

**14.52** The voltage response of the network to a unit step input is

$$V_o(s) = \frac{2(s + 1)}{s(s^2 + 10s + 25)}$$

Is the response overdamped?

SOLUTION:

3 poles at  $s = \begin{cases} 0 \\ -\frac{10}{2} \pm \sqrt{\frac{100-100}{2}} = -5 \end{cases} \leftarrow \begin{array}{l} \text{These poles are} \\ \text{real \& equal} \end{array}$

System is critically damped, not overdamped