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MODULE 1

ELECTRICAL INSTALLATION TECHNOLOGY LEVEL3, LEVEL4, LEVEL5, LEVEL6

ENG/OS/EI/CR/02/3/MA

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INSTALL TRUNKING SYSTEM

Date: 11.06.2026 02:18 PM

May-July 2026

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

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PRACTICAL ASSESSMENT

INSTRUCTIONS TO THE ASSESSOR:

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1. This assessment is to take place in the prescribed order as arranged in the tool.
2. Capture clear **photographs** and/or **videos** of each candidate's work at critical points as they perform the tasks and label all media files with: Candidate Registration Number, Unit Code, Practical Session Number, and Date.
3. Record candidate scores and assessor remarks in the observation checklists for each session.
4. Store all completed checklists, media files, and candidate drawings in a secure digital/physical folder per candidate.

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CANDIDATE & ASSESSOR DETAILS

Candidate Name:	CDACC Reg. No.:
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Assessor Name:	Assessor ID Number:
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SESSION 1 (2 HOURS)

Assessment Date:	Printed By: Management University Of Africa Technical Institute Date: 11.06.2026 02:18 PM
Assessment Venue:	

PRACTICAL CHECKLIST

No.	Items of Evaluation	Max Marks	Awarded
Task 1: Identify trunking types and their sizes			
1.	Wore PPEs as per OSHA and EHS standards • Helmet (<i>Award 1 mark or zero</i>) • Safety boot (<i>Award 1 mark or zero</i>) • Apron/overall (<i>Award 1 mark or zero</i>)	1 1 1	
2.	Identified i. Types of trunks • PVC • metal/steel • galvanized iron. (<i>Award 3×1 Mark</i>) ii. Sizes of trunks • 16mm x 16mm • 25mm x 16mm • 25mm x 25mm	1 1 1 1 1 1	

	40mm x 25mm (Award 4×1 Mark)	1	
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Task 2: Identify trunking accessories

3.	Identified trunking accessories - couplers, - bends, - tees, - end caps (Award 3 marks for any 3 correct responses)	1 1 1	
4.	Performed housekeeping i. Cleaned Workplace ii. Tools returned after use. (Award 2 marks each)	2 2	
	TOTAL	17	

REMARKS:**ORAL ASSESSMENT (10 MARKS)**

Assessor to award marks for each correct response by the candidate in the table below:

Q#	Question	Expected Key Points	Max Marks	Awarded
1	State any two importance of OSHA in electrical work?	✓ Prevents accidents ✓ legal compliance, reduces risk of fire (Award 1 mark for each or zero)	2	
2	Identify three PPEs used during trunking installation and explain their roles	✓ gloves (protect against electric shock), ✓ safety goggles (protect eyes from debris), ✓ safety boots (prevent foot injury), and ✓ overalls (prevent cuts and burns) (Award 1 mark for each or zero)	3	

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3	State two reason for using trunking in electrical installations	✓ To protect cables from mechanical damage ✓ To ensure safety by reducing electric shock ✓ Neat and organized appearance ✓ Ease of maintenance and inspection	2	
5	Name three materials used to manufacture trunking	✓ PVC ✓ Galvanized steel ✓ Aluminum	3	

(Award 1 mark for each or zero)

(Award 1 mark for any 3 or zero)

Videos should be taken as the candidate performs item 5.

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SESSION 2 (3 HOURS): TRUNKING WORK PIECES

Assessment Date:	Printed By: Management University Of Africa Technical Institute Date: 11.06.2026 02:18 PM
Assessment Venue:	

