A current of 20 mA flows through an inductor of value 44 mH. The maximum energy (in µJ) that can be stored in the inductor is

8.80 ✓ .

Question 2

Correct

Mark 1.50 out of
1.50
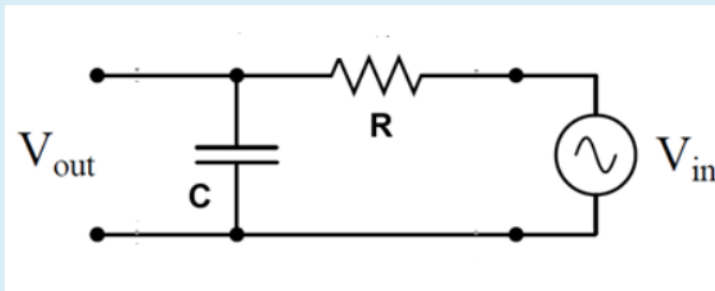
⚑ Flag
question

The circuit shown below is a _____ with a cut off frequency of _____.

Given R=32 kΩ and C=49 nF.

Select one:

○ High pass filter with cut off frequency of 101.553 Hz

○ High pass filter with cut off frequency of 0.102 Hz

○ Low pass filter with cut off frequency of 0.102 Hz

◉ Low pass filter with cut off frequency of 101.553 Hz ✓
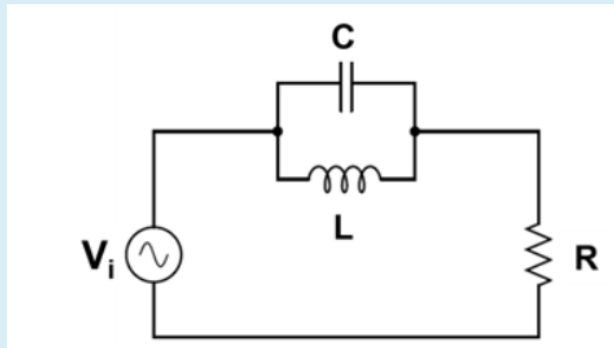
Question 3

Correct

Mark 2.00 out of
2.00

🚩 Flag
question

The equivalent impedance (Ω) of the circuit shown in figure below in Cartesian form can be represented as, $Z_{eq} = a + jb$ where $j^2 = -1$. The input signal to the circuit is $V_i = V_m \text{Sin}\omega t$. Determine the values of a and b.

Given $V_m = 10.6$ V, $\omega = 1140$ radians/second, R = 129 Ω, C = 3 μF, L = 4 mH.

Select one:

○ a=380000129.00 and b=386020060.04

◉ a=129.00 and b=4.63 ✔

○ a=129.00 and b=386020060.04

○ a=133.56 and b=4.63