

Reg.No.:

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VIVEKANANDHA COLLEGE OF ENGINEERING FOR WOMEN
[AUTONOMOUS INSTITUTION AFFILIATED TO ANNA UNIVERSITY, CHENNAI]
Elayampalayam – 637 205, Tiruchengode, Namakkal Dt., Tamil Nadu.

Question Paper Code: 80028

B.E. / B.Tech. DEGREE END-SEMESTER EXAMINATIONS – JAN. / FEB. 2025

Second Semester

Computer Science and Engineering

U19EE201 – BASIC ELECTRICAL AND ELECTRONICS ENGINEERING

(Common to All)

(Regulation 2019)

Time: Three Hours

Maximum: 100 Marks

Answer ALL the questions

Knowledge Levels	K1 – Remembering	K3 – Applying	K5 – Evaluating
(KL)	K2 – Understanding	K4 – Analyzing	K6 – Creating

PART – A

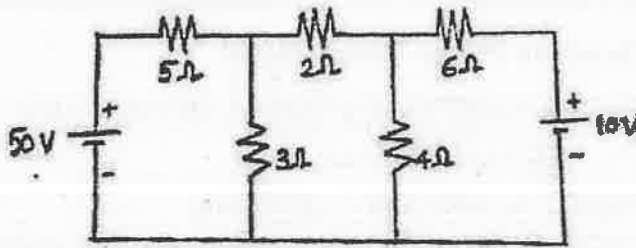
(10 x 2 = 20 Marks)

Q.No.	Questions	Marks	KL	CO
1.	Define Kirchhoff's current Law.	2	K2	CO1
2.	Mention the relation between line & phase values in a three phase systems.	2	K2	CO1
3.	Define MMF.	2	K2	CO2
4.	Differentiate analog & digital instruments.	2	K3	CO2
5.	List the Advantage of Conduit Wiring Systems.	2	K4	CO3
6.	State Inverse Cosine Law.	2	K1	CO3
7.	What is reverse bias of PN Junction Diode?	2	K2	CO4
8.	Draw the NPN configuration of transistors.	2	K1	CO4
9.	Draw the truth table of EXNOR Gate.	2	K1	CO5
10.	Convert : $16FA_{16}$ into Binary.	2	K2	CO5

PART – B

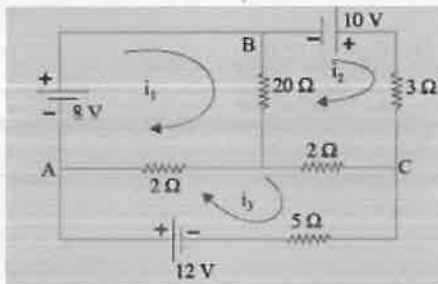
(5 x 13 = 65 Marks)

Q.No.	Questions	Marks	KL	CO
11.	a) Determine the power dissipation in the 4ohm resistor of the circuit shown in figure.	13	K4	CO1



(OR)

b) Determine current in 5ohm resistor by mesh analysis method.	13	K4	CO1
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12.	a) Explain the following:	13	K3	CO2
	1. Accuracy			
	2. Precision			
	3. Linearity			
	4. Error			
	5. Sensitivity			

(OR)

b) Derive the emf equation of a single phase transformer.	13	K2	CO2	
13.	a) With necessary switching circuits explain the operation of staircase and corridor wiring.	13	K3	CO3

(OR)

b) Explain the components of power system with the help of single line diagram and give one example for 22kV substation.	13	K3	CO3	
14.	a) Explain the working of a PNP transistor with neat sketches.	13	K3	CO4

(OR)

b) Discuss on the operation of SCR with neat sketches.	13	K3	CO4
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15. a) Convert the following: 13 K2 CO5
- i. 6002_{10} into binary
 - ii. 788_{10} into binary
 - iii. 1111111100_2 into Decimal
 - iv. 11001001101110011_2 into Decimal

(OR)

- b) Describe in detail the process of IC fabrication. 13 K2 CO5

PART – C

(1 x 15 = 15Marks)

Q.No.	Questions	Marks	KL	CO
16. a)	With neat block diagram explain the operation of UPS with a practical application.	15	K3	CO4
(OR)				
b)	Explain the working principle and applications of single phase Transformer.	15	K3	CO3