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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)

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PRACTICAL ASSESSMENT

Time: 4 HOURS

INSTRUCTIONS TO CANDIDATE:

1. You are allocated 4 hours to carry out all the practical tasks
2. Do not write on the question paper
3. DO NOT switch ON the power without assessor's permission
4. This paper consists of **THREE** printed pages.

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PRACTICAL TASKS

You have been provided with a PVC conduit pre-installed solar PV circuit.

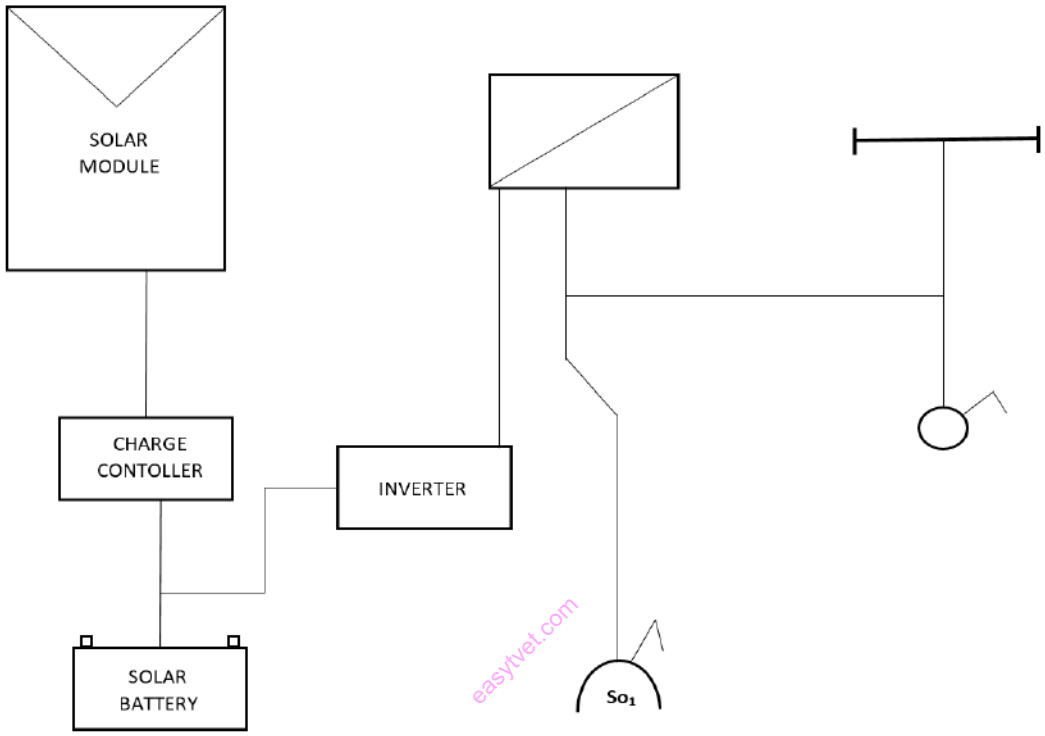


Figure 1

1. Carry out the following tasks:

TASK 1: Repair the circuit as per the layout diagram shown in Figure 1, such that:

a) The fluorescent tube is powered by the AC circuit.

b) AC socket outlets So1 wired in a ring connection

c) Solar PV components are wired in the correct sequence

TASK 2: Perform inspection on the system

TASK 3: Perform the following tests and record the test results

i. Polarity test at DC and AC circuits

ii. Continuity test of the earth cable to the fluorescent fitting

iii. Ring continuity test of socket outlets

iv. Insulation resistance test of the AC circuit

v. Measure Voltage and current at the solar battery

TASK 4: Repair the installation for correct functionality.

TASK 5: Record all the maintenance activities carried out

2. You have been provided with the following resources for the tasks mentioned above:
    - Pre-installed solar PV system
    - PVC pipes
    - PVC T- Joints
    - PCV saddles
    - Gypsum screws
    - Foolscap papers
    - Insulation resistance tester
    - Multimeter
    - Cables
    - Electrical hand tools;
        - Screw drivers
        - Spirit levels
        - Pliers
        - Tape measure
        - Claw hammer

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