# Brac University

## Department of Electrical & Electronic Engineering

## Semester - Fall25

# Course Number

Course Title: ELECTRONIC CIRCUITS I LABORATORY

Section:01

# Lab Report

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Experiment no. 02

Name of the experiment: Rectification

*Prepared by:*

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***Group Number: 01***

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# Experiment 02

# Rectification

**Objective:** To find the operation and performance of half-wave and full-wave bridge rectifier circuits by analyzing their input and output voltage waveforms and evaluating their ability to convert alternating current (AC) into pulsating direct current (DC).

**Equipments:**

1.Breadboard

2.Jumper Wires

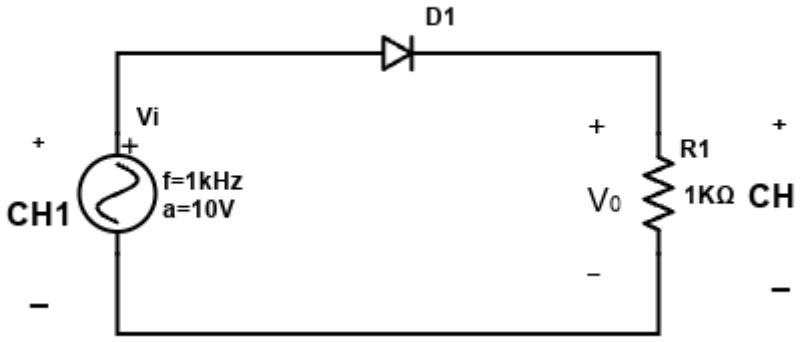
3.AC voltage Source

4.1KΩ Resistors

5.Diode (1N4007)

6.Oscilloscope

**Half wave Rectifier Circuit:**



**Data:**

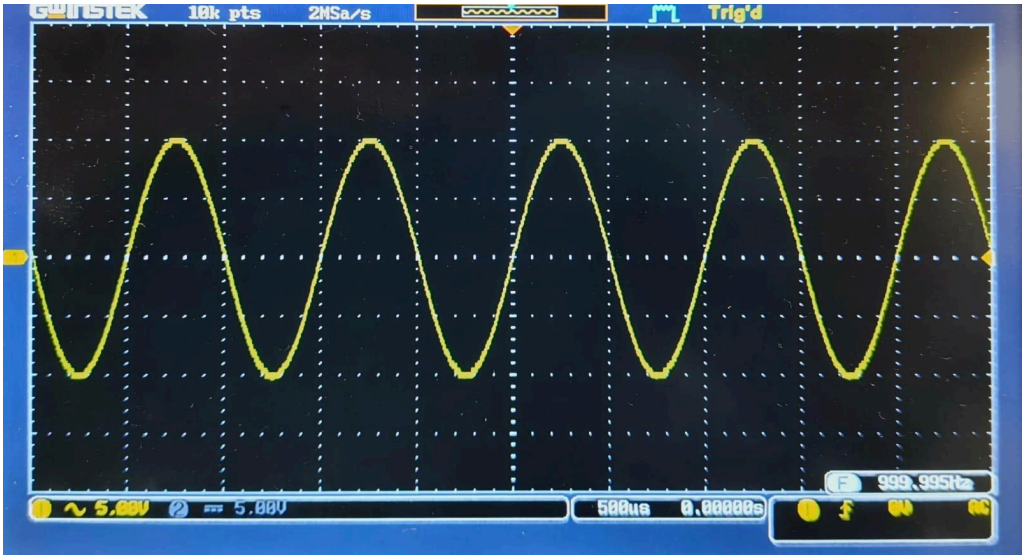



Fig: Input AC Voltage (Vi)

