

071305T4ELC

ELECTRONICS CRAFTSPERSON LEVEL 5

ENG/OS/ET/CR/02/5/A

Install Power Supply Systems

Nov/Dec 2024



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

**PRACTICAL ASSESSMENT**

**Time: 3 HOURS**

**INSTRUCTIONS TO CANDIDATE:**

1. You are required to perform the following tasks

**TASK: Mount a dual-rail voltage regulator using Zener diode**

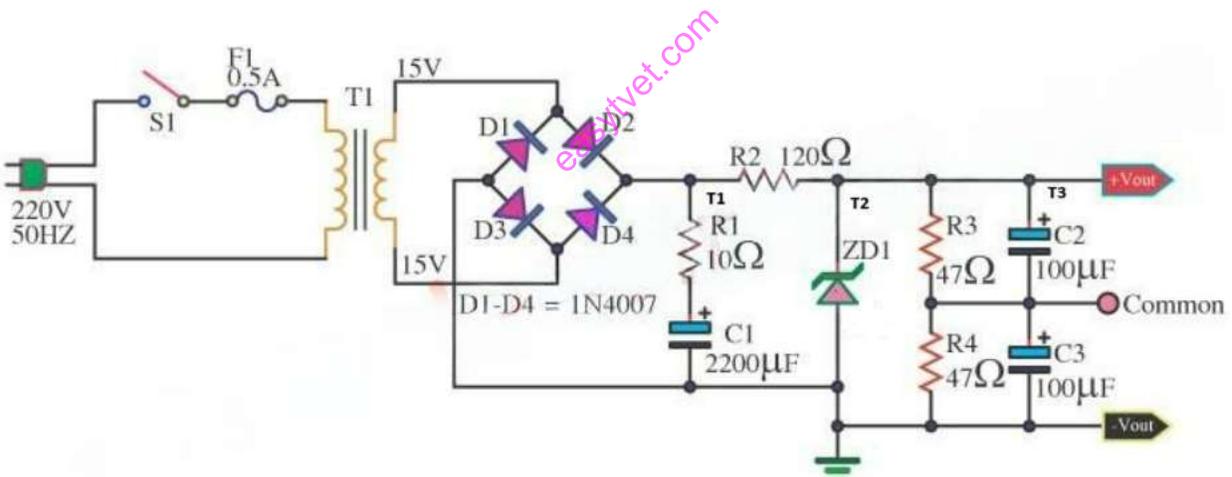
2. You have been provided with the following resources for the practical tasks:

- 220V 50Hz supply
- Fuse 0.5A
- ON-OFF switch Pushbutton
- Step-down transformer 220V(30V)
- Diodes IN4007
- Stripboard 14.5cm x 6.5cm
- Resistors 10 $\Omega$ , 120  $\Omega$ , 47  $\Omega$  and 47  $\Omega$
- Capacitors 2200 $\mu$ F, 100 $\mu$ F and 100 $\mu$ F
- Zener diode 5v
- Multimeter
- Connecting wires
- Solder sucker
- Soldering gun

- Side cutters
- Wire Stripper
- Soldering gun stand

**TASK:** Figure 1 shows the circuit diagram of a simple dual-rail voltage regulator using Zener diode. Referring to the figure carry out the following tasks:

- i. Using the components and equipment provided, mount and solder the circuit.
- ii. Power the circuit and perform the following test:
- iii. Measure voltage at test point:
  - i) T1
  - ii) T2
- iv. Measure the output current



**Figure 1**