Ain Shams University
Faculty of Engineering
Electronics & Comm. Eng. Dept.

ECE211: Electronics
2nd Year Electrical Engineering
Fall 2024

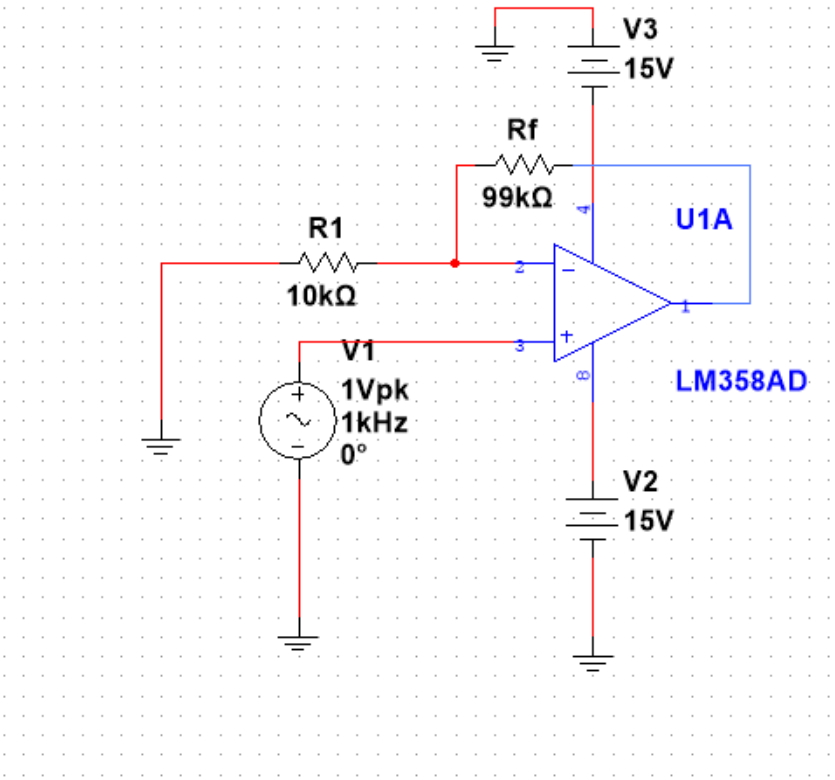
Experiment (4) Report

Names	IDs	Department	Attendance slot	Group No.	Group Code Part A, B
Adham Alaa Abd Alraheem	2200102	CSE	From 11:00-13:30 First Rotation	Team 2	B, 99

Part B:

