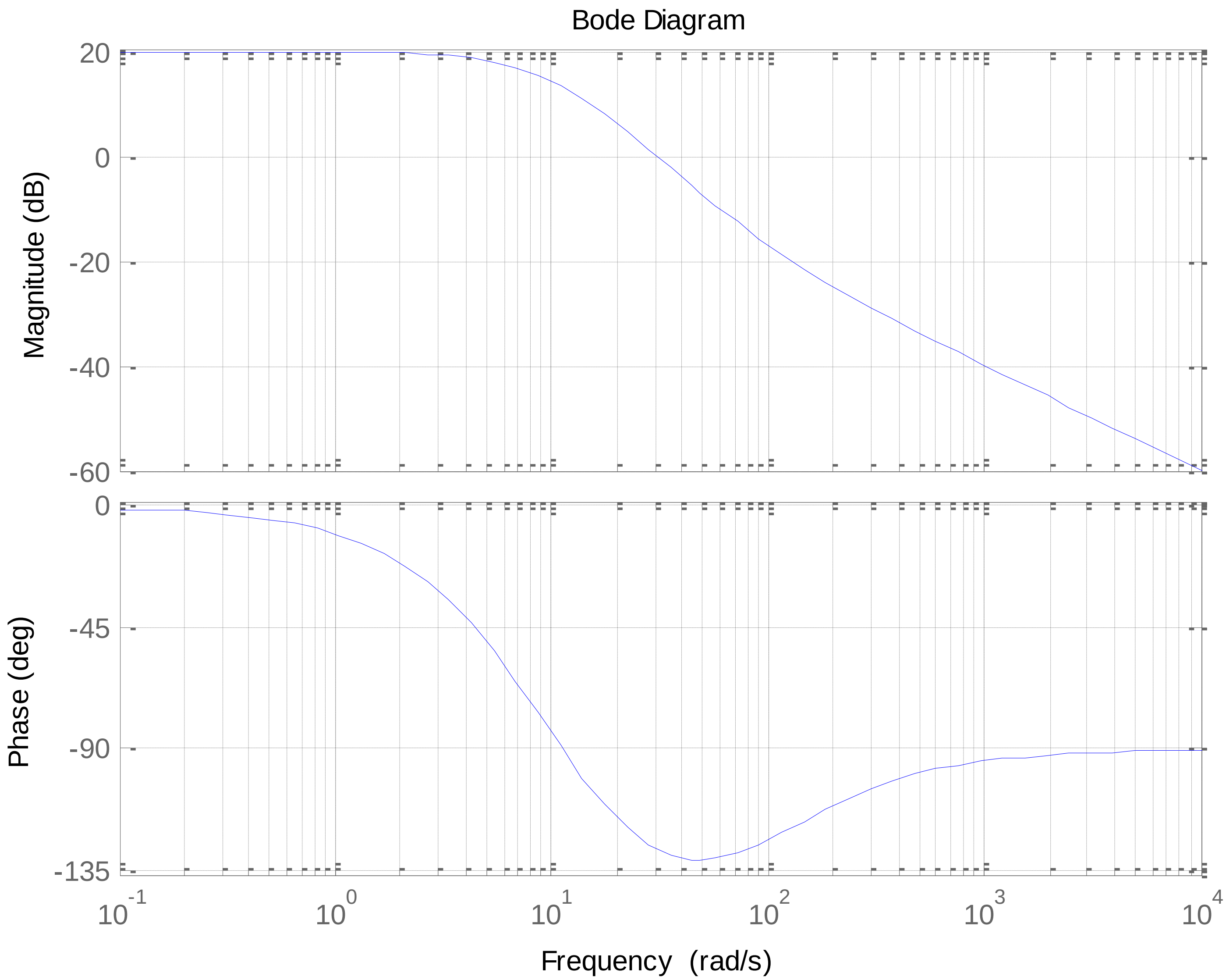
Name ____ CM ____________________

ECE-320 Quiz 7

Problems 1 and 2 refer to the following open loop Bode plot of $G(s)H(s)$



1) The *gain crossover frequency used to determine the phase margin* for this system is best estimated as

a) 0.1 rad/sec b) 13 rad/sec c) 30 rad/sec d) 100 rad/sec e) 300 rad/sec

2) The phase margin for this system is best estimated as a) $+55^o$ b) -55^o c) $+90^o$ d) -90^o