PRACTICAL CHECKLIST

No.	Items of Evaluation	Max Marks	Awarded
Task 1: Applied safety measures		Date: 11.06.2026 02:18 PM	
1.	Applied safety measures as per OSHA and EHS - Used PPEs (<i>Award 1 mark or zero</i>) - Avoided overcrowding of cables (<i>Award 1 mark or zero</i>) - Secured and safe mounting of trunking (<i>Award 1 mark or zero</i>)	1 1 1	
Task 2: List tools ,materials and equipments			
2.	Selected required Tools, Materials, and Equipment for use as Per Work - Cutting tools; (<i>Hacksaw</i>) (<i>Award 1 mark or zero</i>) - Cable stripping (<i>side cutter, (Award 1 mark or zero) combinational pliers</i>) - Fastening (<i>Screw Driver</i>) (<i>Award 1 mark or zero</i>) - Measuring tools (<i>Tape measure, (Award 1 mark or zero)</i>) - Marking tools (<i>Spirit level</i>) (<i>Award 1 mark or zero</i>)	1 1 1 1 1	
3.	Measured Trunking as per layout diagram given($\pm 2\text{mm}$) - Vertical (<i>Award 2 x 1</i>) (<i>Award 1 mark or zero</i>) - Horizontal (<i>Award 1 x 1</i>) (<i>Award 1 mark or zero</i>)	2 1	
4.	Trunking cut accurately as per the measurements taken		

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	90° (Award any 2 x 1) , (Award 2 mark or zero)	2	
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Task 3: Draw a wiring diagram using BS 3939 symbols

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5.	Drew wiring diagram as per the layout diagram as shown in figure 1: - Intake position ➤ <i>Cut out</i> (Award 1 or 0) ➤ Main earth terminal (Award 1 or 0) ➤ E. Meter (Award 2 or 0) ➤ Switch fuse (Award 1 or 0) - CCU (Award ½ or 0 for each; 2-MCB, N, E, and DP) - Lighting ➤ Switches (Award ½ or 0 for each) ➤ Lamps (Award ½ or 0 for each) - Water heater switch (Award 1 or 0 input and output)	1 1 2 1 2 ½ 1 ½ 1 1	
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Task 4: Mount the circuit using Mini-Trunking System

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6.	Joints fitted smoothly - Trunking covers (Award 3 mark or zero) - Trunking body (Award 3 mark or zero)	3 3	
	TOTAL	30	

ORAL ASSESSMENT (10 MARKS)

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Assessor to award marks for each correct response by the candidate in the table below:

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Q#	Question	Expected Key Points	Max Marks	Awarded
1	State the purpose of labeling trunking sections?	✓ For easy identification of circuits during maintenance. (Award 1 mark for any or zero)	1	
2	Name two electrical accessories used with trunking systems?	✓ Switches ✓ Pattresses ✓ junction boxes	2	

	Printed By: Management University Of Africa Technical Institute Date: 11.06.2026 02:18 PM	✓ socket outlets ✓ bb holders (<i>Award 2 marks for any 2 correct responses</i>)		
3	State two safety precaution when handling metal trunking Printed By: Management University Of Africa Technical Institute Date: 11.06.2026 02:18 PM	✓ Wear gloves to avoid cuts from sharp edges ✓ Wearing dustcoat to avoid metal chips (<i>Award 2 marks for any 2 correct responses</i>)	2	
5	Justify cable sizes chosen for lamps vs. sockets.	✓ Lighting circuits use 1.0mm² or 1.5 mm² cables due to low current demand, while socket circuits require 2.5 mm² cables to safely carry higher currents drawn by appliances (<i>Award 2 mark or zero</i>)	2	
6	Describe steps to troubleshoot a non-functional socket in an electrical workshop. Printed By: Management University Of Africa Technical Institute Date: 11.06.2026 02:18 PM	✓ ensure safety – Switch off power before working. ✓ Inspect visually – Check for damage, burns, or loose wires ✓ Test power supply – Confirm other sockets or breakers are working. ✓ Check fuse or circuit breaker – Replace blown fuse or reset tripped breaker. ✓ Inspect wiring – Tighten or reconnect loose live, neutral, or earth wires ✓ Test continuity – Use a multimeter to check wire connections. ✓ Restore power and retest – Verify the socket now works properly. (<i>Award 3 mark or zero</i>)	3	