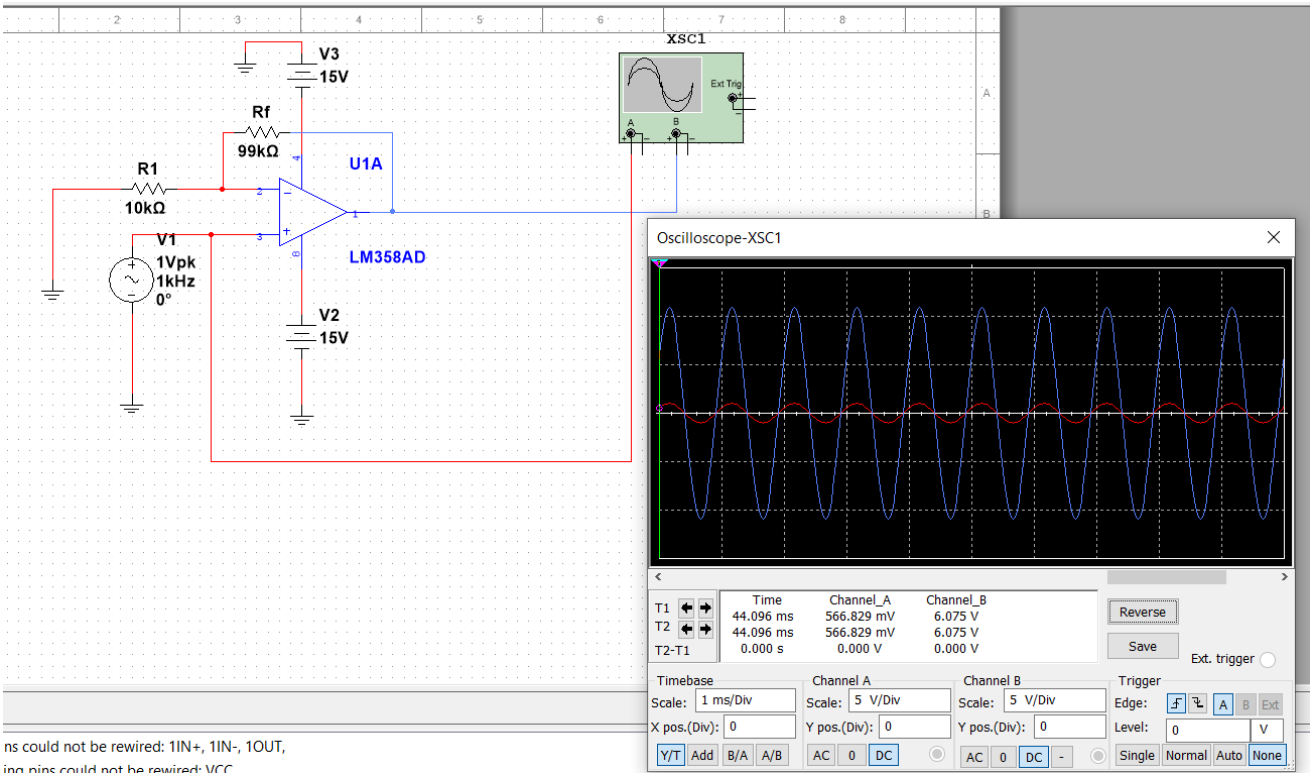
1. The schematic of the circuit of Figure 19.

Adjust the resistance (R1) to 10 KΩ, the Resistance (RF) to x KΩ and supply voltage to ±15V. (1 Mark).



2. CRO snapshot displaying input and output waveforms.

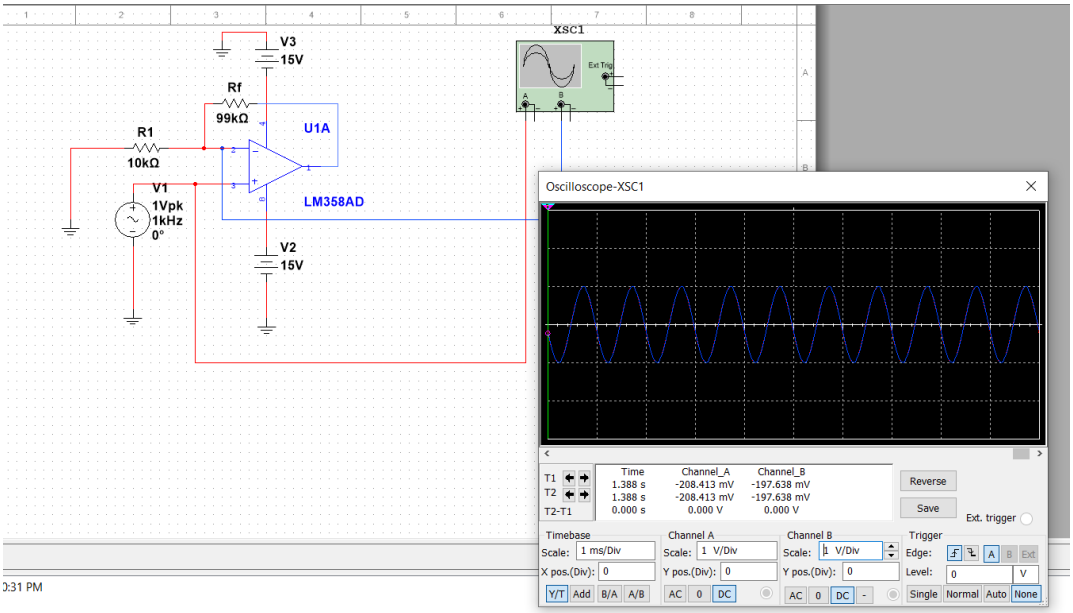
(Vin is Sine wave with 1KHz frequency and 2 V-PP). (1 Mark).