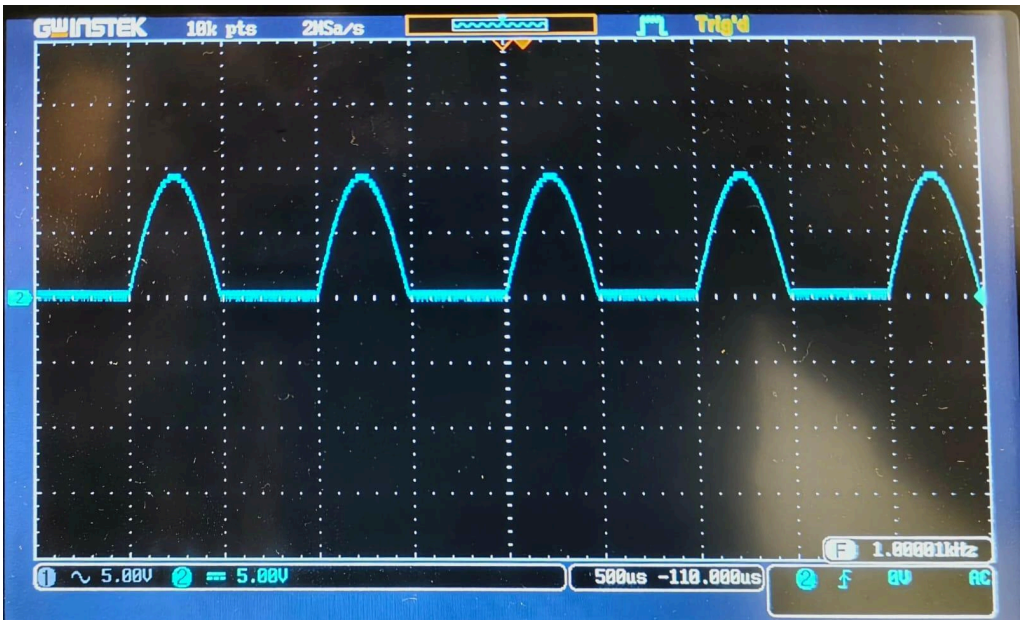
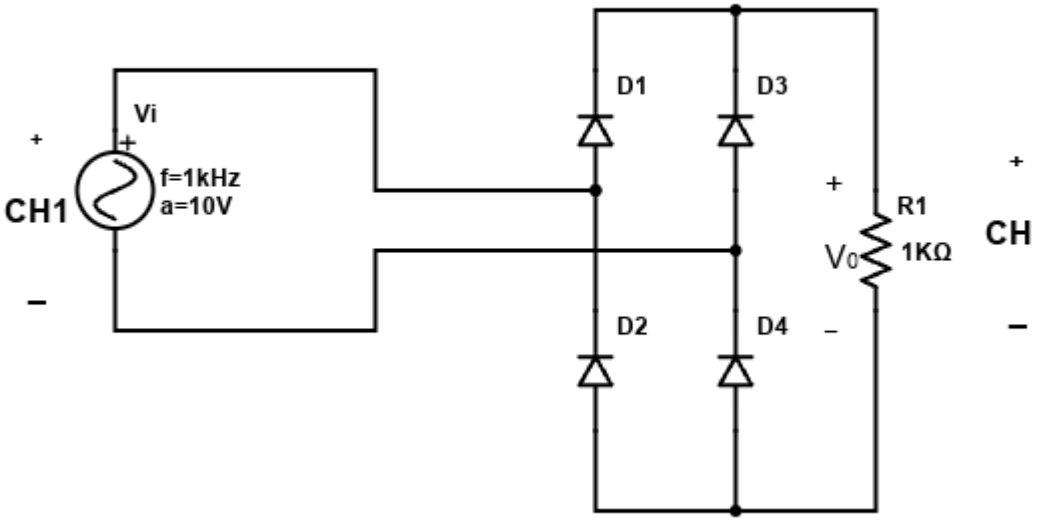



Fig: Half-Wave Rectified Output Voltage (Vo)

