

Assignment-3
Course Name: Linear Control Systems
Course Code: PCEC-109

Date of Submission: 09.05.2025

Q1.

- a.** Sketch the Bode Plot and comment on stability:

$$G(s)H(s) = \frac{50}{s(1+0.25s)(1+0.1s)}$$

- b.** Sketch the asymptotic Bode Plot for the transfer function given below:

$$G(s)H(s) = \frac{2(s+0.25)}{s^2(s+1)(s+0.5)}$$

Q2.

- a.** What is the need for compensation? How you compensate a system with phase-lag?
- b.** Derive the transfer function of a Lag-Lead compensator.
