©2025 TVET CDACC

072203T4SPV

SOLAR PV INSTALLATION LEVEL3

ENG/OS/SPV/CR/04/3

Maintain Solar PV System

July/ August 2025

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

OBSERVATION CHECKLIST

easytvet.com

INSTRUCTIONS TO ASSESSOR

1. Ensure all the materials and equipment are provided.
2. Assess the candidate as the practical progresses observing the critical areas
3. You are required to mark the practical as the candidate perform the tasks
4. Ensure the candidate has a name tag and registration code at the back and front
5. You are required to create the following faults in the pre-installed:
    i. Create loose wiring connections at the socket outlet
    ii. Create loose connection at the charge controller terminals
    iii. Short circuit live and neutral poles at the junction box termination.
    iv. Interchange earth and neutral poles at the consumer control unit
    v. Use poorly insulated wires between charge controller and battery
6. The candidate is required to reinstall the socket outlet So_1 and replace the DC lighting circuit with an AC fluorescent fitting and carry out all the required tasks individually.
7. Ensure the pre-installed system is restored to its original state in case the candidates are assessed in shifts using the same pre-installed system.

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**
OBSERVATION CHECKLIST			
1. Observed safety awareness i. Worn overall/ dust coat ii. Safety shoes iii. Proper handling of tools *iv.* Housekeeping and waste disposal *(Award 1 mark each)*	2 2 2 2		
Sub-Total	**8**		
TASK 1: Repair of the Circuit as per the layout diagram provided			
2. a) Dismantled the DC lighting circuit *(Award 2 or 0)*	2		
b) Powered fluorescent tube from the AC supply *(Award 2 or 0)*	2		
c) Identified faults in the socket outlet So_1 *(Award 1 or 0)*	2		
d) Connected the ring circuit *(Award 1 or 0)*	2		
e) Wired the solar PV components in the correct sequence *(Award 1 or 0)*	2		
Sub-Total for Task 1	**10**		
TASK 2: Inspection of solar PV system			
3. Performed visual inspection on the system i. Identified loose wiring connection at socket S01 (*Award* 2)	2		

easytvet.com

ii. Identified loose wiring connection at battery terminals (*Award 2)* iii. Identified the short circuit connection at the junction box termination. *(Award 2)* iv. Identified wrong polarity at the CCU *(Award 2)* v. Identified poorly insulated wires between charge controller and battery *(Award 2)*	2 2 2 2		
Sub-Total for Task 2	**10**		
TASK 3: Testing and recording of test results			
4. Performed polarity test of DC and AC circuits $(Award\,1\ or\,0\ for\ each)$	2		
5. Performed continuity test of single pole devices $(Award\ any\,2\times1)$	2		
6. Performed ring continuity test of socket outlets $(Award\,2\ or\,0)$	2		
7. Performed insulation resistance test of the AC circuit $(Award\,2\ or\,0)$	2		
8. Recorded test results *(Award 2 or 0)*	2		
Sub-Total for Task 3	**10**		
TASK 4: Repairing the solar PV system			
9. Repaired the installation for correct functionality i. Tightened loose connections $(Award\,1\ or\,0\ for\ any\,2)$ ii. Corrected color coding $(Award\,2\ or\,0)$ iii. Replaced poorly insulated cables $(Award\,2\ or\,0)$	2 2 2		

easyltvet.com

iv. Corrected short circuit connection at junction point (*Award* 2 *or* 0)	2		
Sub-Total for Task 4	**8**		
TASK 5: Recording of maintenance activities			
10. Recorded maintenance activities (*Award any* 6 x 1)	6		
Sub-Total for Task 5	**6**		
GRAND TOTAL	52		
$\frac{X}{52}$ x 100			

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**

_____ _____