R18

ANURAG Engineering College
(An Autonomous Institution)
I B.Tech II Semester Supplementary Examinations, January – 2025
BASIC ELECTRICAL ENGINEERING
(ELECTRICAL & ELECTRONICS ENGINEERING)

Time: 3 Hours   Max. Marks: 75

Section – A (Short Answer type questions)   (25 Marks)
Answer All Questions

		Course Outcome	B.T Level	Marks
1.	What is Ohm's law.	CO1	L1	2M
2.	State KCL.	CO1	L2	3M
3.	Define "Power factor".	CO2	L1	2M
4.	Define "Real power".	CO2	L1	3M
5.	State Lenz's Law.	CO3	L2	2M
6.	What is Fleming's Right hand Rule	CO3	L1	3M
7.	What are the types of DC generators	CO4	L1	2M
8.	Define "Slip".	CO4	L1	3M
9.	Define "Relay"	CO5	L1	2M
10.	Define "Circuit breaker"	CO5	L1	3M

Section B (Essay Questions)
Answer all questions, each question carries equal marks.   (5 X 10M = 50M)

11. A)	Determine the current I in the circuit using Superposition theorem.	CO1	L3	10M
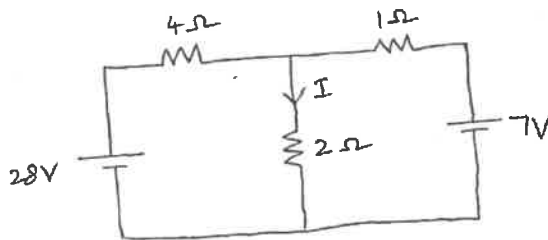
OR

B)	Determine I$_L$ using Thevenin's theorem	CO1	L3	10M
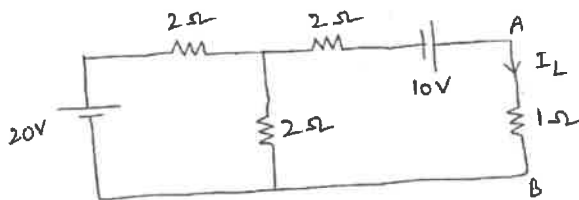
12. A)	Analyse the single-phase R-L series A.C circuit with a phasor diagram.	CO2	L3	10M

OR

B)	Obtain voltage and current relations in 3 phase star connection.	CO2	L2	10M

13. A)	Explain the constructional details and principle of operation of single-phase transformer.	CO3	L2	10M

OR

B)	Derive the emf equation of 1-ϕ transformer.	CO3	L2	10M

14. A)	Explain the Construction and Principle of Operation of DC Generator	CO4	L2	10M
	OR			
B)	Explain the Construction and Principle of operation of three phase Induction Motor	CO4	L2	10M
15. A)	Explain the Construction and Principle of operation of Synchronous Generator	CO5	L2	10M
	OR			
B)	What is Earthing? What are the methods of earthing	CO5	L3	10M