EC 205 Analog Electronics Lab

Experiment No. 7

Expt. 7 : Inverting Adder

Aim:

To design an Inverting Adder to add signals.

Circuit Diagram:

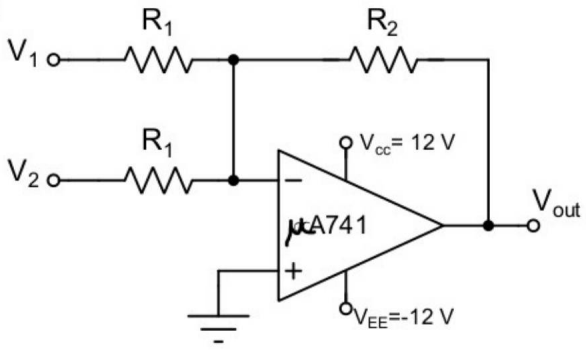

Figure 1: inverting adder

1. Design the inverting adder and test it with two inputs Vi = 2sin(10007rt) and *V2* = 3 V DC.
obz>€.ntve and analyse the output k^(xve_+o-rr"r) .
Think about these

- What is the impedance seen by each of the input signal source?
- With 7?i = *R'2* = 10 k(2, apply a sinusoidal input of 10 V peak-to-peak and frequency 1 kHz at *Vi* and set *V2* to zero. You should observe an inverted sine wave of 10 V peak-to-peak at the output. Now slowly start increasing the input frequency upto 1 MHz. What do you notice? Can you justify the observation?
- Now, decrease the input to 2 V peak-to-peak and repeat the experiment. What do you observe and why?
- Take a //A741 opamp and short circuit both the inverting and non-inverting terminals of the opamp to ground. What voltage do you expect at the output when the opanq.) is powered and what do you actually see? imp wt cxzrxd output offset \/p ltage