Dashboard / My courses / CONTROL SYSTEMS-Lecture-1203 - ENEE3302 - 1 / Quizzes / Quiz #4 Redo

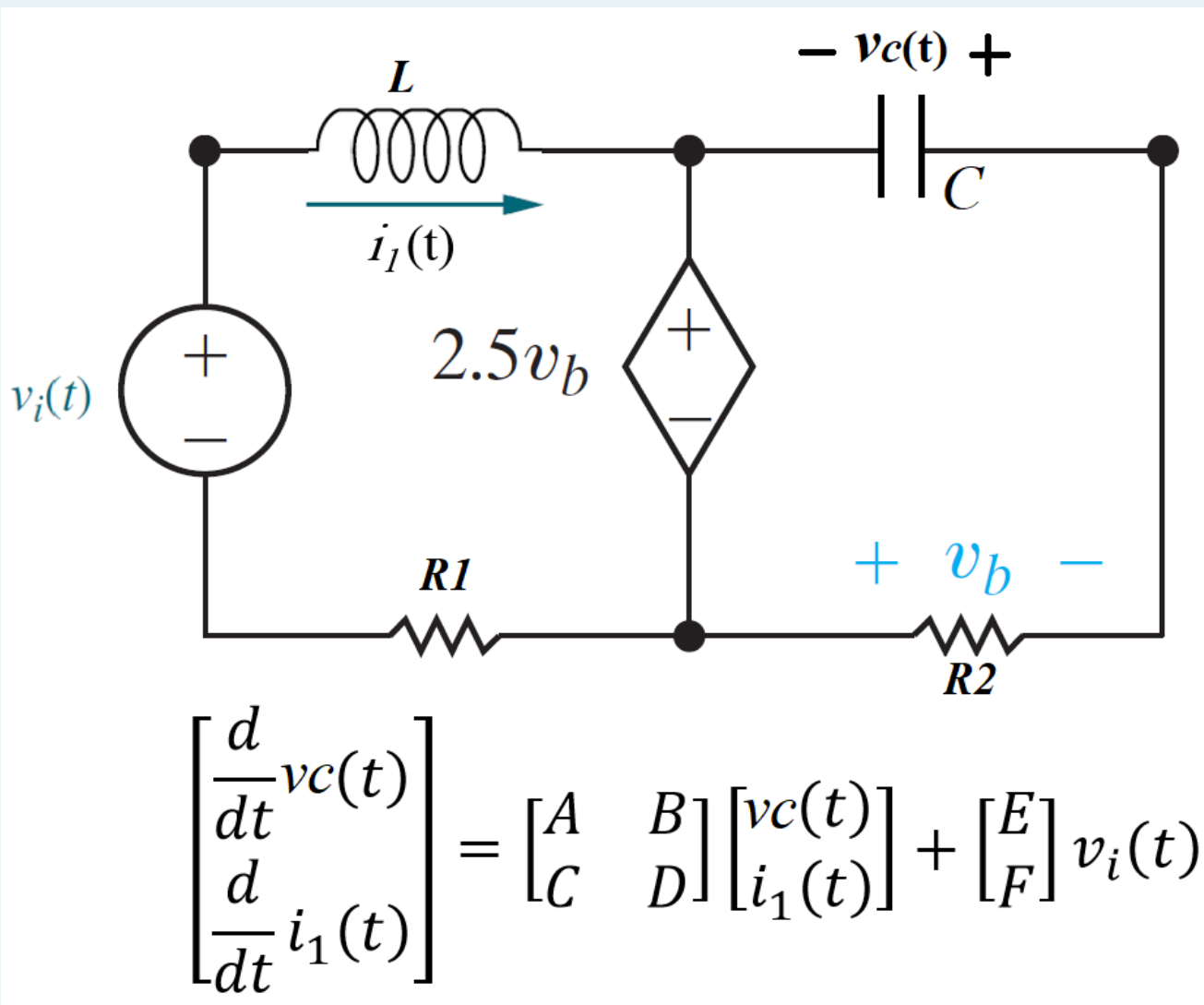|	
Started on	Sunday, 29 August 2021, 8:15 PM
State	Finished
Completed on	Sunday, 29 August 2021, 8:29 PM
Time taken	14 mins 43 secs
Grade	**10.00** out of 10.00 (**100**%)

Question 1

Correct

Mark 10.00 out of 10.00

Answer the questions below, (Insert the numerical value only, do not use <,>,+, *, or /)

The Relative error for your answer should be less than 0.01, which means if the answer was 50, then the error should not exceed 50*0.01= ±0.5!

if the answer was 230, then the error should not exceed 230*0.01= ±2.3!

if the answer was 2.31467*10^-3, then you should enter this value: 0.00231467, not this 0.0023 !!!!

$$\begin{bmatrix} \dfrac{d}{dt}vc(t) \\ \dfrac{d}{dt}i_1(t) \end{bmatrix} = \begin{bmatrix} A & B \\ C & D \end{bmatrix}\begin{bmatrix} vc(t) \\ i_1(t) \end{bmatrix} + \begin{bmatrix} E \\ F \end{bmatrix}v_i(t)$$

If R1=8 ohm, R2=19 ohm, L=0.85 H and C=0.325 F . Write the state equations of the above network. Use the current through the inductor and the voltage across the capacitor as state variables. **Follow the order of the equations provided in this figure in order to find the constants from A to F.**

The value of the constant A is: -0.04

✔

One possible correct answer is: -0.04626951995373

The value of the constant B is: 0

✔

One possible correct answer is: 0

The value of the constant C is: 0.840

✔

One possible correct answer is: 0.84033613445378

The value of the constant D is: -9.41

✔

One possible correct answer is: -9.4117647058824

The value of the constant E is: 0

✔

One possible correct answer is: 0

The value of the constant F is: 1.176

✔

One possible correct answer is: 1.1764705882353

◄ Quiz #1 redo

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Quiz #7 ►

Data retention summary