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		TOTAL	10	
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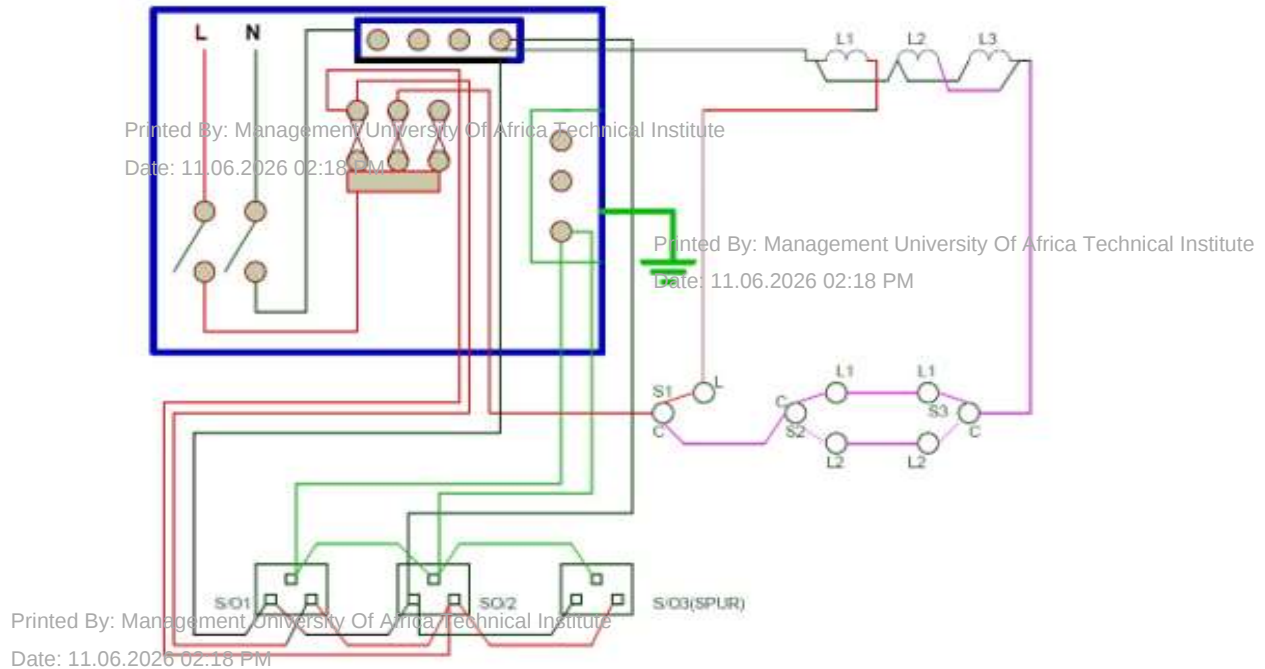


Figure 1: wiring diagram

Photos and videos should be taken as the candidate performs items 3, 5 and 6.

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SESSION 3 (3 HOURS): ASSEMBLE MACHINE AND PERFORM TESTING

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Assessment Venue:	

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PRACTICAL CHECKLIST

No.	Items of Evaluation	Max Marks	Awarded
Task 1: Safety awareness			
1.	Safety awareness - Safety boots (<i>Award 2 mark or zero</i>) - Apron (<i>Award 2 mark or zero</i>) - Proper handling of tools (<i>Award 2 mark or zero</i>) - Proper handling of equipment (<i>Award 2 mark or zero</i>) - Housekeeping and waste disposal (<i>Award 1 mark or zero</i>)	2 2 2 2 1	
Task 2: Drew wiring diagram			
2.	Drew wiring diagram as per layout diagram - Lighting circuit (<i>Award 6 mark or zero</i>) - Cooker circuit (<i>Award 2 mark or zero</i>) - Power (<i>Award 5 mark or zero</i>)	6 2 5	

