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ANURAG ENGINEERING COLLEGE
(AN AUTONOMOUS INSTITUTION)
I B.Tech II Semester Supplementary Examinations, Jan/Feb-2024
BASIC ELECTRICAL ENGINEERING
(ELECTRICAL AND 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 the equivalent resistance when three resistances R1, R2 and R3 are connected in parallel.	CO1	L2	2M
2.	State Thevenin's theorem and draw its equivalent circuit.	CO1	L2	3M
3.	Define active power and power reactive power.	CO2	L1	2M
4.	What is mean by form factor and peak factor of sinusoidal wave form?	CO2	L1	3M
5.	State Flemming's Right Hand Rule.	CO3	L1	2M
6.	Compare ideal transformer and practical transformer.	CO3	L2	3M
7.	Classify the different types of DC Motors.	CO4	L2	2M
8.	List applications of DC Shunt Motor.	CO4	L1	3M
9.	Classify the different types of batteries	CO5	L1	2M
10.	Why a synchronous generator is double excited machine?	CO5	L2	3M

Section B (Essay Questions)

Answer all questions, each question carries equal marks.   **(5 X 10M = 50M)**

			Course Outcome	B.T Level	Marks
11.	A)	Use the superposition theorem to find "v" in the circuit in Fig.1.	CO1	L3	10M

Fig.1
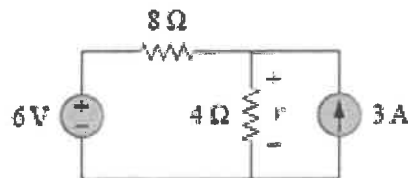
OR

	B)	Obtain the expression for Delta to Star conversion.	CO1	L3	10M
12.	A)	Describe the effective or RMS value and Average value.	CO2	L3	10M

OR

	B)	Derive the necessary equations for line voltages and line currents in 3-Φ balanced Delta connected system.	CO2	L3	10M
13.	A)	Explain the faradays laws of electromagnetic induction principle and state mutual inductance.	CO3	L3	10M

OR

	B)	Explain with the help of neat diagram the construction and working operation of Transformer.	CO3	L3	10M
14.	A)	Discuss the flux control method for speed control of shunt Motor.	CO4	L3	10M

OR

	B)	Explain the principle of operation of three phase induction Motor.	CO4	L3	10M

15. A) Draw and explain construction of synchronous generator.   CO5   L3   10M
OR

   B) Write short notes on   CO5   L3   10M
     i) Batteries.   ii) Earthing.