

071306T4ELC

ELECTRONICS ENGINEERING LEVEL 6

ENG/OS/ET/CR/04/6/A

Apply Electrical Instrumentation

Nov/Dec 2024



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

PRAC TICE ASSESSMENT

Time: 3 HOURS

INSTRUCTIONS TO CANDIDATE:

1. Do not write on the question paper.
2. A separate plain paper will be provided.
3. Return this paper to assessor at the end of assessment.

This tool 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 multivibrator circuit. You are provided with the following materials to carry out the given tasks.

- Oscilloscope
- Multimeter
- Breadboard
- 12 V dc power supply
- 555 Timer IC
- Ceramic capacitor : $0.01\ \mu F$ and $0.1\ \mu F$
- Resistors: $R_1 = 2\ k\Omega$, $R_2 = 10\ k\Omega$, $R_3 = 1\ k\Omega$ and $R_4 = 1\ k\Omega$

TASK 1:

Mount the circuit as shown in figure 1 on the breadboard.

TASK 2:

Power the circuit and measure the voltages at the following test points.

- i. TP_1
- ii. TP_2
- iii. TP_4

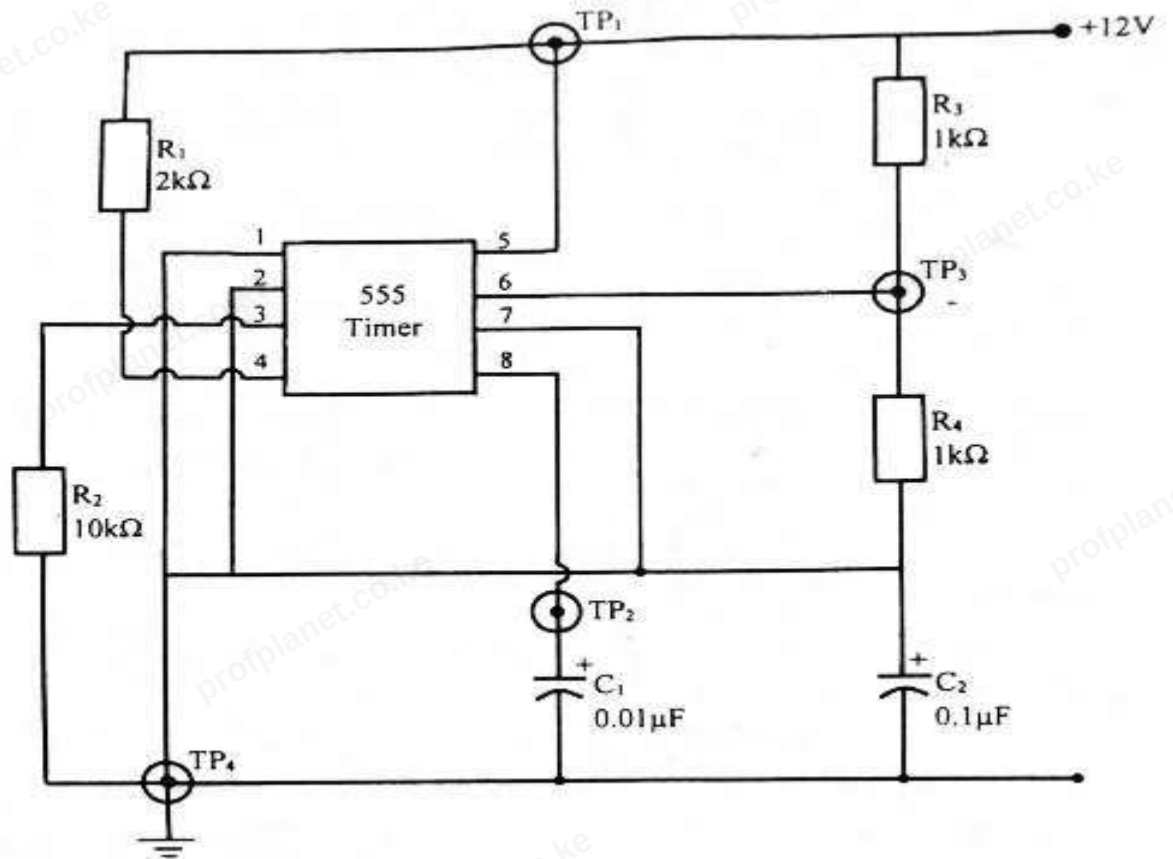
TASK 3:

- i. Use an oscilloscope to display the waveform at test point TP_3
- ii. Draw the output waveform at TP_3

TASK 4:

Carry out the following tests and compile a report.

- i. Continuity test
- ii. Polarity test



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