Regulation R18 *Subject code: 2E1AD*

TKR COLLEGE OF ENGINEERING AND TECHNOLOGY

(Autonomous, Accredited by NAAC with 'A+' Grade)

B.Tech I Semester Supplementary Examinations, January 2024

BASIC ELECTRICAL ENGINEERING

(Common for CE.EEE,ME & IT)

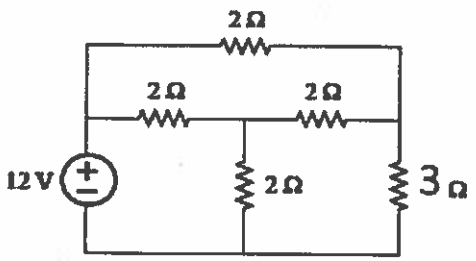
Maximum Marks: 70 Date:27.01.2024 Duration: 3 hours

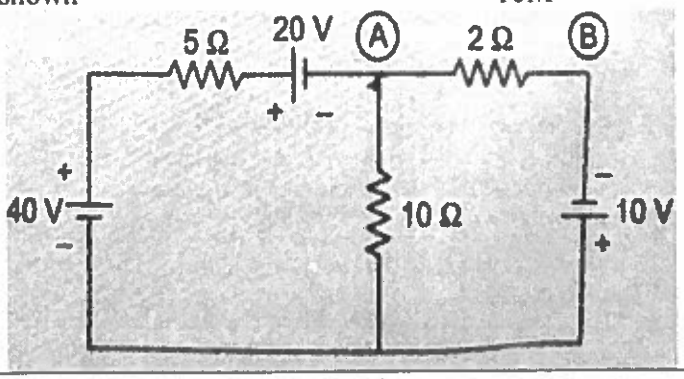
Note: **1.This question paper contains two parts A and B.**
2. Part A is compulsory which carries 20 marks. Answer all questions in Part A.
3. Part B consists of 5 Units. Answer any one full question from each unit.
4. Each question carries 10 marks and may have a, b, c, d as sub questions.

Part-A

	I. Answer all the following 10X2M=20M	Blooms Tx	CO
1	Define Current and Power.	L1	CO1
2	Define Flux density and Permeance.	L1	CO1
3	Write the expression for RMS value of sinusoidal quantity.	L5	CO1
4	Define the Form factor and RMS Value.	L1	CO1
5	State Reciprocity theorem.	L	CO2
6	Contrast Thevenin's and Nortons theorem	L4	CO2
7	What is the expression for generated EMF in a dc machine	L5	CO3
8	List the losses exists in the transformer.	L1	CO3
9	List power factor improvement methods.	L1	CO4
10	List the types of Cables.	L1	CO4

Part-B

	Answer All the following questions. 5X10M =50M		
11	Build the expression for Delta to Star conversion. 10M	L3	CO1
	OR		
12	Find current through each resister for the following circuit. 10M 	L1	CO1
13	Analyze voltage, current relationship in parallel RC circuit and draw its corresponding phasor diagrams. 10M	L4	CO1
	OR		

14	A coil has a resistance of 4 Ω and an inductance of 9.55 mH are connected in series. Find (i) the reactance (ii) the impedance and (iii) the current taken from a 240V, 50 Hz supply also the phase angle between the supply voltage and current. 10M	L1	CO1
15	Using superposition theorem, estimate current flowing in branch A-B for the circuit shown 10M 	L5	CO2
	OR		
16	State and explain Norton's theorem with an example. 10M	L2	CO2
17	A. Derive the equation for induced EMF of a DC generator? 5M B. Compare Lap winding and Wave winding in a DC Machine. 5M	L4	CO3
	OR		
18	Explain the principle of operation of transformer? Draw the phasor diagram for no load condition 10M	L2	CO3
19	Explain about types of earthing. 10M	L2	CO3
	OR		
20	Explain about meter board and distribution board in detail. 10M	L2	CO4