

Experiment Title- 3.1

Student Name:

Branch: CSE

Semester: 2nd

Subject Name: BEEE

UID:

Section/Group:

Date of Performance:

Subject Code: 21-ELH-101

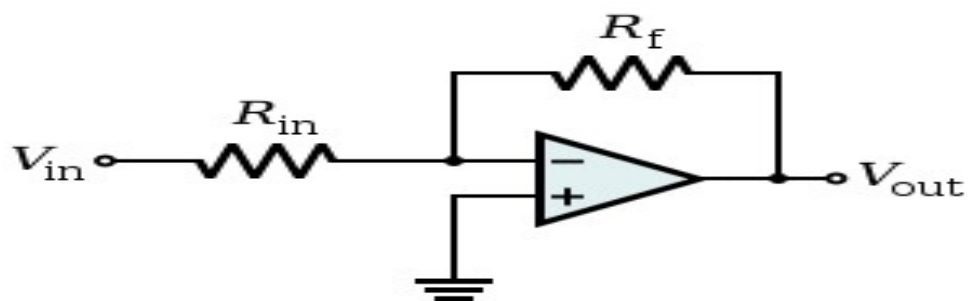
1. Aim:

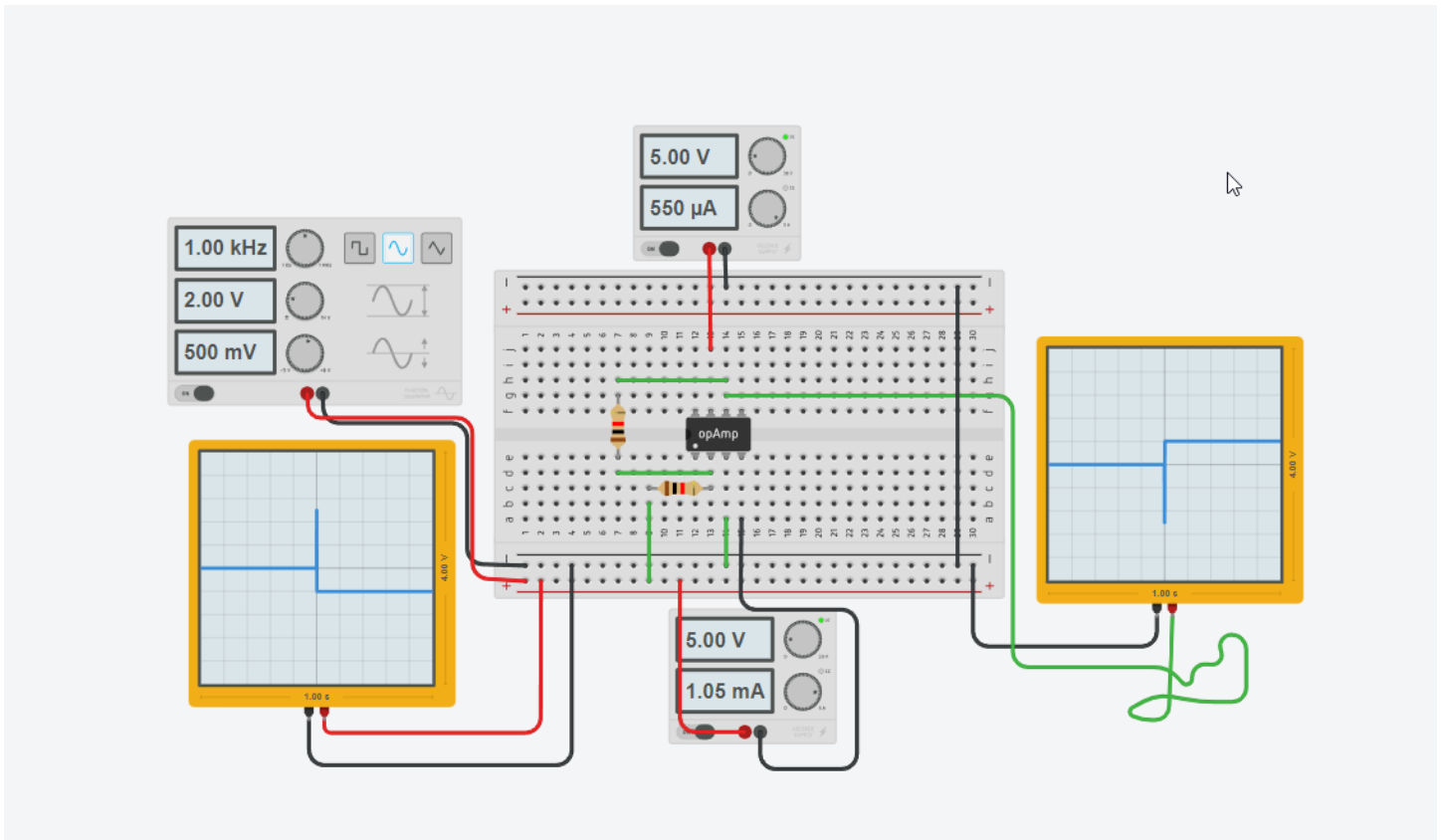
To measure gain of inverting operational amplifier.

