©2025 TVET CDACC

073105T4EOP

ELECTRICAL OPERATION LEVEL 5

ENG/OS/CR/CR/06/5/A

Install Solar Systems

March/April 2025

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

easytvet.com

PRACTICAL ASSESSMENT

TIME: 4 HOURS

INSTRUCTIONS TO CANDIDATE:

1. You have **FOUR** hours to perform the task.
2. **DO NOT** write on the question paper.
3. Separate paper is provided for drawing.
4. **DO NOT** power the circuit without assessors' permission.

This paper consists of THREE (3) printed pages.

Candidate should check the question paper to ascertain that all the pages are printed as indicated and that no questions are missing.

Figure 1 shows a layout of stand-alone solar PV system.

Carry out the following tasks:

a) Draw a wiring diagram such that;

   i. Lamps L_1 and L_2 are controlled by switches S_1 and S_2 independently.

   ii. Lamp L3 is controlled by switch S3 from the D.C supply.

   iii. Socket outlets are in ring

b) Mount the solar components appropriately;

c) Install the system using PVC sheathed cables on surface;

d) Perform continuity test and earth resistance test.

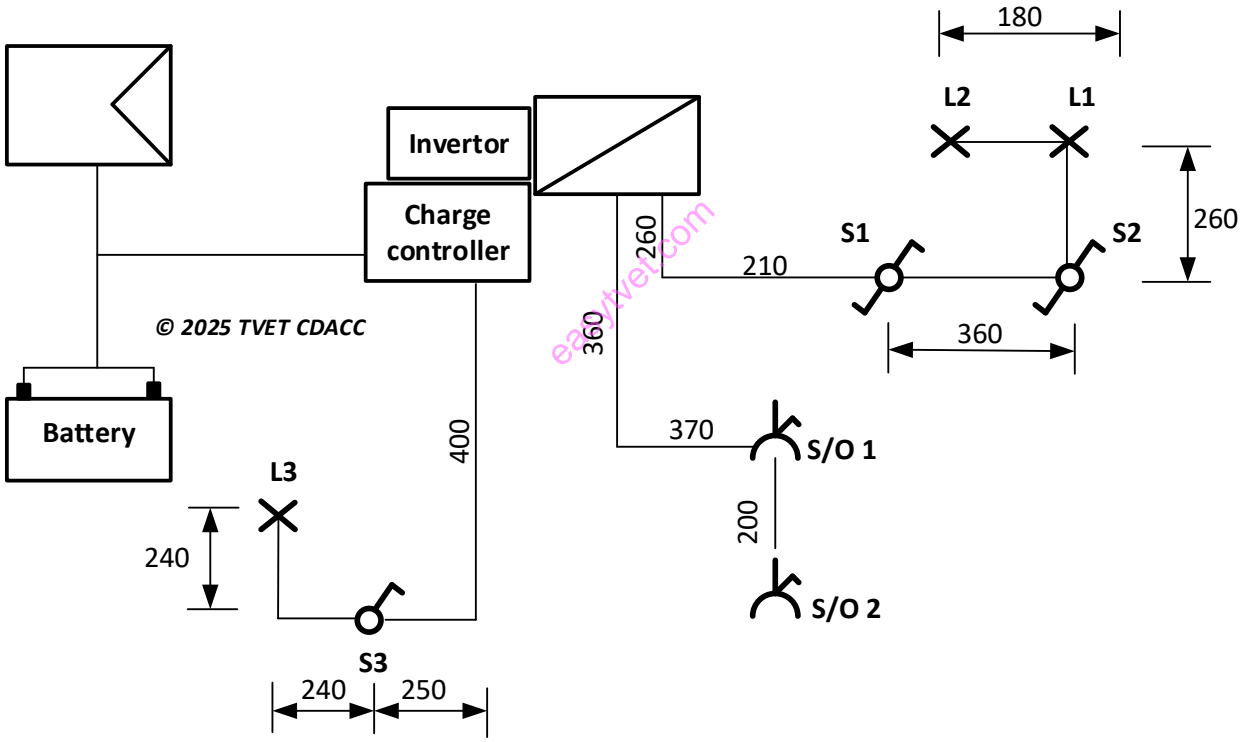


Figure 1

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

- *Solar module 100w*
- *Solar battery*
- *Charge controller*
- *Inverter*
- *Consumer control unit*

- *Straight batten lamp holders*
- *13A socket outlets*
- *Deep pattress box*
- *Shallow pattress box*
- *1 gang two way switches*
- *One way switch*
- *Incandescent lamp*
- *12 V DC lamp*
- *6 A circuit breaker*
- *32 A circuit breaker*
- *1.5 mm^2 PVC sheathed cable TWE*
- *2.5 mm^2 PVC sheathed cable TWE*
- *Wood Screws*
- *Cable clips*

easytvet.com

THIS IS THE LAST PRINTED PAGE.