

CMR INSTITUTE OF TECHNOLOGY

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## Internal Assesment Test - I

Electric Circu	it Analysis	7	¥	•		Code	e:	18EE32	
06/09/2019	Duration:	90 mins	Max Marks:	50	Sem: 3 - B	Bran	ch:	EEE	
ja -		Answer Ar	ny FIVE FULL	Questio	ons				
							Mark	CO CO	BE RBT
stinguish betwee	en (i) ideal and	practical s	sources, (ii) act	ive and	passive elemen	nts.	[2]	CO1	L2
termine three ur	ıknown curren	ts using M	esh Analysis.			* 92	[8]	CO1	L4
5A 1 2 V	102 N2	352 W	20-						
d the node volta	iges for the cir-	cuit shown	in Figure using	g nodal	analysis.		[10]	CO1	L3
b 10.	18V	TO TO	55+6 55+6 73 ANO. 5	Ve S	> Vd				
ermine the equisformation. Con	uivalent resistantide all resistantide a	stance acreate acreance are 10	oss the termion.	nals ab	o using star-c	delta	[6]	CO2	L4
	o6/09/2019  stinguish between termine three under the node voltage of the node voltage	ermine the equivalent resis	obligation: 90 mins Answer Ans	O6/09/2019 Duration: 90 mins Max Marks:  Answer Any FIVE FULL  stinguish between (i) ideal and practical sources, (ii) act termine three unknown currents using Mesh Analysis.	Answer Any FIVE FULL Questions of the circuit shown in Figure using nodal and the node voltages for the circuit shown in Figure using nodal and the node voltages for the circuit shown in Figure using nodal and the node voltages for the circuit shown in Figure using nodal and the node voltages for the circuit shown in Figure using nodal and the node voltages for the circuit shown in Figure using nodal and the node voltages for the circuit shown in Figure using nodal and the node voltages for the circuit shown in Figure using nodal and practical sources, (ii) active and the node voltages for the circuit shown in Figure using nodal and practical sources, (ii) active and the node voltages for the circuit shown in Figure using nodal and practical sources, (iii) active and the node voltages for the circuit shown in Figure using nodal and practical sources, (iii) active and the node voltages for the circuit shown in Figure using nodal and practical sources, (iii) active and the node voltages for the circuit shown in Figure using nodal and practical sources, (iii) active and the node voltages for the circuit shown in Figure using nodal and practical sources, (iii) active and the node voltages for the circuit shown in Figure using nodal and practical sources.	Answer Any FIVE FULL Questions  stinguish between (i) ideal and practical sources, (ii) active and passive elementermine three unknown currents using Mesh Analysis.  2 1 2 1 4 4 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5	Answer Any FIVE FULL Questions  Answer Any FIVE FULL Questions  stinguish between (i) ideal and practical sources, (ii) active and passive elements.  termine three unknown currents using Mesh Analysis.  A D D D D D D D D D D D D D D D D D D	Obligation:    Solid   Duration:   90 mins   Max Marks:   50   Sem:   3 - B   Branch:	Answer Any FIVE FULL Questions  Answer Any FIVE FULL Questions  Marks Of CO  Stinguish between (i) ideal and practical sources, (ii) active and passive elements. [2] COI termine three unknown currents using Mesh Analysis. [8] COI  d the node voltages for the circuit shown in Figure using nodal analysis. [10] COI  ermine the equivalent resistance across the terminals ab using star-delta [6] CO2

3b Using source transformation, determine the current ix.	4]		
502			
4A D Strix 1002 21x			
	[5]	CO2	L2
Transform the network given in Figure into a single voltage source using source transformation technique.  A  10A  20  10A  320  40  10V  50  10V  60  60  60  60  60  60  60  60  60	[2]		
Figure using source transformation.	[5]	CO2	L3
Find Vx in the circuit shown in Figure using source transformation. $ \begin{array}{cccccccccccccccccccccccccccccccccc$	[10]	CO2	L3
5. Find equivalent resistance R <sub>ab</sub> using star/delta or delta/star conversion.	[10]	CO2	LS
502-607 402 502-607 402 302- 402-8 802			
B			

	×		-
6. Construct dual network for the circuit shown in Figure and write the equilibrium	[10]	CO2	L3
equations R1 - AAAA2			
	e		8
(t) (t) c 3-			
$\geq R_3$			
			×
			,
7. Find current ia using superposition theorem.	[10]	CO3	L3
202			
3/12 1/12 5/10			
7			
4A )			
505 VLa 20V 54 VL			

Course Outcomes			P01	P02	P03	<b>P</b> 04	P05	P06	P07	P08	P09	P010	P011	P012	PS01	PS02	PS03
CO1	Understand the basic concepts, basic laws and methods of analysis of DC and AC networks.	1	3	2		1					***	-20	7	,	2		1
CO2	Reduce the complexity of network using source shifting, source transformation and network reduction using transformations.	1	3	2		1	-								2	v .	1
CO3	Solve complex electric circuits using network theorems.	2	2	3		1									2		1
CO4	Discuss resonance in series and parallel circuits and transient analysis.	3	2	3	-	1									2		1
CO5	Discuss the importance of initial conditions and their evaluation and synthesize typical waveforms using Laplace Transformation.	4	3	2	<b>F</b> 2.0	1				2					2	-	1
C06	Solve Unbalanced three phase systems and Evaluate the performance of two port networks	5	2	2	5	1	1							ř	2	-	1

PO1 - Engineering knowledge; PO2 - Problem analysis; PO3 - Design/development of solutions; PO4 - Conduct investigations of complex problems; PO5 - Modern fool usage; PO6 - The Engineer and society; PO7-Environment and sustainability; PO8 - Ethics; PO9 - Individual and team work; PO10 - Communication; PO11 - Project management and finance; PO12 - Life-long

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