ASSIGNMENT 12

1. a. Sketch a Bode plot (magnitude and phase) of the following transfer function.

$$H(j\omega) = \frac{100(j\omega)^2}{(j\omega+1)(j\omega+10)^2(j\omega+100)}$$

   b. Check your sketches using MATLAB.

   c. Using MATLAB, convert your model to ZPK (Zero Pole Gain) form to extract the relevant information in that form.

   d. Using MATLAB, convert your model to SS (State Space) form to extract the relevant information in that form.

2. Repeat parts a and b of problem 1 for the following transfer function.

$$H(j\omega) = \frac{81(j\omega+0.1)}{(j\omega)(\omega^2+3.6j\omega+81)}$$

3. Find the transfer function that corresponds to the following Bode amplitude plot