Department of Electrical & Electrical Engineering

BRAC University

Semester- Fall 2025

EEE205L

ELECTRONIC CIRCUITS I LABORATORY

Section: 01

Experiment:7 - BJT AMPLIFIER

Group Number: 1

Group Members:

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Submitted by :

Name : Abir Chowdhury Ratul

ID : 24121204

Submitted To : Aldrin Nippon Bobby

Aldrin Nippon Bobby

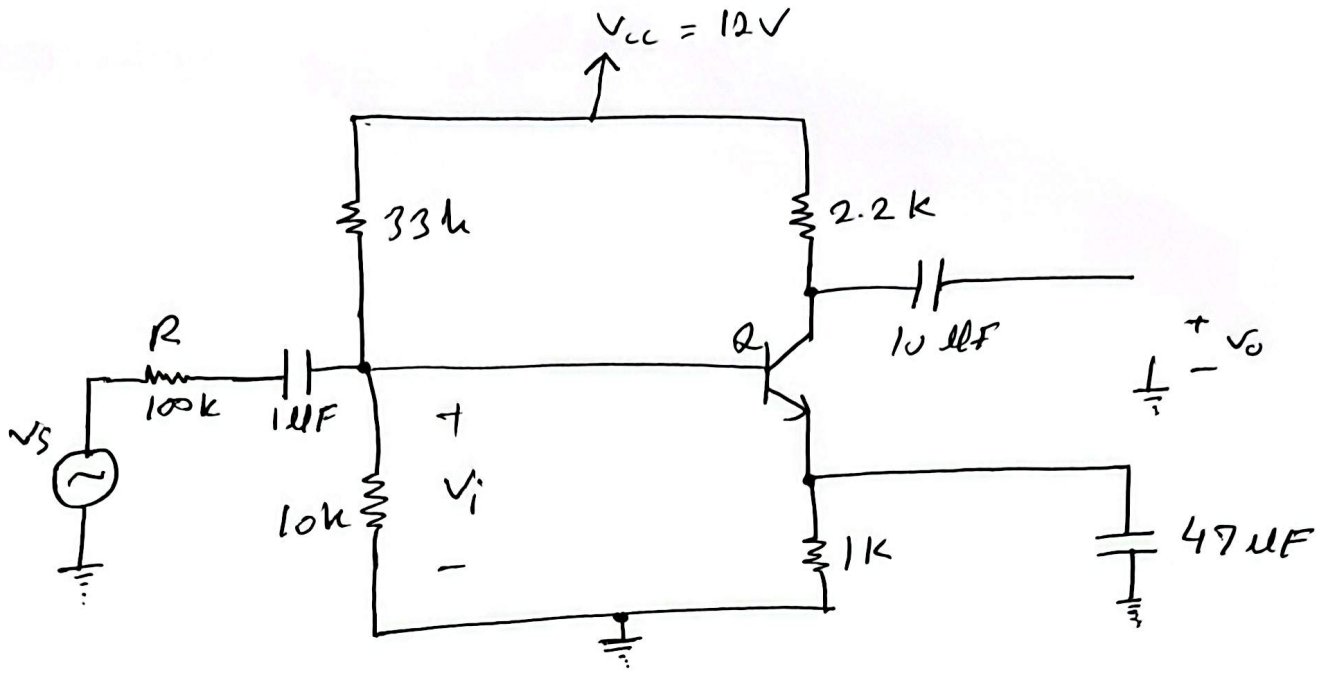
Objective:

To study the common emitter amplifier and measure its gain,

input impedance and output impedance.

Equipments:

1. Breadboard
2. Jumper wires
3. Multimeter
4. DC voltage source
5. Resistors (1K, 2.2 K, 10K, 33KΩ, 100k)
6. 100k Potentiometer
7. n-p-n Transistor (C828)
8. Capacitors (1μF, 10μF, 47μF)



1. Amplification:

$V_i =$ [15.2] mV $\quad V_o =$ [2040] mV.

2. Input Impedance, R_i:

$V_i =$ [15.2] mV $\quad V_s =$ [500] mV

$R =$ [100] kΩ $\quad R_i =$ [3.14] kΩ.

