Course Code: 1940202 Roll No: MLRS-R19

MARRI LAXMAN REDDY
INSTITUTE OF TECHNOLOGY AND MANAGEMENT
(AN AUTONOMOUS INSTITUTION)
(Approved by AICTE, New Delhi & Affiliated to JNTUH, Hyderabad)
Accredited by NBA and NAAC with 'A' Grade & Recognized Under Section2(f) & 12(B)of the UGC act,1956

II B.Tech II Sem Supply End Examination, July 2022

Basic Electrical and Electronics Engineering

(CIVIL & MECH)

Time: 3 Hours. **Max. Marks: 70**

Note: 1. Question paper consists: Part-A and Part-B.
2. In Part – A, answer all questions which carries 20 marks.
3. In Part – B, answer any one question from each unit.
Each question carries 10 marks and may have a, b as sub questions.

PART- A

(10*2 Marks = 20 Marks)

1.	a)	State and explain KCL.	2M	CO1	BL1
	b)	Define Peak value and RMS value.	2M	CO1	BL1
	c)	What is MCB?	2M	CO2	BL2
	d)	What is the need of earthing?	2M	CO2	BL2
	e)	Can DC be applied to transformers?	2M	CO3	BL1
	f)	State Faraday's laws of electromagnetic induction.	2M	CO3	BL1
	g)	Write some applications of PN junction diode.	2M	CO4	BL1
	h)	Why Zener diode is called voltage regulator.	2M	CO4	BL1
	i)	Why an ordinary transistor is called bipolar transistor.	2M	CO5	BL1
	j)	Explain about the various regions in a transistor.	2M	CO5	BL4

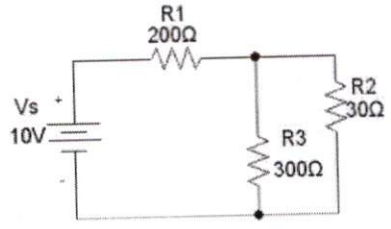
PART- B

(10*5 Marks = 50 Marks)

2	a)	Find the RMS value for sinusoidal wave form.	5M	CO1	BL3
	b)	Derive the relation ship between line voltage and phase voltage in star connected system.	5M	CO1	BL6

OR

3		Find the current through 30ohms and 300 ohms resistor.	10M	CO1	BL3



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4	a)	Explain the operation of SFU.	5M	CO2	BL4
	b)	Explain the earthing procedure.	5M	CO2	BL4
		OR			
5		Explain different types of batteries.	10M	CO2	BL4
6	a)	Explain the principle operation of transformer.	5M	CO3	BL4
	b)	Draw the speed torque characteristics of DC series motor.	5M	CO3	BL1
		OR			
7		Derive the EMF equation of DC generator.	10M	CO3	BL6
8	a)	Explain the VI characteristics of PN junction diode with neat diagram.	5M	CO4	BL4
	b)	Derive an expression for average output voltage for half wave rectifier.	5M	CO4	BL4
		OR			
9		What is Zener diode? Explain how voltage regulation can be achieved using Zener diode.	10M	CO4	BL5
10	a)	Explain the principle operation of CE amplifier.	5M	CO5	BL2
	b)	Draw the input and output characteristics of transistor in common base configuration.	5M	CO5	BL3
		OR			
11		Discuss the working of BJT and FET.	10M	CO5	BL4

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