R18 Regulation *Subject code: 2P3BB*

TKR COLLEGE OF ENGINEERING AND TECHNOLOGY

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

B.Tech III Semester Supplementary Examinations, July 2024

ELECTRICAL CIRCUIT ANALYSIS
(EEE)

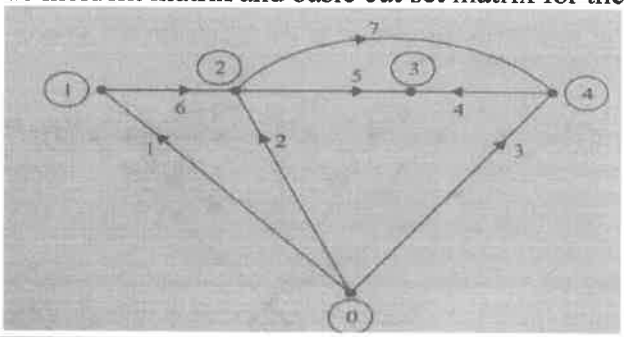
Maximum Marks: 70 Date:20.07.2024 Duration: 3 hours

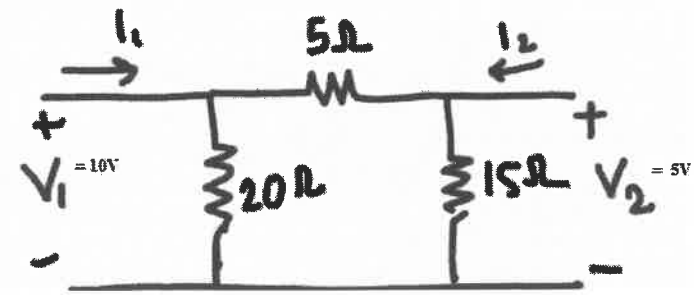
Note: 1.This question paper contains two parts A and B.
2. Part A is compulsory which carries 20 marks. Answer all questions in Part A.
3. Part B consists of 5 Units. Answer any one full question from each unit which carries 10M.
4. Each question carries 10 marks and may have a, b, c, d as sub questions.

Part-A

All the following questions carry equal marks (10X2M=20 Marks)		CO	Bloom Tx
1	Define Tree and Co-tree	1	L1
2	Define Ideal Transformer	1	L1
3	Define Natural frequency	2	L1
4	Write the expression for current in parallel RL circuit	2	L1
5	Write down the Laplace transform of a parabolic function	3	L1
6	Give the relationship between Bandwidth and Q-factor	3	L1
7	Define Quality factor	4	L1
8	Condition for reciprocity of ABCD-parameters	4	L1
9	Define low pass filter	5	L1
10	In constant k-type filter in t network cut of frequency is?	5	L1

Part-B

Answer All the following questions. (5X10M=50Marks)			
11	Explain Basic incidence matrix and Basic cut set matrix with example. [10M]	1	L2
	OR		
12	Form the Bus incident matrix and basic cut set matrix for the given graph  [10M]	1	L2
13	Find the current in a series RL circuit having R=2ohm and L=10H while a dc voltage of 100V is applied.what is the value of current after 5 sec of switching on. [10M]	2	L2

	OR		
14	Explain the initial condition of resistor, inductor and capacitor. [10M]	2	L2
15	Derive response of RL parallel circuit to dc excitation. [10M]	3	L2
	OR		
16	Derive response of RC parallel circuit to dc excitation. [10M]	3	L2
17	Determine open circuit parameter. [10M]	4	L2
	OR		
18	Determine the z-parameter for a given net work. [10M] 	4	L2
19	Explain briefly about composite filter. [10M]	5	L2
	OR		
20	Comparison of different types of filters . [10M]	5	L2