USM Mechanical Engineering

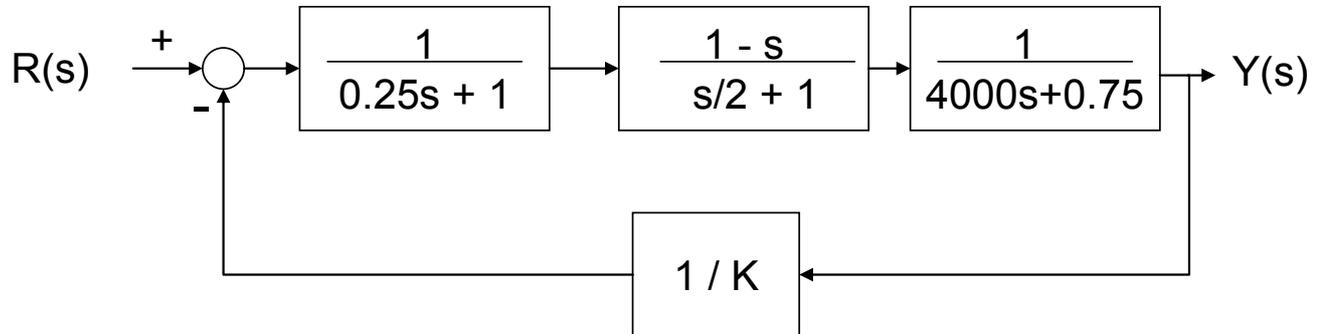| EMM 302 Controls | Spring 2009 | Prof. Horizon Gitano |
| Homework #5 | Rev. 1 | www.skyshorz.com/university/resource.php |

HW#5   **Controls**

1) Give the following micro-hydro control system:

A) Draw the root locus diagram for K=0 to infinity.

B) Determine the gain **k** such that the system is stable.

C) Determine the gain **k** such that the roots will have a dampening ratio of 0.6.

C) At the gain in part B, what will the rise time be for a step function to reach 95% of the final value?