

LAHORE UNIVERSITY OF MANAGEMENT SCIENCES
Department of Electrical Engineering

EE240 Circuits I
Quiz 01 - Section 1

Name: _____

Campus ID: _____

Total Marks: 10

Time Duration: 15 minutes

Question 1 (10 marks)

- (a) [8 marks] The current $i_c(t)$ through the capacitor of capacitance $\frac{1}{2}F$ is shown in Figure 1 below. Determine the voltage across the capacitor. Also plot the voltage for $-2 \leq t \leq 5$.

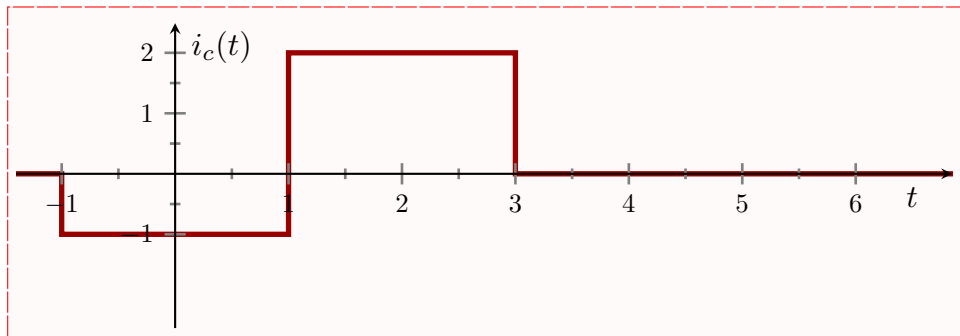


Figure 1: Current through the Capacitor.

- (b) [1 mark] Draw the $i - v$ characteristics of an ideal DC voltage source.
(c) [1 mark] Write an expression to relate the voltage and current for the capacitor.