2. Apparatus:

Op-AMP IC, CRO, Resistor, Multimeter, Function Generator, Bread board, Connecting Wires

3. Circuit Diagram:





4. Steps for experiment:

1. Connect the circuit as shown in the figure.
2. Connect supply voltage to I/P.
3. Note the values of R_F & R_{in} .
4. Note V_{IN} & V_{OUT} with the digital multimeter.
5. Repeat steps 2 & 3 for different values of R_F & R_{in} .

5. Calculations/Theorems /Formulas used etc

Output Voltage $V_0 = -V_{IN} (R_F/R_1)$

Gain == $[V_0/V_{in}]$

6. Observations/Discussions:

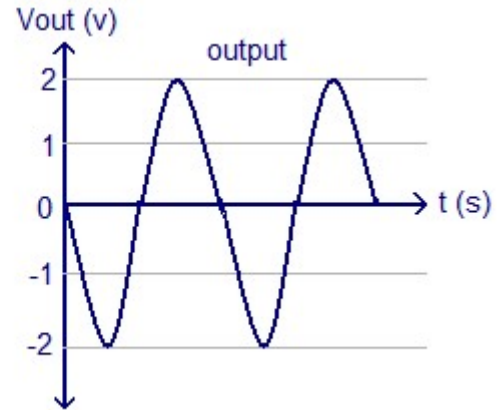
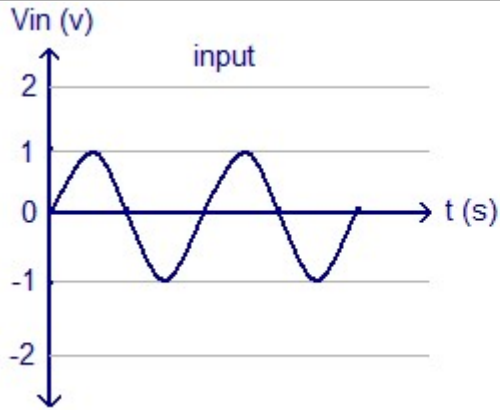
Sr. No.	Rf	R1	Vin	Vo	Gain [Vo/Vin]
1	500	100	5	25	5
2	200	100	5	10	2
3	300	200	5	7.5	1.5

7. Percentage error (if any or applicable):

No Error

8. Result/Output/Writing Summary:

In inverting amplifier O/P is out of phase with I/P with I/P.



9. Graphs (If Any): Image/Soft copy of graph to be attached here

No Graphs Used

Learning outcomes (What I have learnt):

1. Learnt about other workings of Inverting OP Amplifiers.
2. Learnt about the need of multimeter to get values of voltages.
3. Learnt about checking the results in oscilloscope.
4. Learnt about the different functions of Operational Amplifiers.

Evaluation Grid:



DEPARTMENT OF ACADEMIC AFFAIRS

Discover. Learn. Empower.



Sr. No.	Parameters	Marks Obtained	Maximum Marks
1.	Worksheet completion including writing learning objectives/Outcomes.(To be submitted at the end of the day).		10
2.	Post Lab Quiz Result.		5
3.	Student Engagement in Simulation/Demonstration/Performance and Controls/Pre-Lab Questions.		5
	Signature of Faculty (with Date):	Total Marks Obtained:	