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3.	Laid Cables in the trunk as per IEC Standards - Correct trunking type and size (<i>Award 2 mark or zero</i>) - Cables laid neatly inside (<i>Award 2 mark or zero</i>) - No cable damage or sharp bends (<i>Award 2 mark or zero</i>) - Trunking fixed securely (<i>Award 2 mark or zero</i>) - Covers fitted properly (<i>Award 2 mark or zero</i>)	2 2 2 2 2	
Task 3: Install and wire the circuit			
4	Installed property at single phase intake point - Cut-out (<i>Award 2 mark or zero</i>) - Energy meter (<i>Award 2 mark or zero</i>) - CCU (<i>Award 2 mark or zero</i>)	2 2 2	
5	Secured mounting - Firm (<i>Award 2 mark or zero</i>) - Level (<i>Award 2 mark or zero</i>)	2 2	
6	Stripped Cables - Safety precautions (<i>Award 1 mark or zero</i>) - Select the right tool (<i>Award 1 mark or zero</i>) - Measure and mark (<i>Award 1 mark or zero</i>) - Strip the inner conductor (<i>Award 1 mark or zero</i>) - Inspect the conductor (<i>Award 1 mark or zero</i>)	1 1 1 1 1	
7	Fixed Accessories as per IEC Standards (Assessor ensures candidate has achieved) - Correct type of accessory used (<i>Award 1 mark or zero</i>) - Mounted securely and level (<i>Award 1 mark or zero</i>) - Proper wiring connections (<i>Award 1 mark or zero</i>)	1 1 1 1 1	

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	• <i>Meets IEC safety requirements Neat and professional finish</i> (Award 1 mark or zero)		
8	Correct Use of Hand Tools • Right tool for the job (Award 1 mark or zero) • Safe and proper handling (Award 1 mark or zero) • Tool in good condition (Award 1 mark or zero) • Follows safety rules (Award 1 mark or zero) • Cleans and stores tool after use (Award 1 mark or zero)	1 1 1 1 1	
Task 4: Carrying out tests Date: 11.06.2026 02:18 PM			
9	Performed Continuity test • Isolated supply (Award 2 mark or zero) • Set test equipment to Continuity (Award 2 mark or zero) • checked for open circuit and correct Test conductors (Award 2 mark or zero)	2 2 2	
10	Performed Polarity test • Candidate observed safety by isolating supply (Award 1 mark or zero) • Selected right test equipment, Multimeter or continuity tester (Award 1 mark or zero) • Linked line and neutral at DB (Award 1 mark or zero) • Tested switch terminals (Award 1 mark or zero) • performed continuity test between line pin and neutral bar of the socket outlet (Award 1 mark or zero) • Confirmed correct polarity (Award 1 mark or zero)	1 1 1 1 1 1	
11	Correct circuit operation • Lighting (Award 5 mark or zero) • Sockets (Award 5 mark or zero)	5 5	
TOTAL		78	
REMARKS:			

ORAL ASSESSMENT (10 MARKS)