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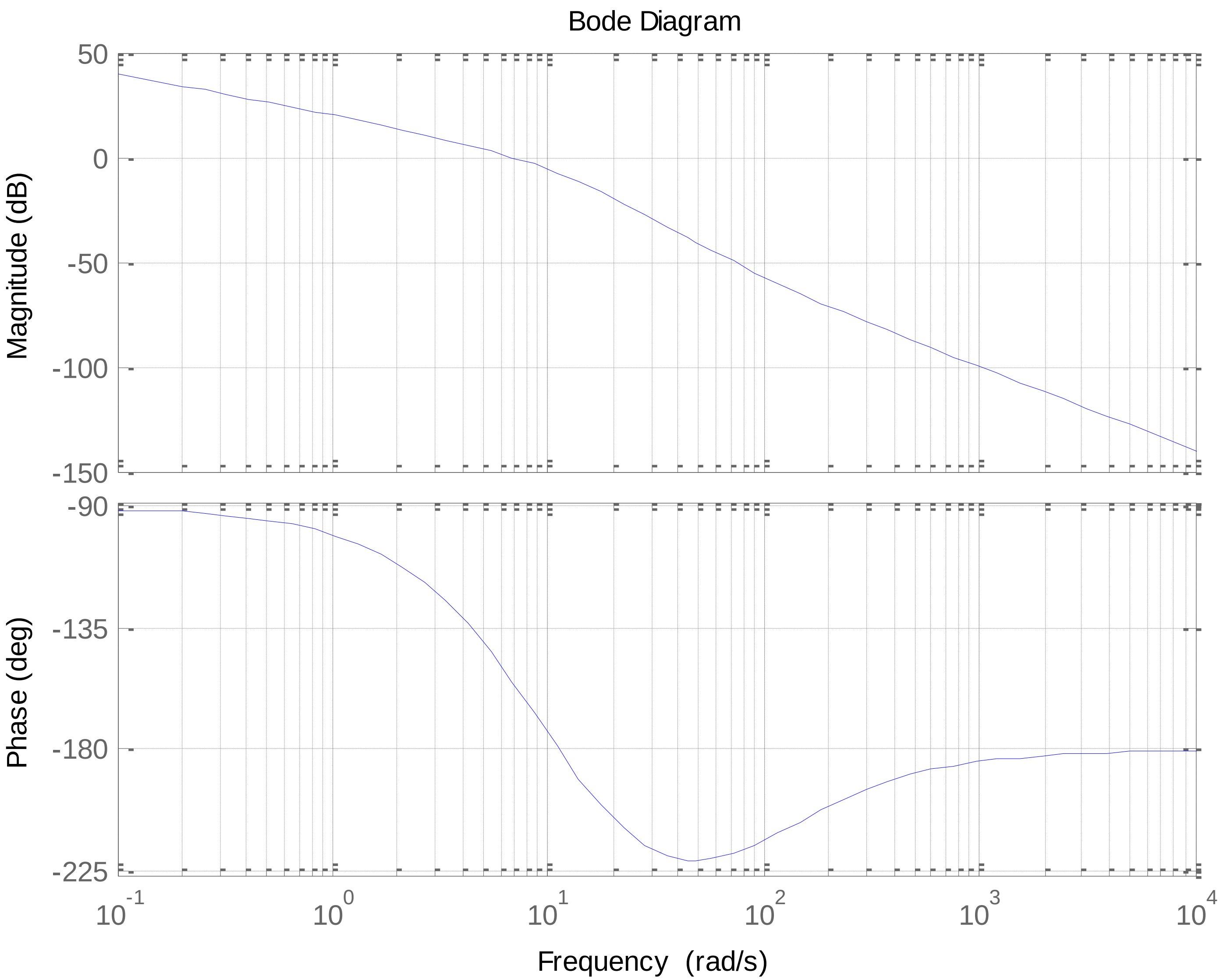
Problems 3-6 refer to the following open loop Bode plot of $G(s)H(s)$



3) The *gain crossover frequency used to determine the phase margin* for this system is best estimated as

a) 0 rad/sec b) 1 rad/sec c) 6 rad/sec d) 10 rad/sec e) 60 rad/sec

4) The *phase crossover frequency* for this system is best estimated as

a) 0 rad/sec b) 1 rad/sec c) 6 rad/sec d) 10 rad/sec e) 60 rad/sec

5) The phase margin for this system is best estimated as a) $+25^o$ b) -25^o c) $+45^o$ d) -45^o

6) The gain margin for this system is best estimated as a) +8 dB b) - 8 dB c) ∞ dB d) 0 dB

