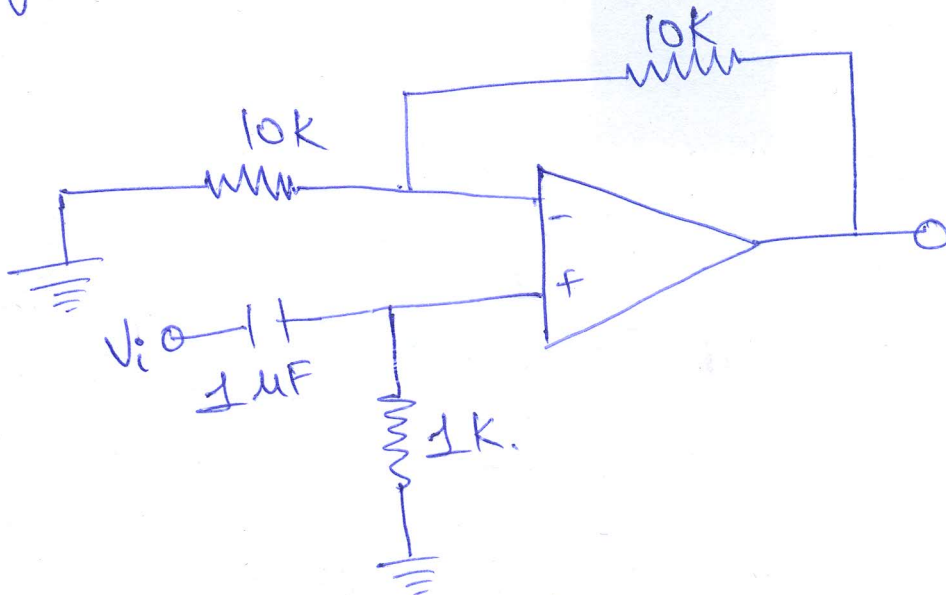


Assignment - 4

1. The OP-AMP circuit shown in figure is a filter. The type of filter and its cut-off frequency respectively?

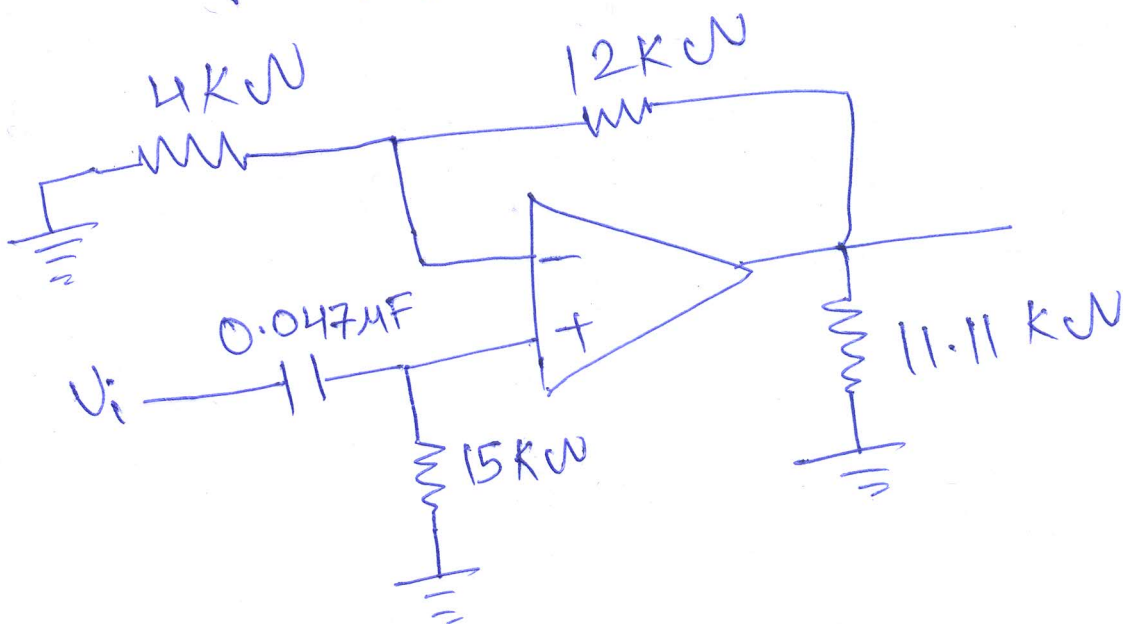
(Design on LT Spice)



(10)

2. Compute the voltage gain for the following circuit with input frequency 1.5KHz and also design on Spice.

(10)



③ Design a Second order low pass Butterworth filter at a high cut-off frequency of 2.2 kHz
Given $R_F = 20 \text{ k}\Omega$ and Capacitor $0.047 \mu\text{F}$.
(Manual as well as Spice). (10)

④ Design a Second order low pass filter
with cutoff frequency $f_0 = 2 \text{ kHz}$ and
gain = 2.8. (Manual as well in Spice).
(10)