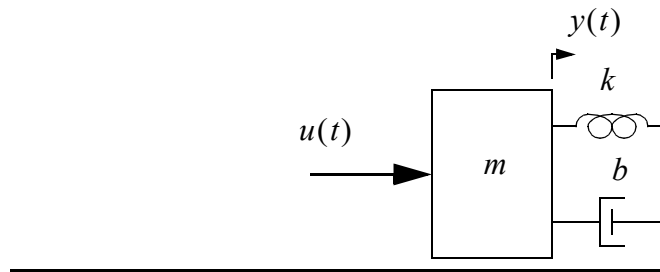
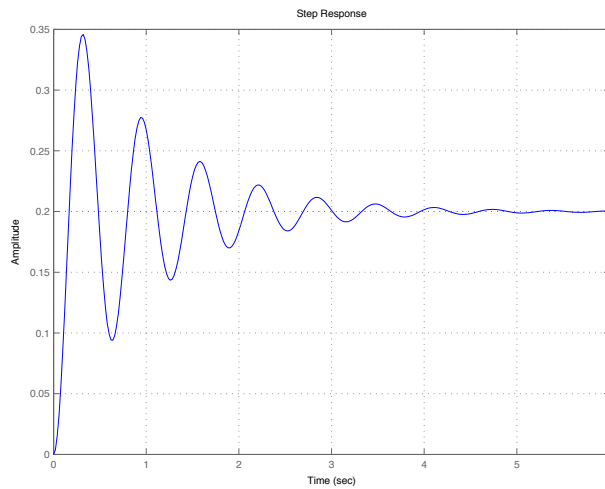


Homework #10

1. Consider the following mechanical system.



The step response for this system is shown below.



- Find the values for m , k , b (approximately).
- Check your answer to part a) by using the MATLAB step command (using your estimated values for m , k , b) to find and plot the response. Compare your plot with the one above.
- Using the MATLAB step command, demonstrate how the step response changes as the damping coefficient is varied. Demonstrate how the locations of the poles can be used to predict these changes.