EE 311   Homework - 9

Signals and Systems

Name _____

Design a Butterworth lowpass filter that meets the following specifications:

(1) $|H(\omega)| = 0.9$ at $10 Hz$ and

(2) $|H(\omega)| = 0.1$ at $28 Hz$.

Compute the following:

(a) The order N and cutoff frequency ω_c

(b) The locations of the poles

(c) The transfer function $H(s)$

(d) The $LCCDE$ description of the filter