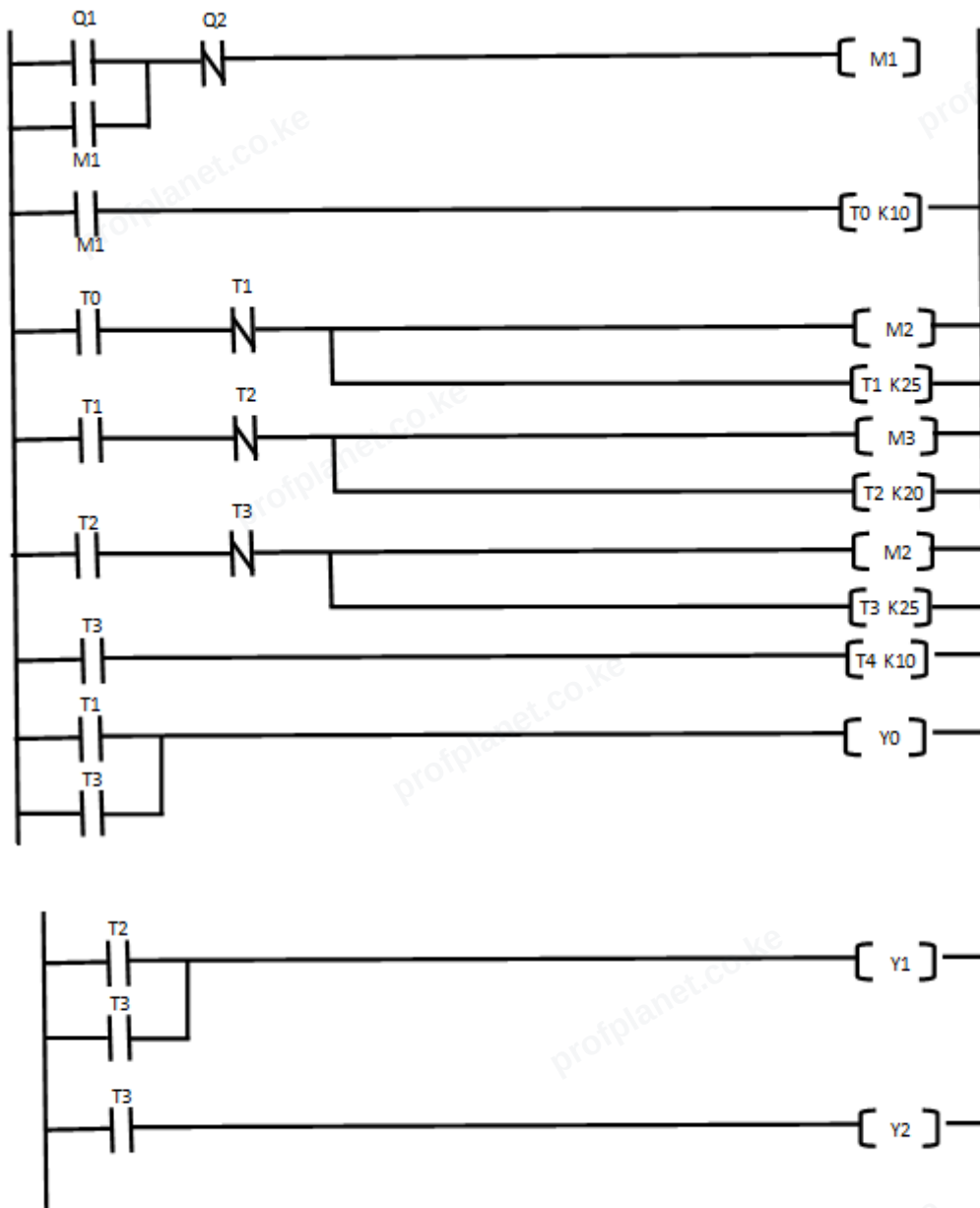


Figure 1: Block diagram



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