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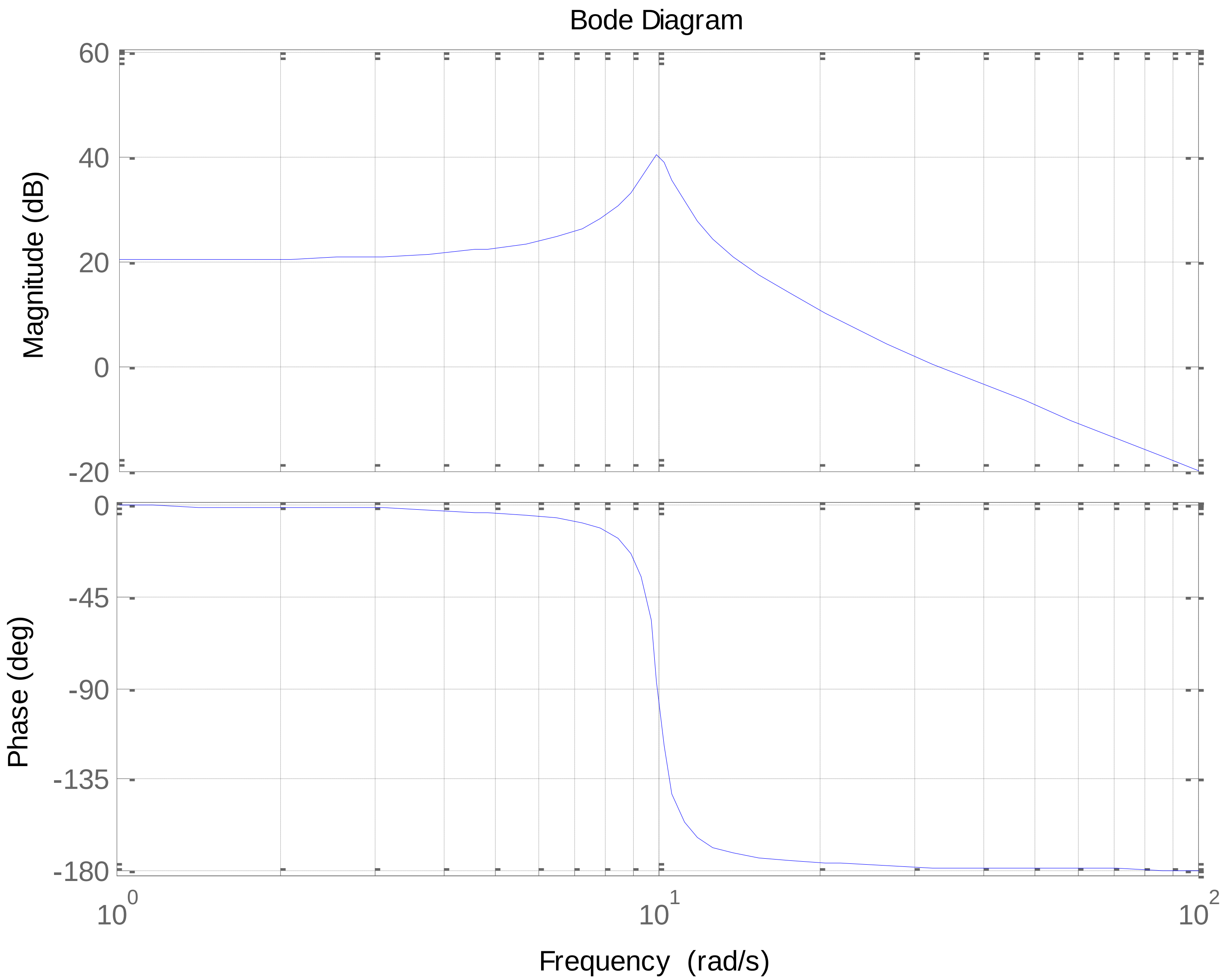
Problems 7-10 refer to the following open loop Bode plot of $G(s)H(s)$



7) The *gain crossover frequency used to determine the phase margin* for this system is best estimated as

a) 0 rad/sec b) 10 rad/sec c) 13 rad/sec d) 32 rad/sec

8) The *phase crossover frequency* for this system is best estimated as

a) 0 rad/sec b) 1 rad/sec c) 10 rad/sec d) 20 rad/sec e) none of these

9) The phase margin for this system is best estimated as a) $+2^o$ b) -2^o c) $+90^o$ d) -90^o

