You can preview this quiz, but if this were a real attempt, you would be blocked because:

This quiz is not currently available

Question **1**

Not yet answered

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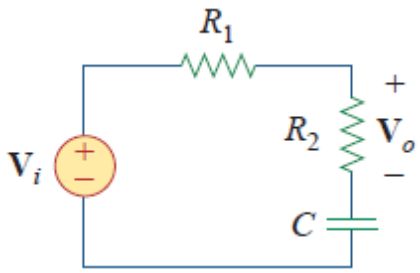
What is the type of the following filter?



Select one:

- a. bandstop
- b. lowpass
- c. bandpass
- d. highpass

Question **2**

Not yet answered

Marked out of 1.00

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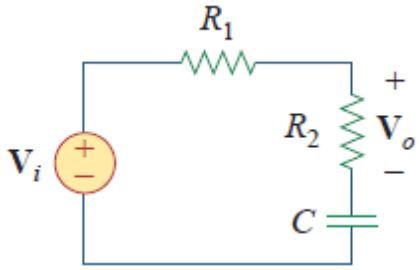
The maximum gain of the following filter is



Select one:

- a. 0.5
- b. $R_1/(R_1+R_2)$
- c. $R_2/(R_1+R_2)$
- d. 1

Question **3**

Not yet answered

Determine the filter type and the cutoff frequency of the following circuit.

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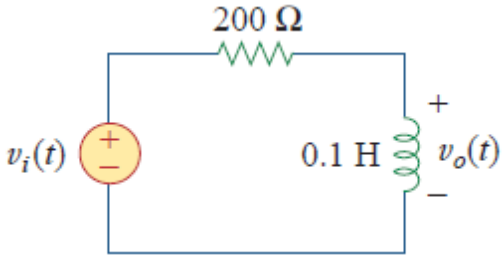

Select one:

- a. lowpass, 2000 rad/s
- b. highpass, 0.5 rad/s
- c. lowpass, 0.5 rad/s
- d. highpass, 2000 rad/s

Question **4**

Not yet answered

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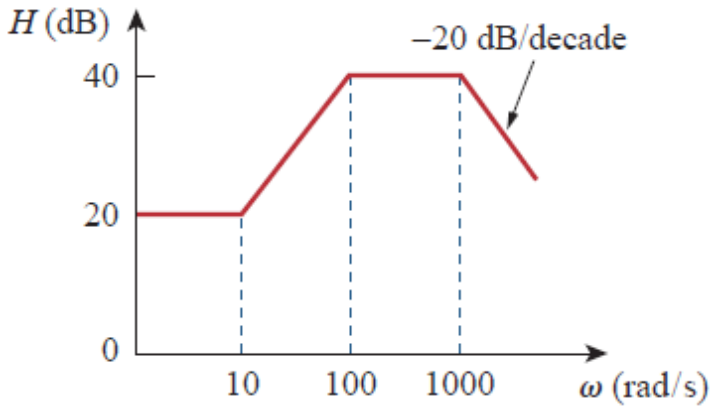
The corresponding transfer function of the following bode plot is



Select one:

- a. $\frac{100000(s+100)}{(s+10)(s+1000)}$
- b. $\frac{100000s}{(s+10)(s+1000)}$
- c. $\frac{100000(s+10)}{(s+100)(s+1000)}$
- d. $\frac{100000(s+1000)}{(s+10)(s+100)}$

Question **5**

Not yet answered

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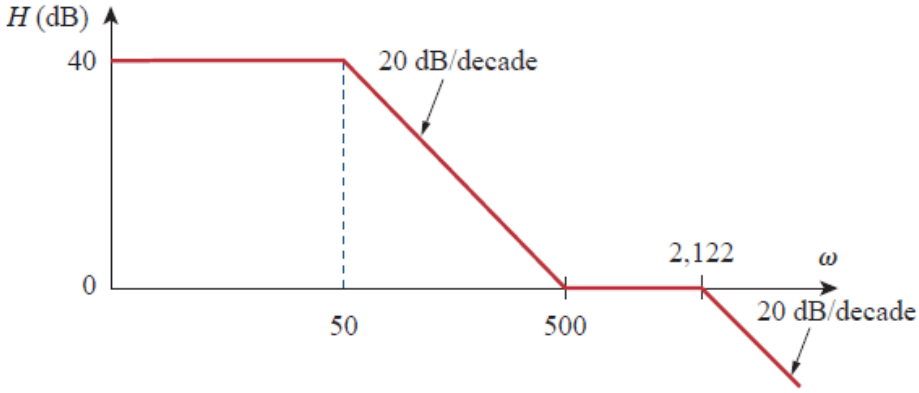
Which transfer function that has the following bode plot?

Edit question



Select one:

a. $\frac{21220s}{(s+500)(s+2122)}$

b. $\frac{21220(s+500)}{(s+50)(s+2122)}$

c. $\frac{21220(s+2122)}{(s+50)(s+500)}$

d. $\frac{21220(s+50)}{(s+500)(s+2122)}$

Question **6**

Not yet answered

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[Questions 6-10 are based on the following information.]

A filter is described by the transfer function

$$H(s) = \frac{s}{(s+1)(s+2)}.$$

The magnitude of H is

Select one:

a. $\frac{1}{\sqrt{9+\left(\omega-\frac{2}{\omega}\right)^2}}$

b. $\frac{\omega}{\sqrt{(\omega^2+1)(\omega^2+4)}}$

c. $\frac{\omega}{(\omega+1)(\omega+2)}$

d. $\frac{1}{\sqrt{4+\left(\omega-\frac{3}{\omega}\right)^2}}$

Question **7**

Not yet answered

The phase angle of H is

Select one:

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a. $90^\circ - \tan^{-1}\omega - \tan^{-1}\frac{\omega}{2}$

b. $-\tan^{-1}\omega + \tan^{-1}\frac{\omega}{2}$

c. $-\tan^{-1}\omega - \tan^{-1}\frac{\omega}{2}$

d. $90^\circ - \tan^{-1}\omega + \tan^{-1}\frac{\omega}{2}$

Question **8**

Not yet answered

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The type of the filter is

Select one:

a. bandstop

b. bandpass

c. lowpass

d. highpass

Question **9**

Not yet answered

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The center frequency of the filter in rad/s is

Select one:

a. 1.414

b. not applicable

c. 1.732

d. 2

Question **10**

Not yet answered

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The maximum gain of H is

Select one:

a. 0.5

b. 0.333

c. 0.25

d. 1

Next

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