**Full Wave rectifier circuit:**




**Data:**

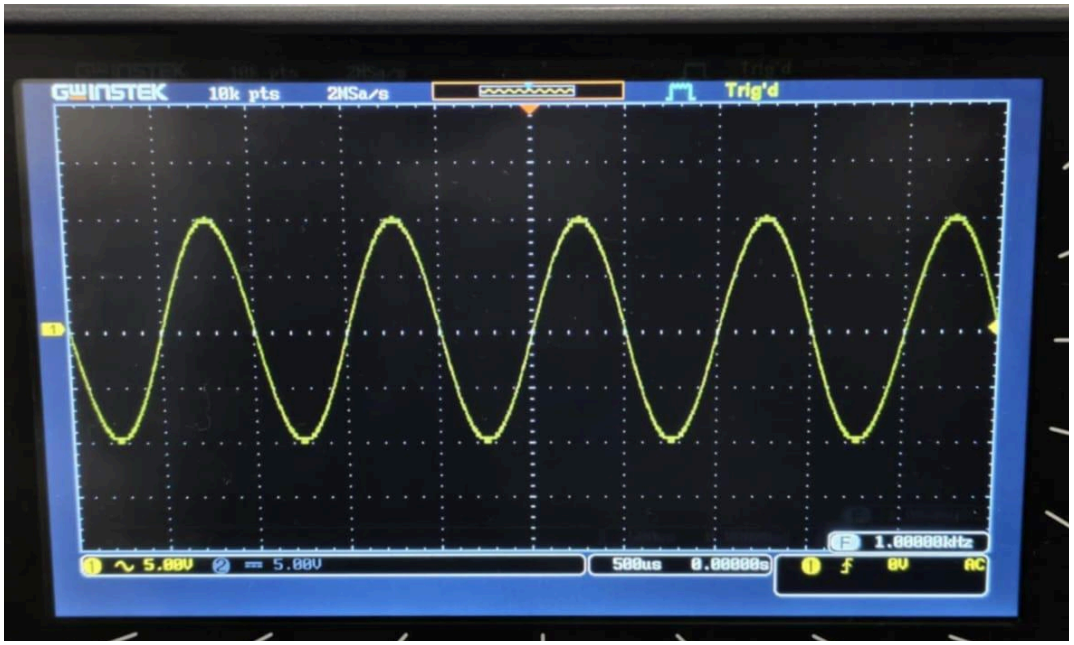



Fig: Input AC Voltage (Vi)

