Q.P. Code: 19EE0213 **R19**

Reg. No: | | | | | | | | | | |

SIDDHARTH INSTITUTE OF ENGINEERING & TECHNOLOGY:: PUTTUR

(AUTONOMOUS)

B.Tech III Year I Semester Supplementary Examinations August-2022

ELECTRICAL MEASUREMENTS

(Electrical and Electronics Engineering)

Time: 3 hours Max. Marks: 60

(Answer all Five Units **5 x 12 = 60** Marks)

UNIT-I

1	**a**	How the electrical measuring instruments are classified?	**L1**	**6M**
	b	Discuss about errors and compensations of measuring instruments.	**L2**	**6M**
		OR		
2	**a**	Describe the construction and working of attraction type MI instrument.	**L1**	**6M**
	b	Derive an expression for the Deflecting torque in MI type instruments.	**L3**	**6M**
		UNIT-II		
3	**a**	Draw the circuit of a Kelvin's double bridge used for measurement of low resistances. Derive the condition for balance.	**L1**	**6M**
	b	List the advantages and disadvantages of Maxwell's Bridge.	**L1**	**6M**
		OR		
4	**a**	Explain the construction and working of Anderson Bridge with suitable diagrams.	**L1**	**6M**
	b	Derive the expression for capacitance using Schering Bridge.	**L3**	**6M**
		UNIT-III		
5	**a**	Explain the construction of Two element dynamometer type wattmeter.	**L1**	**6M**
	b	Explain the measurement of LPF and UPF.	**L1**	**6M**
		OR		
6	**a**	Discuss the errors of single phase energy meter.	**L2**	**6M**
	b	A 40A , 230 V meter on full load test makes 72 revolutions in 42 seconds . If the normal disc speed is 620 revolutions per Kwh , find the percentage error .	**L4**	**6M**
		UNIT-IV		
7	**a**	Describe the construction and working of LVDT with a neat schematic diagram.	**L2**	**6M**
	b	Describe the method for measurement of temperature with use of i) RTD ii) Thermistors iii) IC Sensor	**L2**	**6M**
		OR		
8	**a**	Discuss Current transformer and Potential transformer.	**L2**	**6M**
	b	What are the parameters to be considered in selecting a transducer for a particular application.	**L1**	**6M**
		UNIT-V		
9	**a**	Describe the construction and working of a moving coil ballistic galvanometer.	**L1**	**6M**
	b	compare flux meter and Ballistic Galvanometer	**L4**	**6M**
		OR		
10	**a**	Draw a neat figure and explain the working of a C R O.	**L1**	**6M**
	b	Draw the Lissajous patterns? Write the advantages of CRO.	**L1**	**6M**

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