3. The voltage gain.

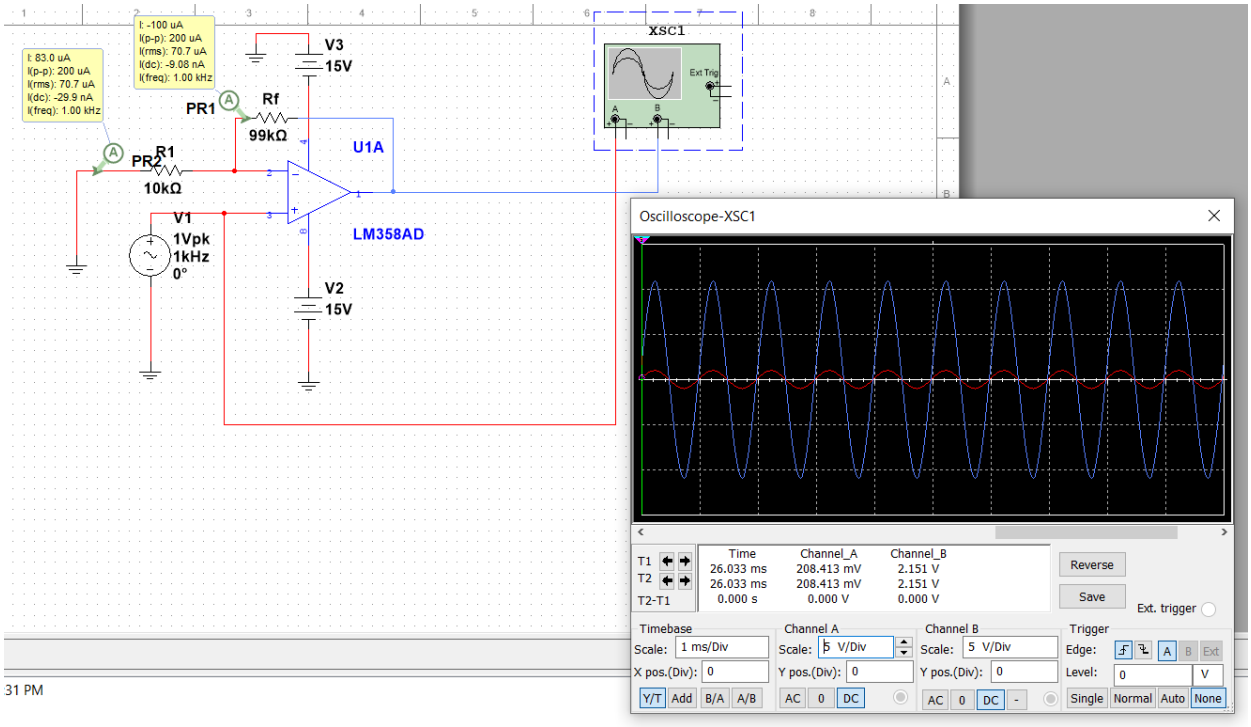
Vout = Vin (1+ Rf/R1) = 1(1 + 99/10) = 10.9 V

4. CRO snapshot displaying the voltage of the negative and positive terminals of the Op-Amp.



The voltage at both terminals is equal

5. CRO snapshot displaying current waveforms in the resistors R1 and RF and compare them to the expected values.



Expected :

I_{Rf} = (10.9/√2 - 1/√2)/99000 = 70.71 uA (rms)

I_{R1} = (1/√2)/10000 = 70.71 uA (rms)