10) The gain margin for this system is best estimated as a) +5 dB b) - 5 dB c) ∞ dB d) 0 dB

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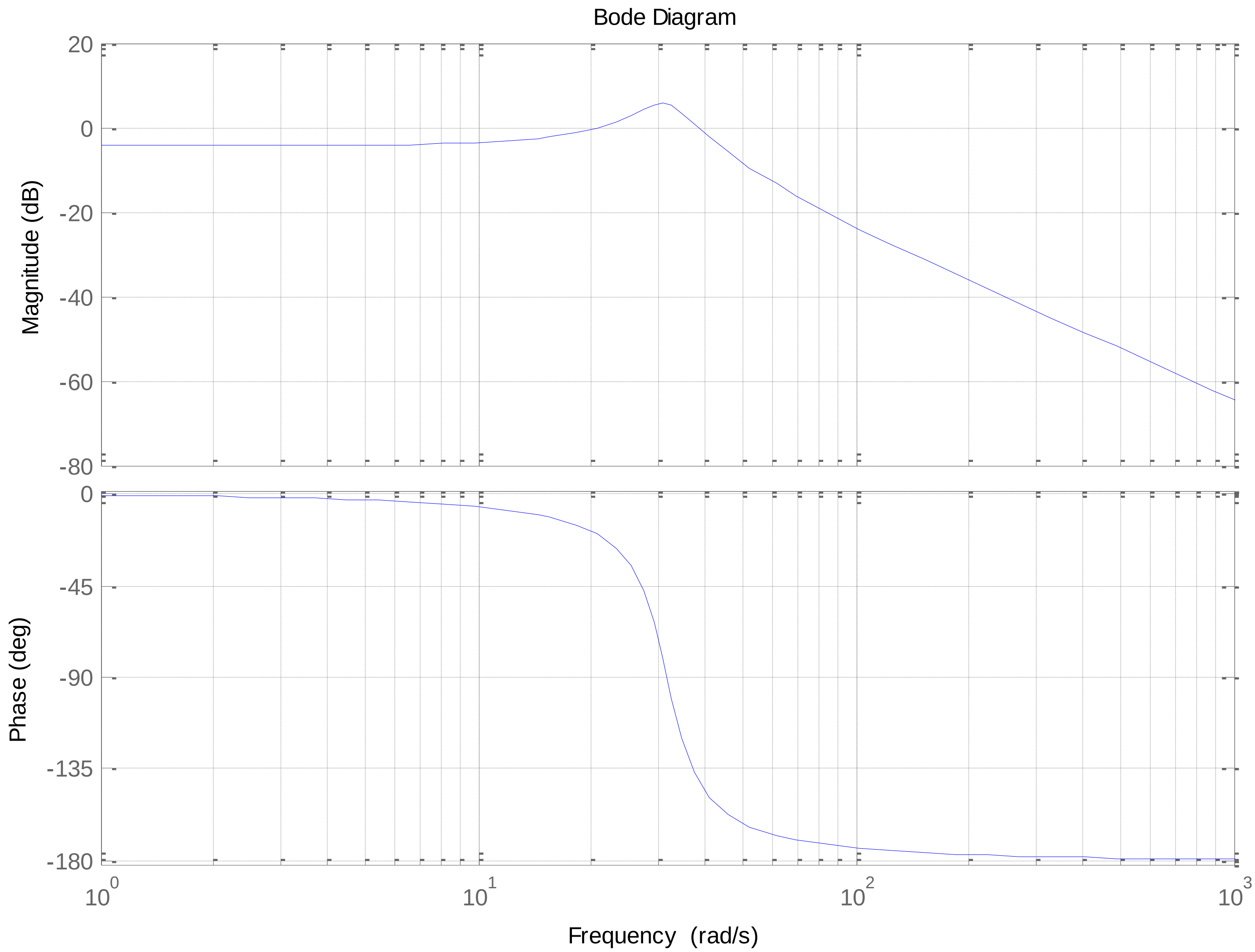
Problems 11 and 12 refer to the following open loop Bode plot of $G(s)H(s)$



11) The *gain crossover frequency used to determine the phase margin* for this system is best estimated as

a) 11 rad/sec b) 20 rad/sec c) 30 rad/sec d) 40 rad/sec

12) The phase margin for this system is best estimated as a) $+150^o$ b) $+120^o$ c) $+40^o$ d) -150^o

