Total No. of Questions - [2]

Total No. of Printed Pages: 2

G.R. No.	

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March 2024 (INSEM) EXAM F.Y.B. TECH. (SEMESTER - II)

COURSE NAME: Basic Electrical Engineering

COURSE CODE: ET12233

DEPARTMENT: Electronics and Telecommunication

Engineering

(PATTERN 2023)

Time: [40 min]

[Max. Marks: 20]

- (*) Instructions to candidates:
- 1) Figures to the right indicate full marks.
- 2) Use of scientific calculator is allowed.
- 3) Use suitable data wherever required.
- 4) Solve any two sub questions from Question 1 and 2.

Question	Question Description	Marks	CO	Blooms
No.			mapped	Taxonomy
				Level
Q.1	a) Calculate current through 15 Ω resistance in the circuit shown in Fig. 1 using superposition Theorem.	[5]	CO1	Apply
	50V ± 20Ω ≥ 100V ± 100			
	Fig. 1			
	b) Determine power consumed by 20 Ω resistance in the circuit shown in Fig. 1 using Thevenin's theorem.	[5]	CO1	Apply
	c) Find voltage drop across 30 Ω resistance in the circuit shown in Fig. 1 using Kirchhoff's laws.	[5]	CO1	Apply

			,	
Q.2	a) For the circuit shown in Fig. 2, calculate total current of the circuit. (express current in rectangular as well as polar form) 2.5 Ω 0.06H 6.8 μF WWW 7000	[5]	CO2	Apply
	230 V o Fig. 2			
	b) Derive an expression for current drawn and power consumed by a circuit consisting of a resistor 'R' and capacitor 'C' connected in series across v = Vm sinot supply.	[5]	CO2	Understa
	c) For the circuit shown in Fig. 3, calculate currents I1 and I2 in the circuit.	[5]	CO2	Apply
	5Ω I, 0.02H 1Ω I, 0.08H 100V 50Hz Fig. 3	·		