

021306T4ICI

INDUSTRIAL CONTROLS INSTALLATION LEVEL 6

ENG/OS/IC/CR/4/6

Manage High Voltage Systems

July/August 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 No.			
Assessor's name & Reg. code			
Unit(s) of Competency			
Venue of Assessment			
Date of assessment			
Items to be evaluated: (Award appropriate marks for each item evaluated)	Marks available	Marks obtained	Comments
OBSERVATION CHECKLIST			
Wore safety clothing - Safety boots (Award $\frac{1}{2}$ or 0) - Apron (Award $\frac{1}{2}$ or 0) - High Voltage safety gloves (Award $\frac{1}{2}$ or 0) - High voltage safety goggles (Award $\frac{1}{2}$ or 0)	$\frac{1}{2}$ $\frac{1}{2}$ $\frac{1}{2}$ $\frac{1}{2}$		
1. Identified transformer primary (HV) and secondary (LV) side (Award 1 or 0)	1		
2. Identified and correctly used tools and equipment - Pliers - Side cutter - Screw Driver - Ohmmeter - Voltmeter - Ammeter	1 1 1 1 1 1		
Sub total	09		
PRODUCT CHECKLIST			

TASK 1			
3. Connected Ohmmeter probes between: - Primary winding terminals (Award 2 or 0) - Secondary winding terminals (Award 2 or 0)	2 2		
4. Accurately measured and recorded: - Primary winding resistance (2-10 Ω) (Award 2 or 0) - Secondary winding resistance (0-1 Ω) (Award 2 or 0)	2 2		
Sub total	08		
TASK 2			
5. Located and recorded manufacturer's resistances in the datasheet: - Primary winding resistance (as per datasheet) (Award 1 or 0) - Secondary winding resistance (as per datasheet) (Award 1 or 0)	1 1		
6. Compared and gave reasons for any difference between the winding resistances measured and the manufacturer's datasheet winding resistances: Possible reasons: i. Instrument errors ii. Different measurement condition for example temperature and other physical conditions (Award 1 or 0 for comparison) (Award 2 or 0 for each reason)	1 4		
Sub total	07		

TASK 3			
7.	- Connected the Megger between Primary winding (HV) and core(earth) (Award 2 or 0) - Applied a test voltage of 500V (Award 2 or 0) - Recorded the insulation resistance. (Award 2 or 0)	2 2 2	
8.	- Connected the Megger between Secondary (LV) winding and core(earth) (Award 2 or 0) - Applied a test voltage of 500V (Award 2 or 0) - Recorded the insulation resistance. (Award 2 or 0)	2 2 2	
9.	- Connected the Megger between Primary winding (HV) and Secondary (LV) winding (Award 2 or 0) - Applied a test voltage of 500V (Award 2 or 0) - Recorded the insulation resistance. (Award 2 or 0)	2 2 2	

Sub total	18		
TASK 4			
10. Commented on the insulation condition of the transformer. Possible comments: i. Insulation resistance greater than $1\text{M}\Omega$ (good/recommended insulation) ii. Insulation resistance less than $1\text{M}\Omega$ (broken/poor insulation/insulation breakdown) (Award 2 or 0)	2		
Sub total	2		
11. • Connected the primary side of the transformer to the AC power supply in the correct sequence (i.e. mains to double pole circuit breaker to switch and finally to the primary side of the transformer) • Applied the AC voltage to the primary side keeping the secondary open. • Measured and recorded primary and secondary voltage. • Turned off the AC supply.	2 2 2 2		
Sub total	08		

TASK 6			
12. Compared the measured voltage with manufacturer's rated voltage and accounted for any difference: (Award 2 or 0) Possible reasons for difference: - Instrument errors - Different measurement conditions for example temperature and other physical conditions	2		
Sub total	02		
GRAND TOTAL	54		
Percentage = $\frac{x}{54} \times 100$			
The candidate was found to be: (Please tick (✓) as appropriate)			
Competent ☐	Not yet competent ☐		
The candidate is competent if s/he gets score of _____ marks			
Feedback from candidate:			
Feedback to candidate:			
Candidate's signature:	Date		
Assessor's signature:	Date		

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