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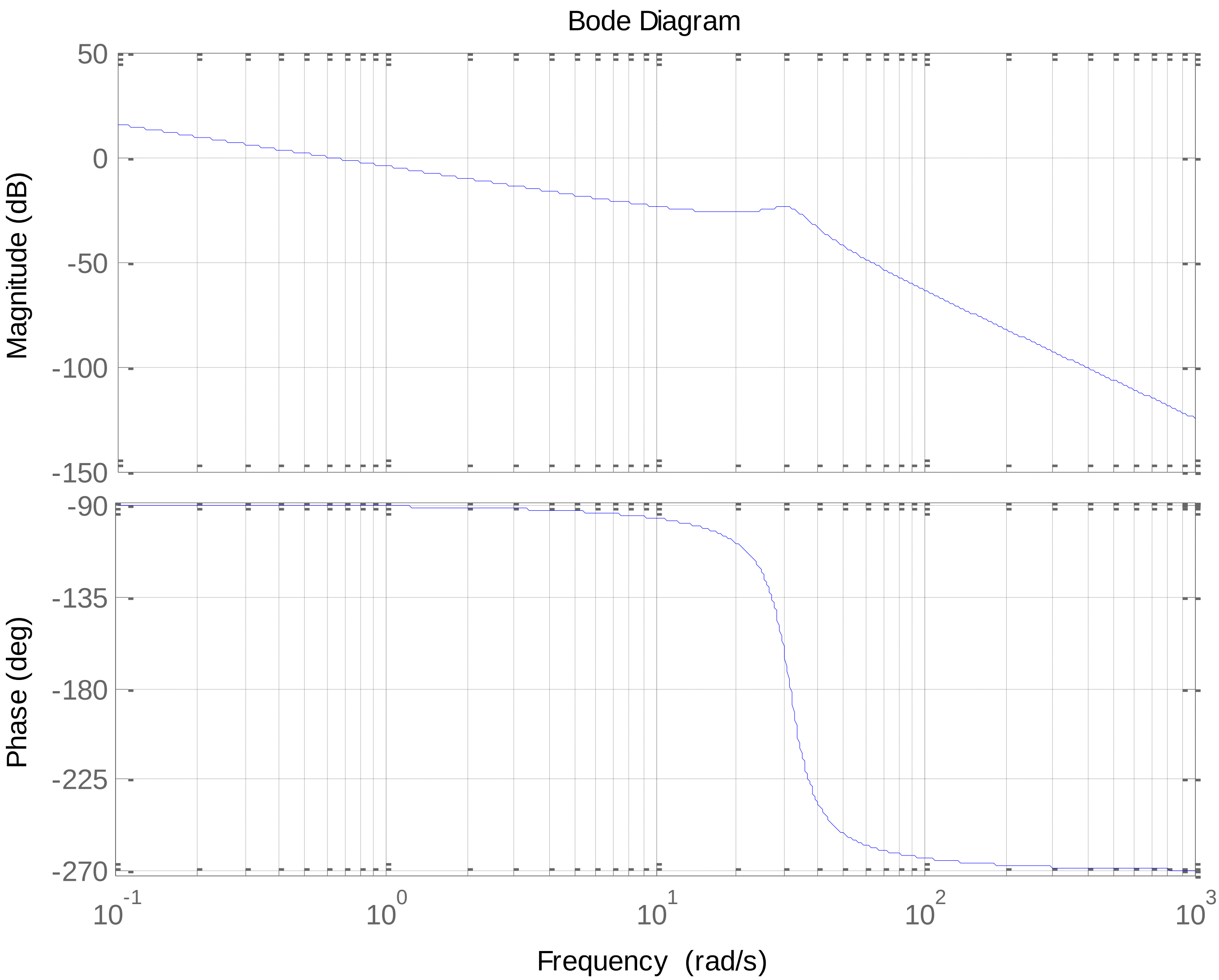
Problems 13-16 refer to the following open loop Bode plot of $G(s)H(s)$



13) The *gain crossover frequency used to determine the phase margin* for this system is best estimated as

a) 0.1 rad/sec b) 0.6 rad/sec c) 13 rad/sec d) 30 rad/sec

14) The *phase crossover frequency* for this system is best estimated as

a) 0 rad/sec b) 10 rad/sec c) 13 rad/sec d) 30 rad/sec

15) The phase margin for this system is best estimated as a) $+90^o$ b) -90^o c) $+20^o$ d) -20^o

16) The gain margin for this system is best estimated as a) +25 dB b) - 25 dB c) ∞ dB d) 0 dB