Subject Name/ Code: Basic Electrical& Electronics Engineering -E108   MM:20
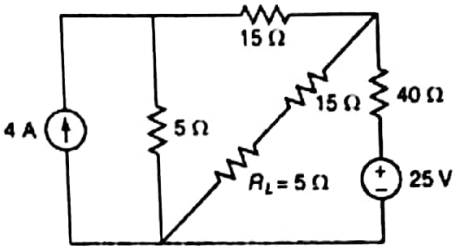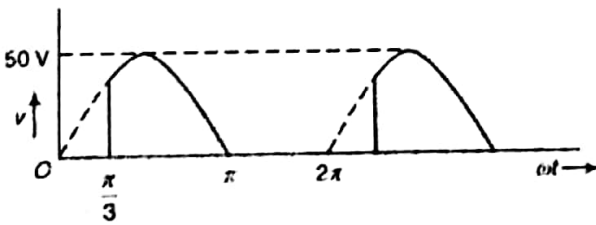Time: 60 Minutes

NOTE: All questions carry equal marks. **FULL CREDIT** is due only to legible, systematically written to the point correct answers.

Q.1	Using the superposition theorem, find the current through RL in the circuit shown in figure.
Q.2	A circuit takes a current $i = 50 \sin (314t – \pi/3)$ when the supply voltage is $v = 400 \sin 314\,t$. Find the impedance, resistance, and the inductance of the circuit.
Q. 3	The resistor and a capacitor are connected in series with a variable inductor. When a circuit is connected to a 240 V, 50 Hz supply, the maximum current by varying the inductance is 0.5 A. At this current the voltage across the capacitor is 250 V. Calculate R, C and L
Q. 4	Find the average and rms value of the waveform shown in Figure.

Subject Coordinator: Dr S C Gupta