071305T4EOP

ELECTRICAL OPERATION (POWER OPTION) LEVEL 5

ENG/OS/PO/CR/07/5

Perform Electrical Breakdown Maintenance

July/August 2025

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

easytvet.com

PRACTICAL ASSESSMENT

TIME: 4 HOURS

INSTRUCTIONS TO CANDIDATE:

1. Figure 1 shows a layout diagram of a pre-installed electrical installation system such that:
   i. Lamp L_1 is controlled from three different positions S_1, S_2 and S_3 independently;
   ii. Lamp L_2 is controlled from S_1;
   iii. The socket outlets are connected in a ring.

   You are required to perform the following tasks:

   Task 1: Identify the required tools, equipment and materials you will require to restore the circuit operation;

   Task 2: Draw the wiring diagram;

   Task 3: Identify and record the faults;

   Task 4: Repair the installation and restore to its correct functionality;

Task 5: Carry out the following tests:

a) Polarity test;
b) Continuity test;
c) Insulation resistance test.

Task 6: Write a detailed breakdown maintenance report.

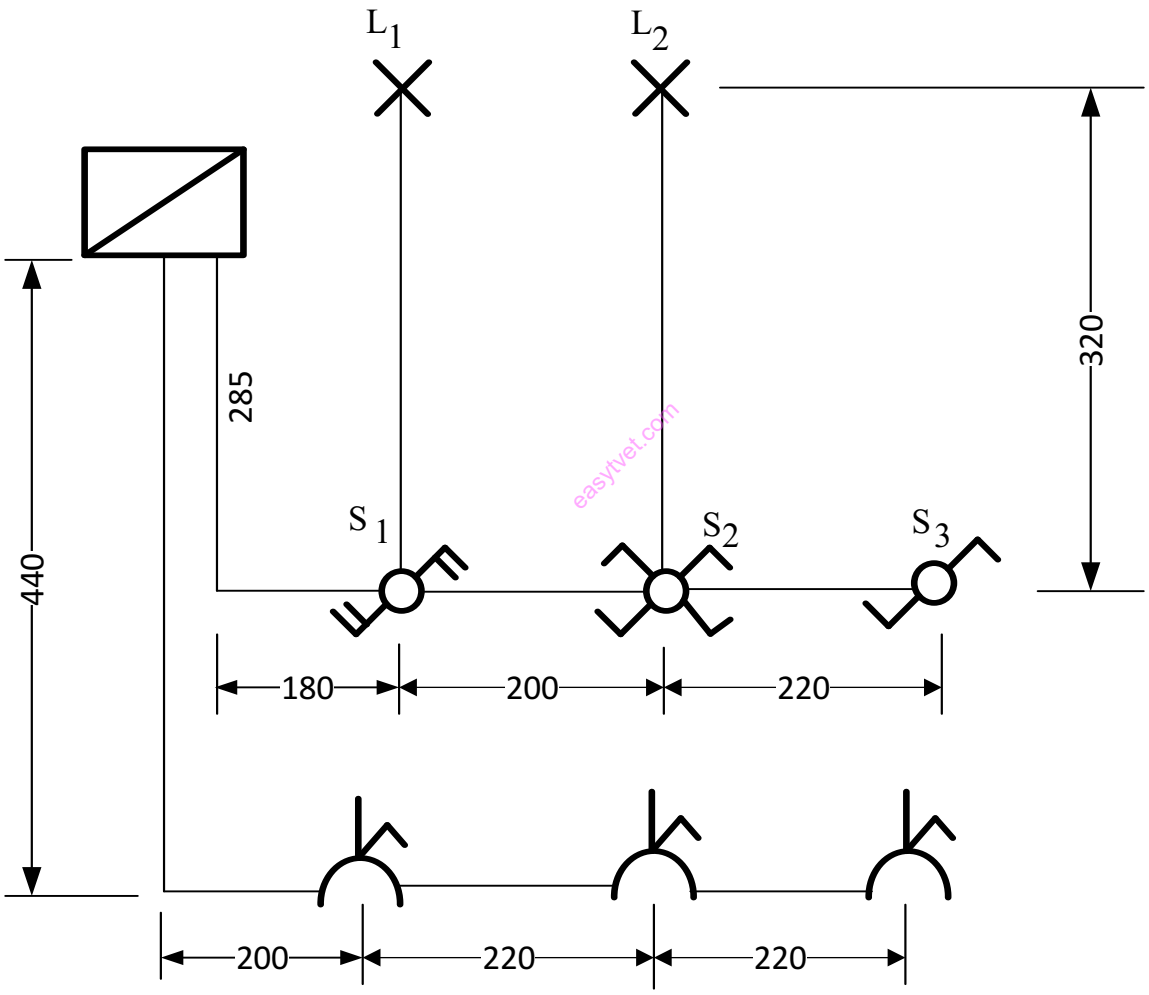


Figure 1

1. You have been provided with the following resources for the project;
   i. Pre- installed circuit;