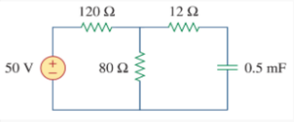
Unit 7 - First Order and Second Order Circuits

Assignment 5

The due date for submitting this assignment has passed.
As per our records you have not submitted this assignment.

Due on 2019-09-04, 23:59 IST.

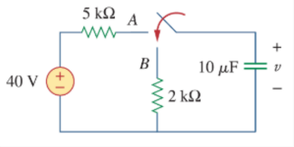
1) Find the time constant for the RC circuit in Fig. below. *2 points*



- 30ms
- 15ms
- 20ms
- 10ms

No, the answer is incorrect.
Score: 0
Accepted Answers:
30ms

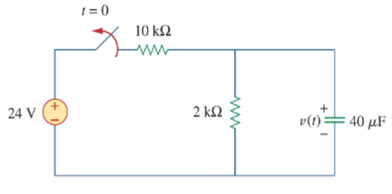
2) The switch in Fig. moves instantaneously from A to B at t = 0. Find 'v' for t > 0. *2 points*



- $40e^{-50t}V$
- $50e^{-50t}V$
- $10e^{-50t}V$
- $70^{-50t}V$

No, the answer is incorrect.
Score: 0
Accepted Answers:
$40e^{-50t}V$

3) The switch in Fig. has been closed for a long time, and it opens at t = 0. Find v(t) for t > 0. *2 points*

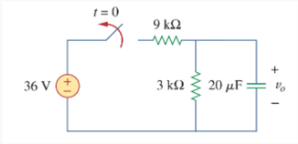


- $5e^{-12.5t}V$
- $4e^{-12.5t}V$
- $-4e^{-12.5t}V$
- $3e^{-12.5t}V$

No, the answer is incorrect.
Score: 0
Accepted Answers:
$4e^{-12.5t}V$

4) For the circuit in Fig., find $v_0(t)$ for t > 0. *2 points*

Determine the time necessary for the capacitor voltage to decay to one-third of its value at t = 0.



- $9e^{-16.667t}V, 65.92ms$
- $9e^{16.667t}V, 65.92ms$
- $9e^{-16.667t}V, 60.92ms$
- $19e^{-16.667t}V, 65.92ms$

No, the answer is incorrect.
Score: 0
Accepted Answers:
$9e^{-16.667t}V, 65.92ms$

5) A series RLC circuit has R=10k ohm, L=0.1 mH, and C=10 micro F. What type of damping is exhibited by the circuit? *2 points*

- Underdamped
- Overdamped
- Critically damped

No, the answer is incorrect.
Score: 0
Accepted Answers:
Overdamped