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071305T4EOP

ELECTRICAL OPERATION (POWER OPTION) LEVEL 5

ENG/OS/PO/CR/04/5/A

Demonstrate Understanding of Electronics

March/April 2025

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

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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.

This checklist consists of FIVE (5) printed pages.

OBSERVATION CHECKLIST

Candidate's Name & Registration Code			
Assessors Name & Registration Code			
Venue of Assessment			
Date of Assessment			
Items to be Evaluated: *Please award marks as appropriate. Give a brief comment on your observation.*	**Marks Available**	**Marks Obtained**	**Comments**
a) Identify resistors R1 and RL.			
1. Correctly identified the resistors • R_1 -680Ω • R_L -5 kΩ *(Award 1 mark each)*	1 1		
2. Identified the terminals of the transistor (Collector, Base and Emitter) (*Award 1 for each terminal)*	3		
Sub total	**5**		
b) Fabricate the circuit in a strip board			
3. Wore personal protective equipment • Dust coat/Overall • Safety boots *(Award 1 mark each)*	1 1		
4. Identified the components to be used in fabrication of the circuit • Transformer • Rectifier diodes • Capacitors • Zener diode • Transistor • Strip board	1 1 1 1 1 1 1		

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• Jumper wires *(Award 1 mark each)*			
5. Correctly fixed and arranged the components on the strip board. • Transformer • Rectifier diodes • Capacitors • Zener diode • Transistor • Resistors *(Award 1 mark each component)*	 1 4 2 1 1 2		
6. Correctly fabricated the circuit. • Strip board side correctly identified and used for circuit. *(Award 2 or 0)* • All the joints on the strip board. *(Award any ½ x 14)* • Proper utilization of the strip board *(Award 2 or 0)*	 2 7 2		
7. Components soldered on the strip board. • Firmly fixed (Award any ½ x 10) • Neat and smoothly finished (Award 5 or 0)	 5 5		
Sub total	**41**		
c) Power the circuit and measure the voltages at test points			
8. Obtained the values of the voltages at test points as follows: • TP1 (240V) • TP2 (12V) • TP3 (12V) • TP4 (11.3V)	 2 2 2 2		

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• TP5 (0V) *(Award 2 for each correct answer)*	2		
Sub Total	**10**		
d) Measure the value of current flowing through R_1			
9. Measured the value of the current flowing through R_1 =0.39 A (*Award 2 or 0)*	2		
10. Correctly used tools and equipment • Pliers (Award 1 or 0) • Neon tester (Award 1 or 0) • Digital Multimeter (Award 1 or 0) • Side cutter (Award 1 or 0) • Wire stripper (Award 1 or 0)	 1 1 1 1 1		
11. Observed colour code *(Award 1 or 0)*	1		
12. Applied good housekeeping practice • Clean working area (Award 3 or 0) • Tiddly arranged the area (Award 2 or 0) • Properly disposed waste (Award 2 or 0)	 3 2 2		
Sub-Total	**15**		
GRAND TOTAL	**71**		
GRAND TOTAL $\left(\frac{x}{71}x100\right)$	**100**		

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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** _____ _____

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