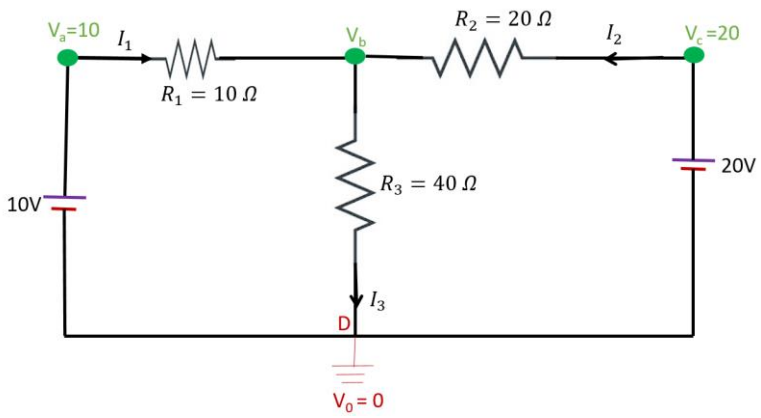
BALOCHISTAN UNIVERSITY OF ENGINEERING AND TECHNOLOGY KHUZDAR

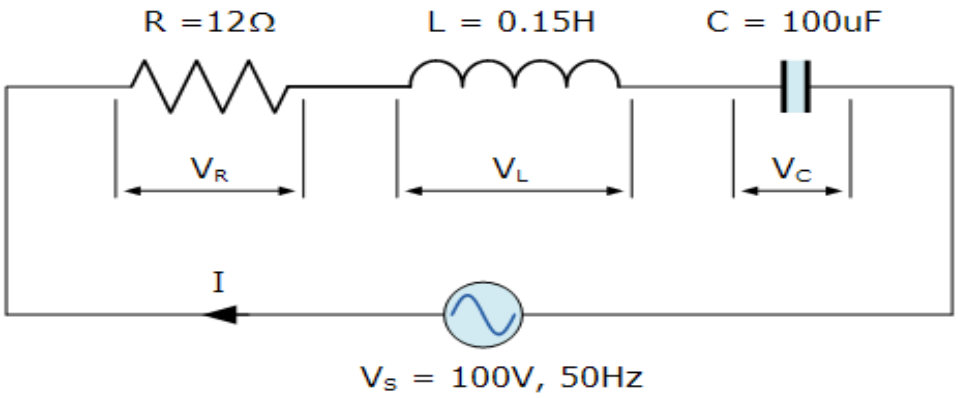
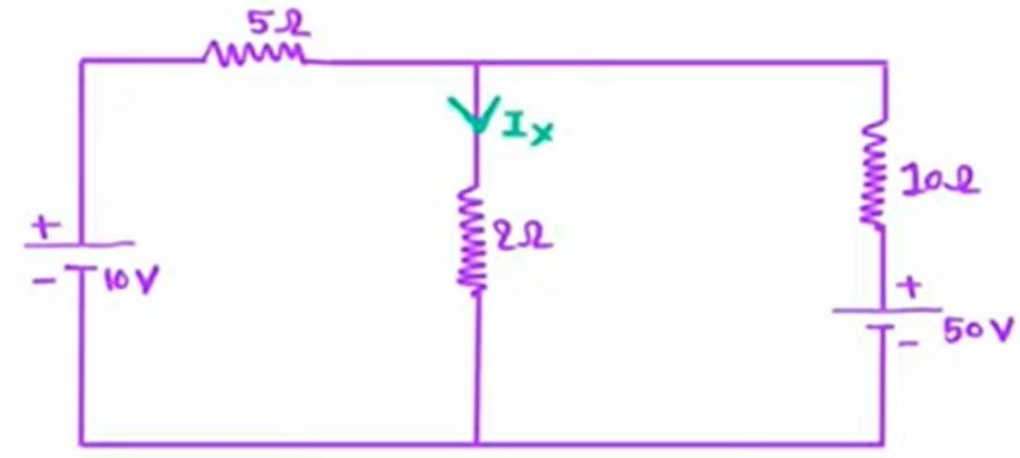
DEPARTMENT OF BIOMEDICAL ENGINEERING