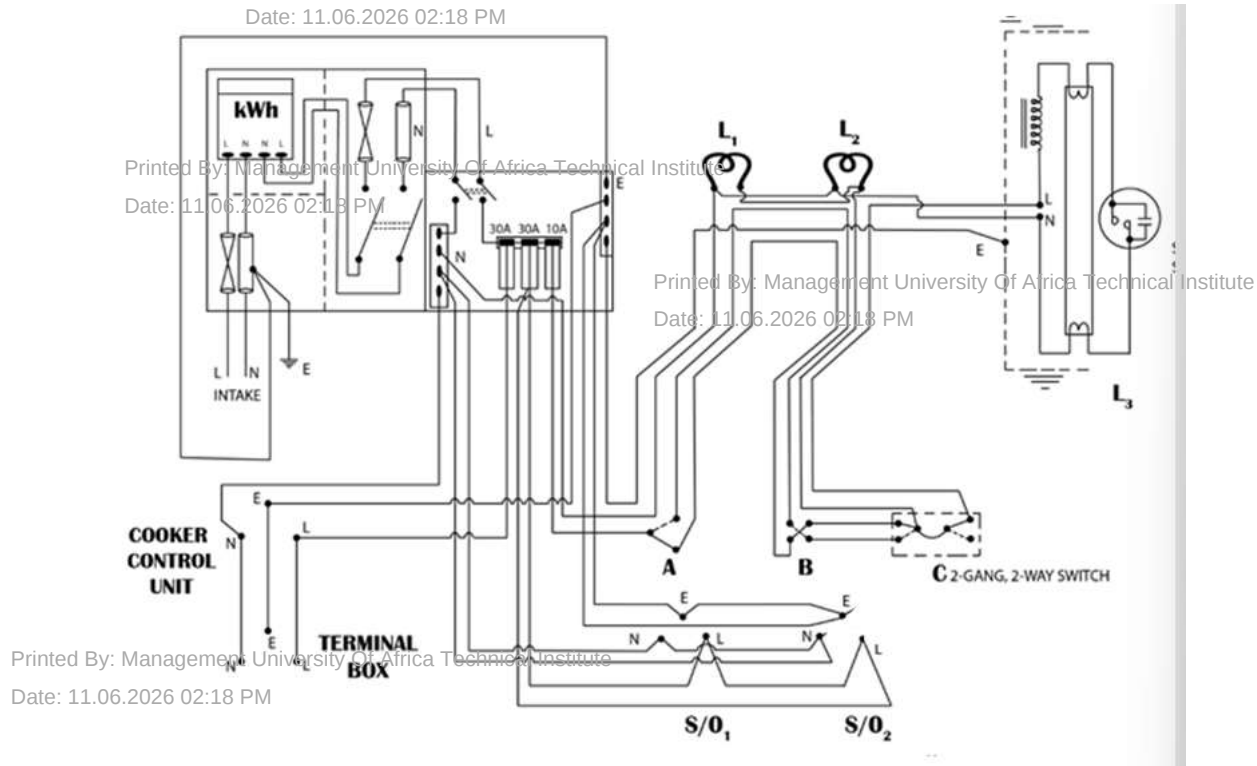
Assessor to award marks for each correct response by the candidate in the table below:

Q#	Question	Expected Key Points	Max Marks	Awarded
1	State two reasons for avoiding overpacking of trunking?	✓ Causes overheating ✓ Makes future maintenance difficult (Award 1 mark for each or zero)	2	
2	Mention two disadvantages of poorly installed trunking	✓ Causes cable congestion ✓ Increases risk of electrical faults (Award 1 mark for each or zero)	2	
3	Name the tool used for: (i) Aligning trunking (ii) Securing trunking to a wall	✓ Spirit level – for alignment. (Award 2 mark or zero) ✓ Drill machine – for securing (Award 2 mark or zero)	2 2	
4	Electrical trainees were conducting wiring in a computer lab but skips continuity and polarity tests. When the system was energized, some sockets did not function. Outline two tests that were ignored and explain their importance in ensuring proper installation.	✓ The trainees ignored continuity and polarity tests. ✓ Continuity test ensures all connections are complete with no breaks. ✓ Polarity test ensures correct wiring to avoid malfunction and hazards. (Award 2 mark for correct response)	2	
		TOTAL	10	

WIRING DIAGRAM

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SUMMARY OF ASSESSMENT

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SECTION	Total Marks	Marks Awarded
Practical Assessment 1	17	
Practical Assessment 2	30	
Practical Assessment 3	78	
TOTAL	125	
Percentage % $\frac{x}{125} \times 100$	100	
ORAL ASSESMENT		
Oral assessment 1	10	
Oral assessment 2	10	
Oral assessment 3	10	

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TOTAL	30	
Percentage %	100	
$\frac{x}{30} \times 100$		

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ASSESMENT OUTCOME**The candidate was found to be:**

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Competent☐**Not yet Competent**☐*(Please tick as appropriate)*

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The candidate is competent if the candidate obtains at least 50%

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