EC205 AE LAB PROJECT PROPOSAL

PERFORMANCE ANALYSIS OF PRECISION CURRENT PUMP

BY:

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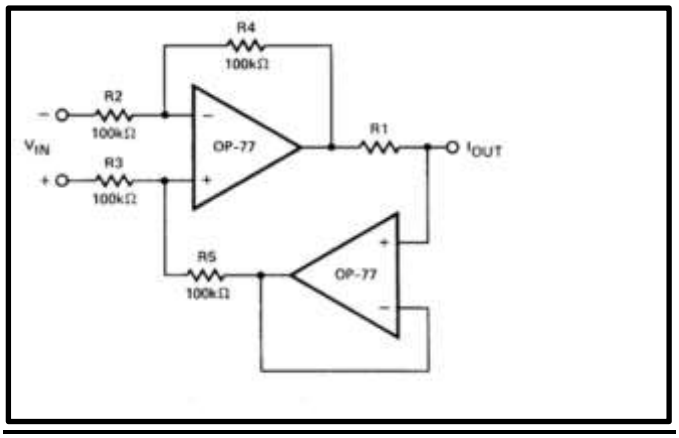
AIM:

To measure the precision of current under ideal conditions using op-amp based current source.

COMPONENTS REQUIRED:

- Voltage Sources
- Op-amps
- Resistors

CIRCUIT:



OVERVIEW OF PROCESS:

1. **Baseline Precision:**
   - The voltage applied to the differential input stage changes from –250 mV to 250 mV during a 100 ms interval.
   - The formula that relates input voltage to output current tells us that the current flowing through the load should be $V_{IN}/100$.

2. **Load Regulation:**
   - Load regulation refers to the regulator's ability to maintain a constant voltage despite variations in load resistance.

3. **The effect of Resistor tolerance:**
   - Resistor tolerance of different resistors change the overall precision in each case.