**Ece 232 - Advanced Electrical Circuit Analysis Lab Manual 6**



Magnitude response

Phase response

For resonant angular frequency the imaginary part of the response must be zero

 or

The magnitude at the resonant angular frequency

When does reaches its maximum value

These results indicates that the max value for , obtained when the circuit is operating in the resonant frequency.

This value is not possible since

To find the corner frequencies (half-power frequencies) find the frequencies where phase

First corner frequency

Second corner frequency

 at corner frequencies



We can see that the gain the zeros and poles of two systems are so close to each other as seen ………….. allows.

2- L=0.1H, ,



To find the resonant angular frequency

Value of C independent of R.

To find half-power frequency

1. , L=0.1H, ,

Since it is independent of R.

To find half-power frequency



Since the filter is a band-pass filter with critical frequency only the components of with frequency passes. DC components and other frequencies dies out at the output.

 4. In Preliminary work part 1, the filter is a high-pass filter.

In Preliminary work part 2a, the filter is a low-pass filter.

In Preliminary work part 2b, the filter is a band-pass filter.