

Fig. 3

[30 Points]

a. Indicate why each of the following are needed in relation to Control Systems Modeling, Operating point, Simulink, and Step response.

b. Fig. 4 shows the Simulink model of the magnetic levitation system. Define and write

- all the requirements to calculate and compute the following terms using Matlab.
- Gain crossover frequency
- Phase crossover frequency
- Gain margin,
- Phase margin,
- Bandwidth,
- Settling time,
- Rise time,
- Steady state error.

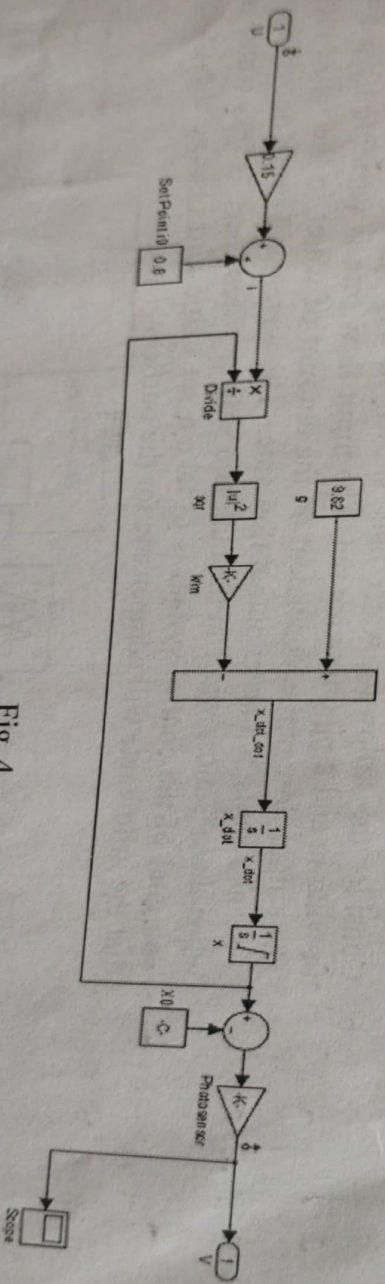


Fig. 4

Good luck