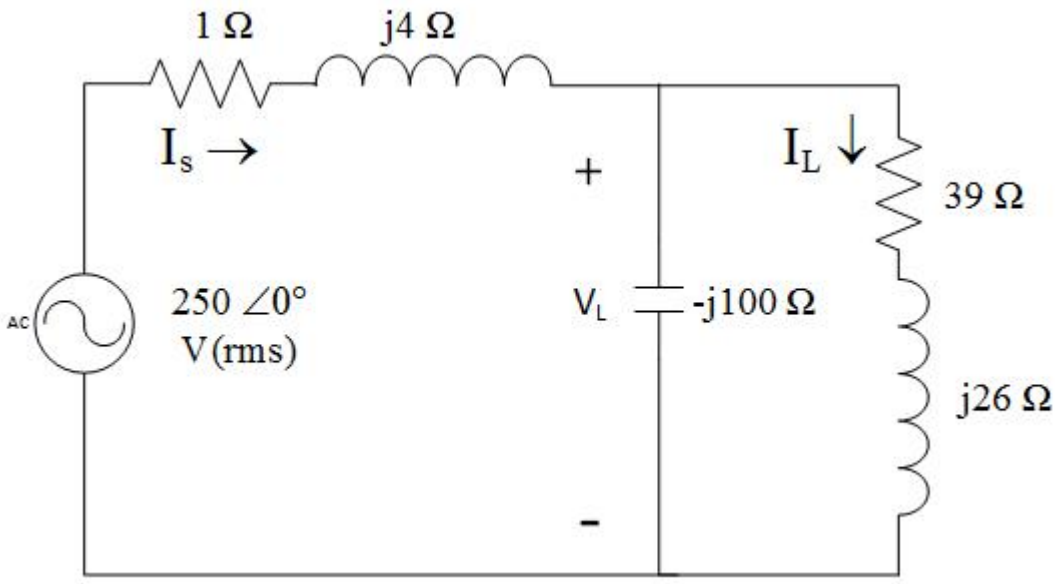
Started on	Wednesday, 7 December 2016, 11:03 AM
State	Finished
Completed on	Wednesday, 7 December 2016, 11:53 AM
Time taken	50 mins 38 secs
Grade	**100.00** out of 100.00

Question 1

Correct

Mark 100.00 out of 100.00



Quiz 12a

The load *L* is the series resistor and inductor in parallel with the capacitor.

a) Calculate the rms phasors $\mathbf{V}_L$ and $\mathbf{I}_L$.

$|\mathbf{V}_L| =$ 243.32 ✓ V_{rms}

Phase angle $\mathbf{V}_L$ = -3.86 ✓° (Degrees)

$|\mathbf{I}_L| =$ 5.19 ✓ A_{rms}

Phase angle $\mathbf{I}_L$ = -37.55 ✓° (Degrees)

b) Calculate the average power and magnetizing reactive power absorbed by the (39 + j 26) Ω (Ohm) elements.

P_{avg} = 1050.74 ✓ W

Q = 700.5 ✓ VAR

c) Calculate the power factor and the power factor angle seen by the voltage source.

pf = 0.985 ✓

pf angle θ = 9.78 ✓ Degrees

Numeric Answer

a) V_L = 243.3 at angle -3.86° Vrms I_L = 5.191 at angle -37.55° Arms

b) P_{avg} = 1,051.04 W Q = 700.7 VAR

c) pf = 0.986 pf angle q = 9.76 Degrees

Correct

Marks for this submission: 100.00/100.00.