

LAHORE UNIVERSITY OF MANAGEMENT SCIENCES
Department of Electrical Engineering

EE240 Circuits I
Quiz 01 - Section 2

Name: _____

Campus ID: _____

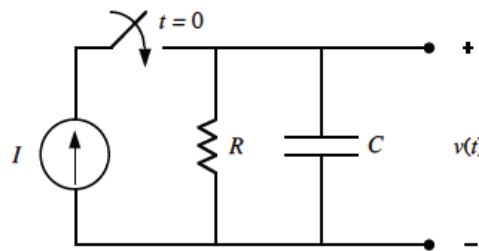
Total Marks: 10

Time Duration: 15 minutes

Question 1 (7 marks)

Consider a circuit shown below where the DC current source is delivering current to the parallel combination of a resistor and a capacitor. Assume that the switch is closed at $t = 0$ and the capacitor is uncharged, that is $v(t) = 0$, before the switch is closed.

- (a) [5 marks] Draw the waveforms of the currents $i_R(t)$ and $i_C(t)$, that is current through the resistor and capacitor respectively. We do not expect you to draw the waveform to the scale.
- (b) [2 marks] Draw the waveform of the current $i_C(t)$ if the resistance of the resistor in the circuit is increased by a factor of two.



Question 2 (3 marks)

Determine the equivalent resistance across terminals a and b for the resistor network shown below.

