

Jude - Skima Favour

17/Eng 021039

Computer Engineering 3001

ENG 342 Class Work

1) Discuss the benefits of filters in engineering system

Ans

1) Filters can alter the amplitude and/or phase characteristics of a signal with respect to frequency.

2) They are suited to multi-rate applications (i.e. decimation and interpolation) thus providing important computational efficiency.

3) Flexibility in Gain and Frequency Adjustment: The op-amp gain can be easily controlled in closed loop fashion. In active filters input signal is not attenuated, but in passive filters the signal needs to be attenuated.

4) Economical and cost effective

5) In the case of active filters there is no loading effect. The op-amp has high input impedance and low output impedance. Hence the active filter using op-amp does not cause loading of the source or load.