Question 1

1 / 1 pts

( ) Given that R = 5 Ω, L = 3 H, C = 1/3 F, if the net impedance is resistive, find the required frequency of the circuit?

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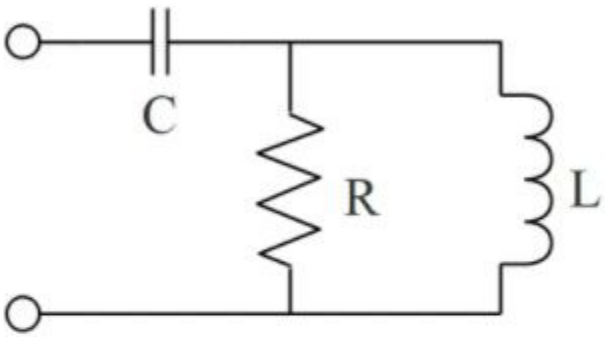

Note: Two versions will be given to avoid misunderstandings, the text version (black) and the image version (blue). If the two contents conflict, please refer to the image version first.

ω = 1 rad/s

○ $\omega = 1$ rad/s

ω = 0.5 rad/s

○ $\omega = 0.5$ rad/s

ω = 1.25 rad/s

◉ $\omega = 1.25$ rad/s

ω = 2 rad/s

○ $\omega = 2$ rad/s

Question 2

1 / 1 pts

( ) If $V_1(t) = 10\cos(200t)$, find $i(t)$.

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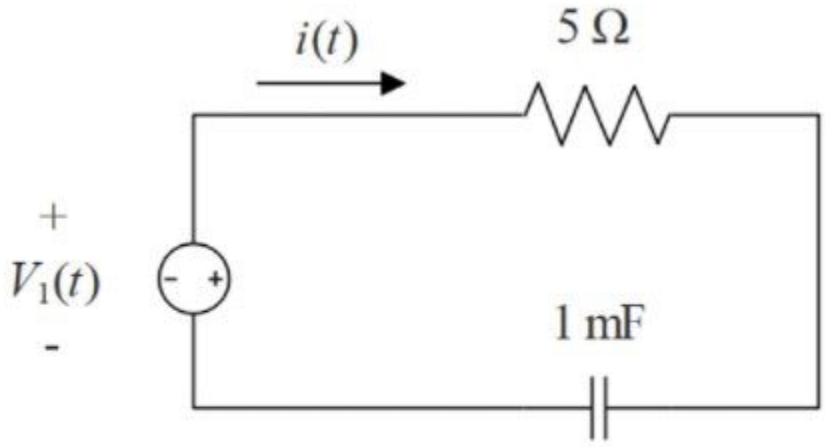

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$i(t) = \sqrt{2}\cos(200t + 45°)$

◉ $i(t) = \sqrt{2}\cos(200t + 45°)$

$i(t) = 2\cos(200t)$

○ $i(t) = 2\cos(200t)$

$i(t) = \sqrt{2}\cos(200t)$

○ $i(t) = \sqrt{2}\cos(200t)$

$i(t) = 10\cos(200t + 45°)$

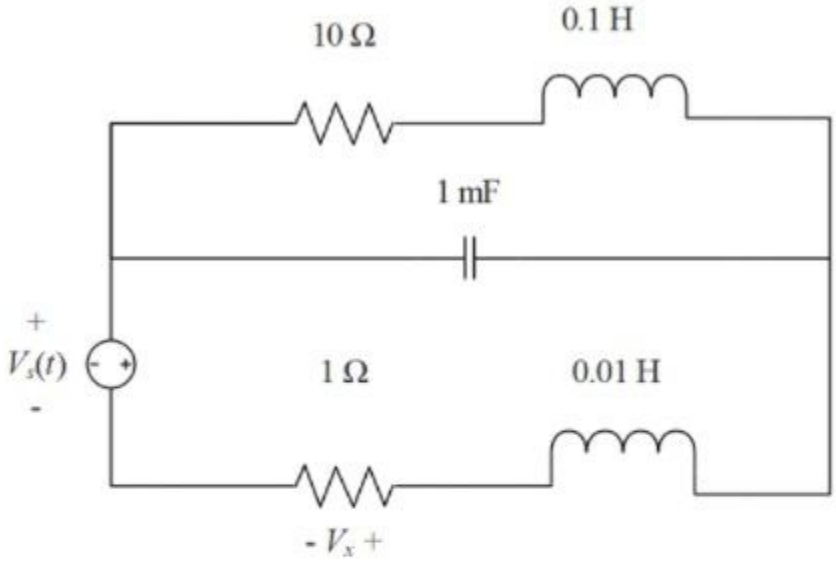
○ $i(t) = 10\cos(200t + 45°)$

Question 3

0 / 1 pts

( ) Given that $V_s(t) = 10 \sin(100t + 90°)$, determine $V_x(t)$.

( ) Given that $V_s(t) = 10 \sin(100t + 90°)$, determine $V_x(t)$.



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5∠0°

○ $5 \angle 0°$

0.33∠0°

○ $0.33 \angle 0°$

0.33∠90°

◉ $0.33 \angle 90°$

5∠90°

○ $5 \angle 90°$