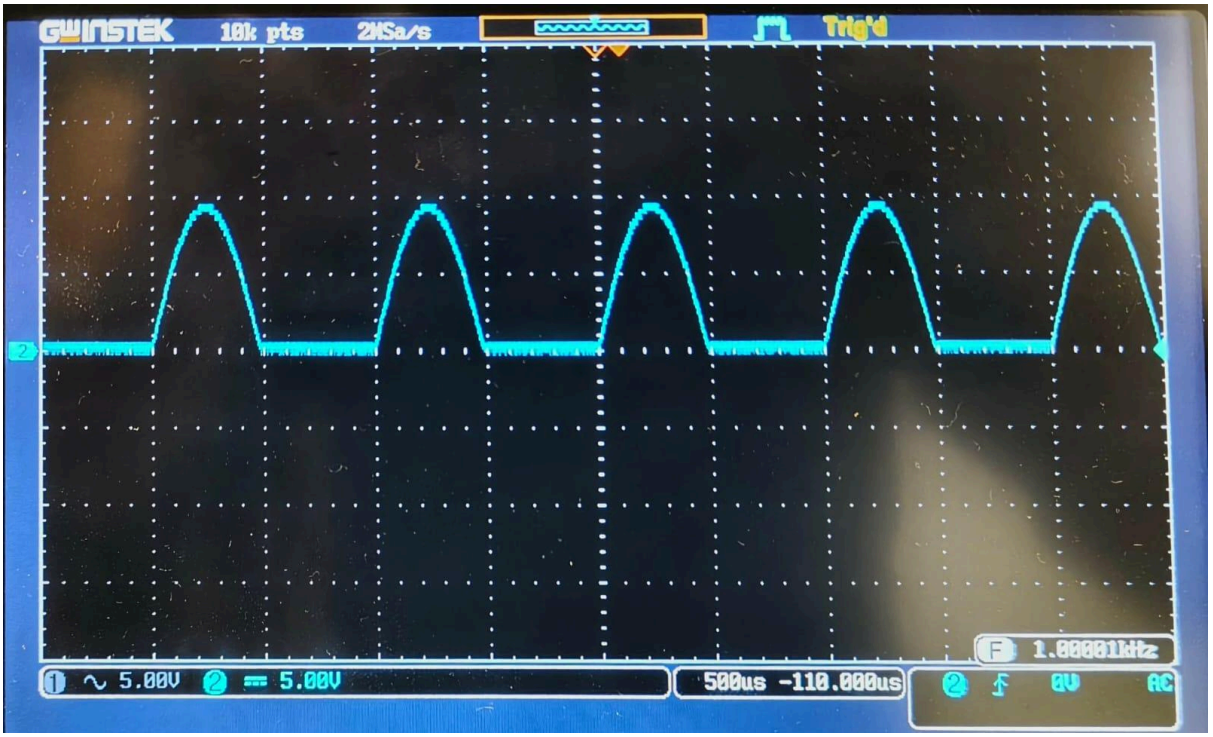
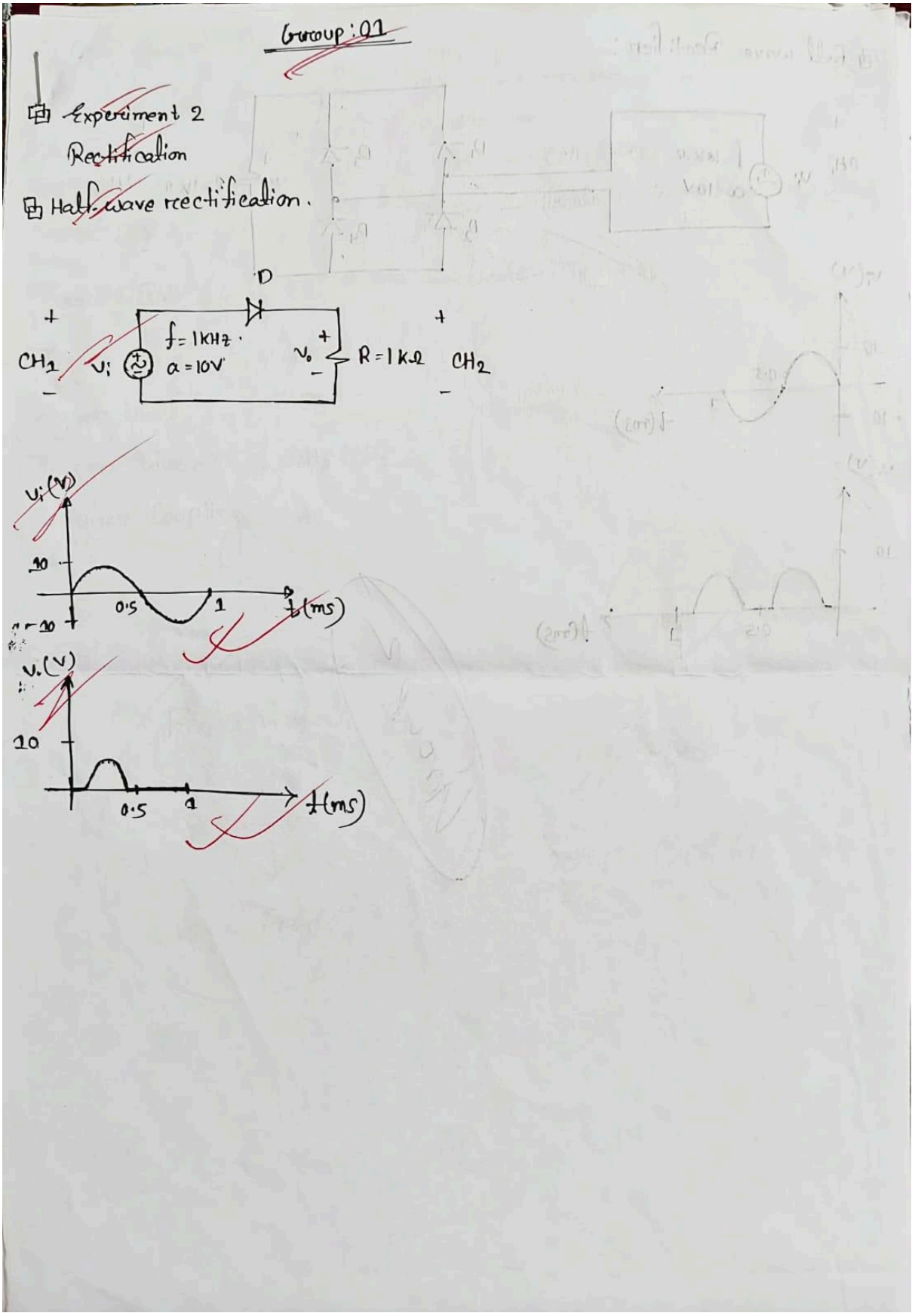
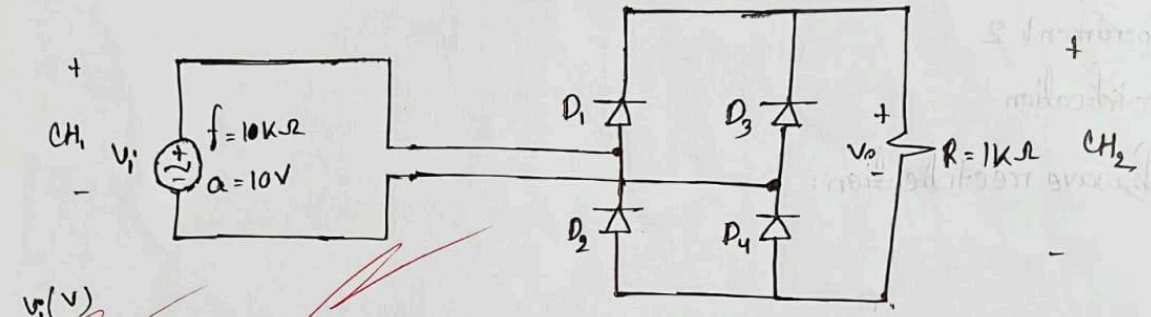