3. Output Impedance, R_o :

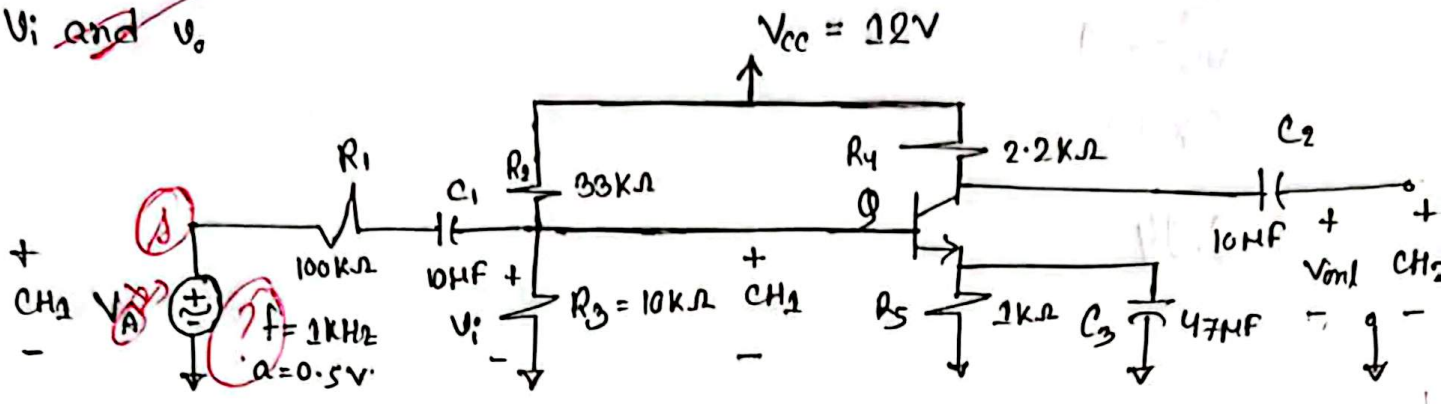
$R_o =$ [2.18] kΩ.

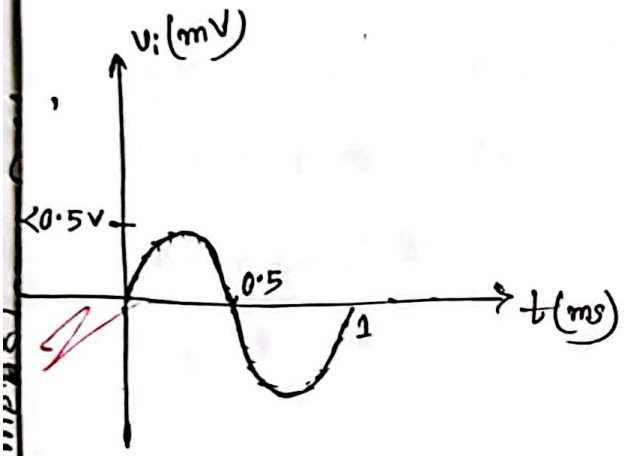
Experiment :07

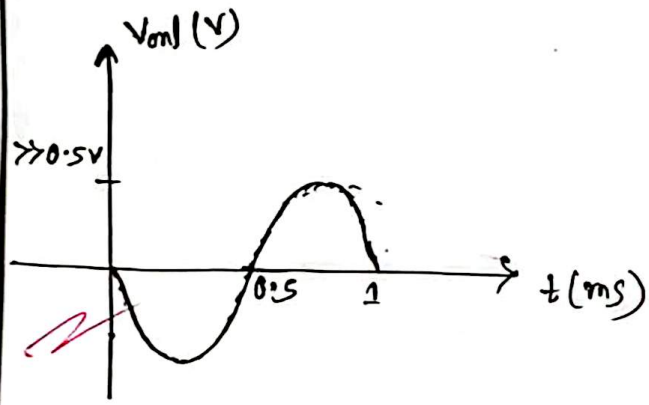
Common Emitter Amplifier

Group 1

Vi and Vo







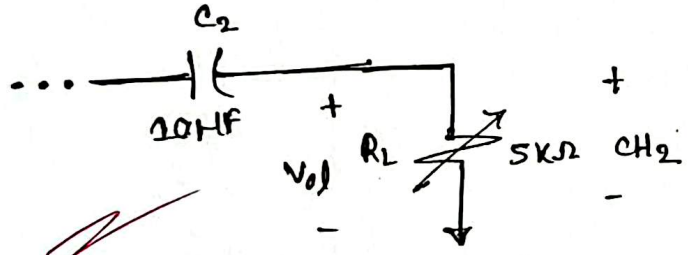
R_1 (KΩ)	V_{sa} (V)	V_{ia} (mV)	V_{oanl} (V)	$A_v = \frac{V_{oanl}}{V_{ia}}$
100.2	0.5	15.2	2.04	134.2 V

☐ R_i

$$R_i = \frac{R_2}{\frac{V_{sa}}{V_{ia}} - 1} \quad (K\Omega)$$

3.14

☐ R_o



$V_{oal} = \frac{V_{oanl}}{2}$ (V)	R_o (KΩ)
1.02	2.18

Experiment 01

Oscilloscope settings

	CH1	CH2
Probe Switch	1X	1X
Zero time	xAxis	xAxis
AC / DC	AC	AC
Volts / DIV	0.5V	200m
Time / DIV	0.5ms	

Trigger Mode	ATO
TRIGGER SOURCE	CH1.
TRIGGER COUPLING	AC
TRIGGER LEVEL	0V

Incomplete

7/10

2015 - December - 18