072204T4SPV

SOLAR PV INSTALLATION ASSISTANT LEVEL 4

ENG/OS/PVI/CR/05/4

Maintain Solar PV Systems

July/August 2025

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

PRACTICAL ASSESSMENT

Time: 4 HOURS

INSTRUCTIONS TO CANDIDATE:

1. Figure 1 shows a pre-installed solar PV system such that:
   i. Socket outlets are wired in ring with a spur.
   ii. Lamps L1 and L2 are controlled from two independent positions by switches S1 and S2.

You are required to perform the following tasks

TASK 1: Draw the wiring diagram for the circuit in figure 1

TASK 2: Conduct visual inspection on the system and record the faults

TASK 3: Perform the following tests and record the results BEFORE correcting the identified faults.

i. Earth resistance on AC circuits
ii. Polarity test of AC circuits

iii. Ring continuity test of socket outlets
iv. Insulation resistance test of the AC circuit
v. Continuity test of single pole devices

TASK 4: Repair the installation for correct functionality.

TASK 5: Perform the following tests and record the results AFTER correcting the identified faults.

i. Earth resistance on AC circuits
ii. Polarity test of AC circuits
iii. Ring continuity test of socket outlets
iv. Insulation resistance test of the AC circuit
v. Continuity test of single pole devices

TASK 6: Record the maintenance activities carried out.

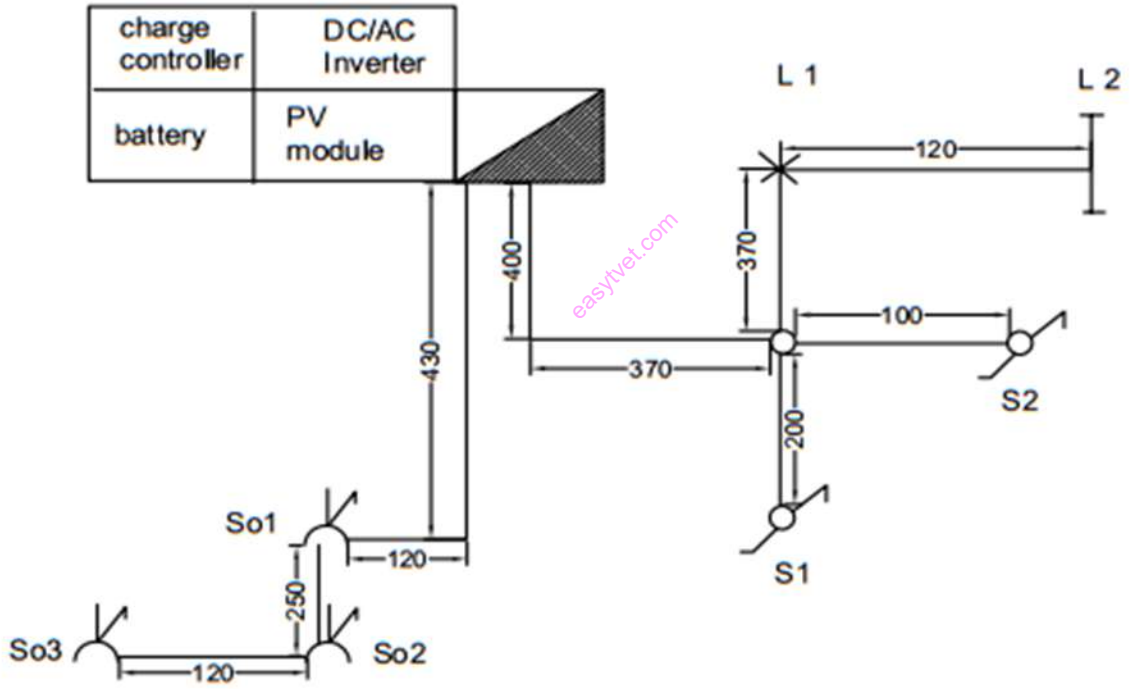

Figure 1

2. You have been provided with the following resources for the practical tasks:

i. Pre-installed solar PV system
ii. Foolscap papers
iii. Insulation resistance tester
iv. Multi-meter

v. Mega-ohm meter
vi. Screw driver
vii. Pliers
viii. Tape measure
ix. Electrical claw hammer