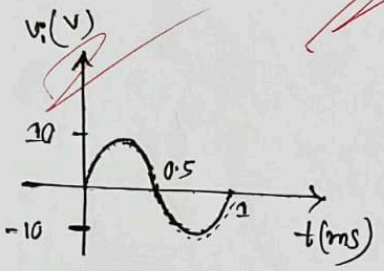

Fig: Full-Wave Rectified Output Voltage (Vo)

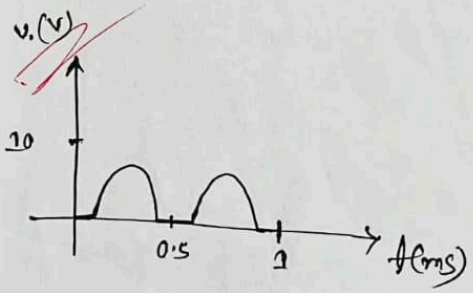
**Appendix:**


Group: 01
Experiment 2
Rectification
Half-wave rectification.
D
+
CH1
−
Vi
f = 1KHz
a = 10V
+
Vo
−
R = 1kΩ
+
CH2
−
Vi(V)
10
0.5
1
t(ms)
−10
Vo(V)
10
0.5
1
t(ms)

## Full-wave Rectifier:




Vrms

Oscilloscope settings :

| | $CH_1$ | $CH_2$ |
|---|---|---|
| Probe Switch | 1X | 1X → connector |
| Zero Line | x axis | x axis → |
| AC/DC | AC | DC → ($CH_1$ & $CH_2$) |
| Volts / DIV. | 5V | 5V → (scale → downside of $CH_1$ & $CH_2$) |
| Time / DIV | 0.5ms → (scale → Top right) . | |
| Trigger Mode | ATO | (menu) |
| Trigger Level | 0V | |
| Trigger Source | $CH_1$ / $CH_2$ | |
| Trigger Coupling | AC | |

10/10

Experiment
↓
Zener
↓
Some Faults

10/10

2015 - October - 30