

LAHORE UNIVERSITY OF MANAGEMENT SCIENCES
Department of Electrical Engineering

EE240 Circuits I
Quiz 02

Name: _____

Campus ID: _____

Total Marks: 10

Time Duration: 15 minutes

Question 1 (6 marks)

The voltage $v_L(t)$ across the inductor of inductance $\frac{1}{2}H$ is shown in Figure 1 below. Determine the current through the inductor. Also plot the current for $-2 \leq t \leq 5$.

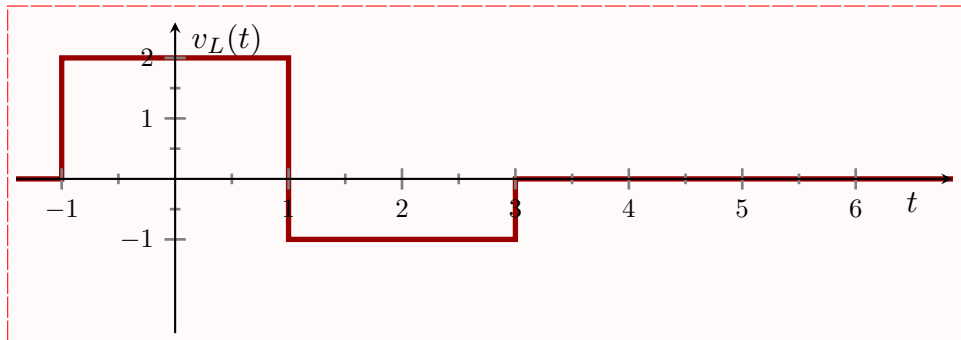


Figure 1: Voltage across the Inductor.

Question 2 (4 marks)

Draw a circuit with voltage source (10 V), switch, inductor (1 H) and resistor (2Ω) in series. The switch is initially open and closed at $t = 0$. Label the voltages across resistor and inductor as $v_R(t)$ and $v_L(t)$ respectively and plot the waveforms of the voltages.