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Question: Sketch the asymptotes of the Bode plot magnitude and phase …

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Sketch the asymptotes of the Bode plot magnitude and phase for each of the following open-loop transfer functions. After completing the hand sketches, verify your result using Matlab. Turn in your hand sketches and the Matlab results on the same scales.

(a) $L(s) = \dfrac{2000}{s(s+200)}$

(b) $L(s) = \dfrac{100}{s(0.1s+1)(0.5s+1)}$

(c) $L(s) = \dfrac{1}{s(s+1)(0.02s+1)}$

(d) $L(s) = \dfrac{1}{(s+1)^2(s+10)^2}$

(e) $L(s) = \dfrac{10(s+4)}{s(s+1)(s+100)}$

(f) $L(s) = \dfrac{1000(s+0.1)}{s(s+1)(s+8)^2}$

(g) $L(s) = \dfrac{(s+5)(s+10)}{s(s+1)(s+100)}$

(h) $L(s) = \dfrac{4s(s+10)}{(s+100)(s+500)}$

(i) $L(s) = \dfrac{s}{(s+1)(s+10)(s+50)}$

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Expert Answer

kotamsettijhansi answered this
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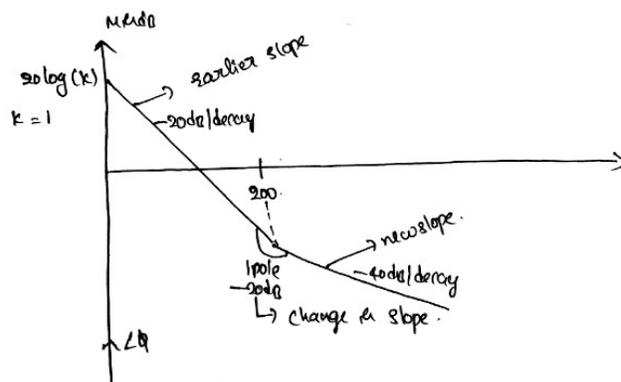
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