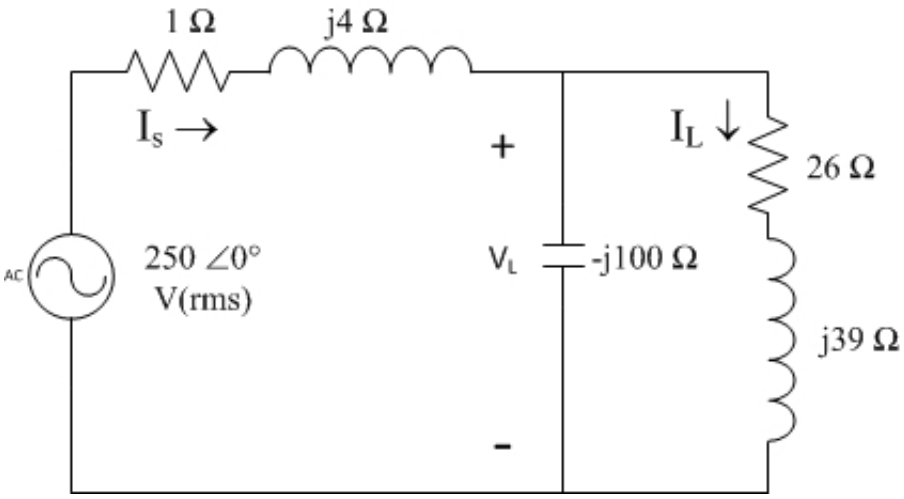
Started on	Wednesday, 7 December 2016, 11:03 AM
State	Finished
Completed on	Wednesday, 7 December 2016, 11:53 AM
Time taken	50 mins
Grade	**25.00** out of 100.00

Question 1

Partially correct

Mark 25.00 out of 100.00



Quiz 12b

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 $\mathbf{V}_L$ = ✗ ° (Degrees) (smallest negative angle)

$|\mathbf{I}_L| =$ 5.19 ✓ A_{rms}

Phase angle $\mathbf{I}_L$ = ✗ ° (Degrees) (smallest negative angle)

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

P_{avg} = ✗ W

Q = [ ] ✗ VAR

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

pf = [ ] ✗

pf angle θ = [ ] ✗° (Degrees)

Numeric Answer

a) V_L = 239.5574 at angle -2.17° (Degrees) Vrms I_L = 5.1109 at angle -58.48° (Degrees) Arms

b) P_{avg} = 679.1448 W Q = 1,018.7173 VAR

c) pf = 0.815 pf angle θ = 35.40° (Degrees)

Partially correct

Marks for this submission: 25.00/100.00.