

- 5 a Plot the root locus for a unity feedback control system has an open loop transfer [10]
$$G(s) = \frac{K}{s(s^2+6s+25)}$$
- b Sketch the Bode plot for the unity feedback control system $G(s) = \frac{100}{s(s+1)(s+2)}$ [10]
Determine the gain and phase margin.
- 6 Attempt any **FOUR**
- a Write a short note on requirements of good control system. [5]
- b List various types of temperature transducers and write application of each transducer. [5]
- c Explain advantages and limitations of Routh Hurwitz stability criterion. [5]
- d Write a short note on steady state errors in feedback control system. [5]
- e For a unity feedback system $G(s) = \frac{9}{s(s+4)}$. Determine resonant peak and resonant [5]
frequency.