

*Arab Academy For Science & Technology & Maritime Transport
College of Engineering & Technology*



EC434: Analogue Signal Processing
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Sheet No. 2

- P1.** For RC first order low pass filter if $R = 1 K\Omega$ and $C = 10\mu F$
- Write down the $H(S)$ and $H(jw)$ equations.
 - Draw the bode plot of $|H(jw)|$ in log – log scale.
 - Find the pole from the graph.
 - Repeat the problem for high pass filter.
- P2.** For RLC second order low pass filter if $R = 1K\Omega$, $C = 1nF$ and $L = 1nH$
- Find the Quality factor (Q) and the natural frequency (w_o and f_o).
 - The poles (p_o and p_1) and write the poles in form of (s_o and s_1).
 - Write down the $H(S)$ and $H(jw)$ equations.
 - Write down the $|H(jw)|$ equation.
 - Find w_p and $|H(jw_p)|$.
 - Find w_c .
 - Repeat the problem for high pass filter.