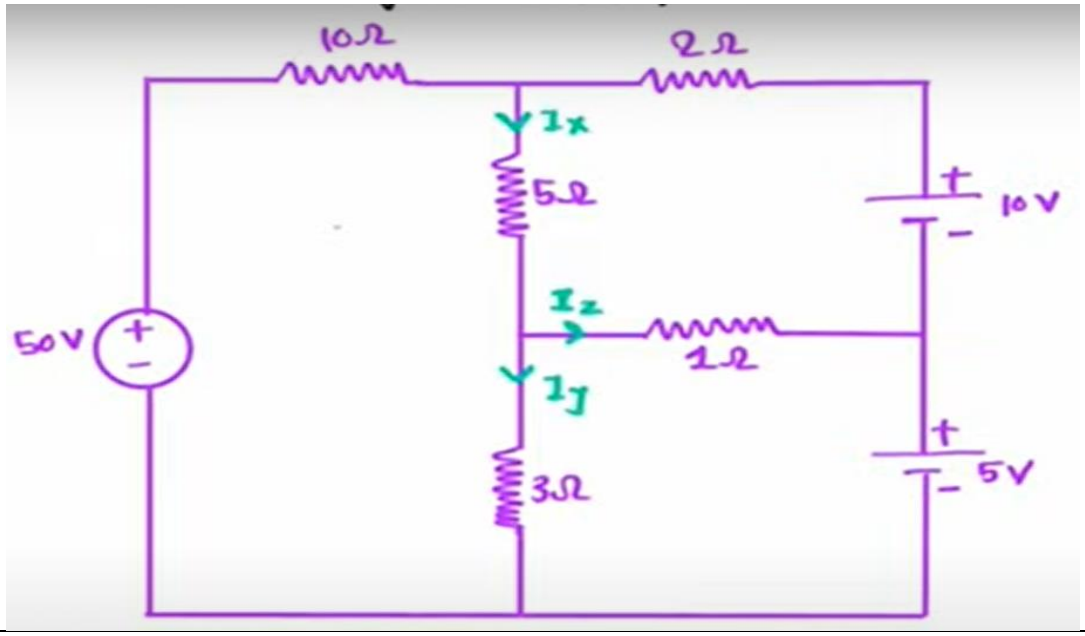
B.E First Semester 2023

Assignment 01

Last Date: 30th October, 2023

Question No. 1	Write Short note on the following terms a) Kirchhoff's Current Law and Voltage Law b) Voltage Divider and Current Divider Rule c) Node, Loop, Mesh and Branch. d) Impedance and Admittance e) Inductive Reactance and Capacitive Reactance f) Impedance Triangle and Power Triangle. g) Source Transformation. h) Define Thevenin's Resitance and Thevenin Voltage i) J operator	
Question No. 2	APPLY NODAL ANALYSIS TO FIND THE CURRENT I_3 	

Question No. 3	A series RLC circuit containing a resistance of 12Ω, an inductance of 0.15H and a capacitor of 100uF are connected in series across a 100V, 50Hz supply. Calculate the total circuit impedance, the circuits current, power factor and draw the voltage phasor  	
Question No. 4	Apply the Loop Analysis on the given below circuit, find the Current I_x  	

Question No. 5	Apply the Loop Analysis on the given below circuit, find the Current I_x ,I_y ,and I_z  	
Question No. 6	(a) Suppose A = 4 + j1 and B = 2 + j3 respectively. Determine the sum and difference of the two vectors in both rectangular (a + jb) form and graphically as an Argand Diagram. (b) Suppose A = 4 + j1 and B = 2 + j3 find the multiplication and division of A and B.	
Question No. 7	(a) Convert Polar Form into Rectangular Form of A = $6<30^0$ (b) Convert Rectangular Form into Polar Form A = (5 + j3)	

**************************BEST OF LUCK***********************