Q.P. Code: 16EC416 **R16**

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

SIDDHARTH INSTITUTE OF ENGINEERING & TECHNOLOGY:: PUTTUR

(AUTONOMOUS)

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

ELECTRONIC MEASUREMENTS AND INSTRUMENTATION

(Electronics and Communication Engineering)

Time: 3 hours Max. Marks: 60

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

UNIT-I

1	**a**	Define any two statistical analysis of measuring instrument.	**L1**	**6M**
	b	Explain different types of errors that occur in measurements.	**L5**	**6M**
		OR		
2	**a**	Describe with the help of circuit diagram the construction and working of a shunt-type ohm meter.	**L2**	**6M**
	b	Explain the fundamental principle on which DC meter is constructed.	**L2**	**6M**
		UNIT-II		
3	**a**	Explain the major parts of CRT with a block diagram.	**L2**	**6M**
	b	Discuss in detail, the construction and working of a digital sampling oscilloscope.	**L2**	**6M**
		OR		
4	**a**	Explain with a diagram how frequency & phase can be measured using a Lissajous method.	**L2**	**6M**
	b	Briefly discuss about digital storage oscilloscope.	**L2**	**6M**
		UNIT-III		
5	**a**	With the help of block diagram explain the functioning of a conventional standard signal generator.	**L2**	**10M**
	b	List the applications of random noise generator.	**L1**	**2M**
		OR		
6	**a**	Explain how wave analyser can be tuned to a particular frequency within the audible frequency range.	**L2**	**10M**
	b	List the application of wave analysers.	**L1**	**2M**
		UNIT-IV		
7	**a**	Discuss the working principle of Q-meter &its applications.	**L2**	**6M**
	b	Describe the operation of the Wheatstone bridge.	**L2**	**6M**
		OR		
8	**a**	Distinguish between the active & passive transducers.	**L4**	**6M**
	b	Explain the operation of potentiometric transducer.	**L2**	**6M**
		UNIT-V		
9	**a**	List the three types of temperature transducers &describe the application of each.	**L2**	**6M**
	b	Write short notes on i) LVDT ii) thermocouple	**L1**	**6M**
		OR		
10	**a**	Explain the operation of potentiometric transducer.	**L2**	**6M**
	b	Draw the diagram of Resistance Thermometer & explain briefly.	**L2**	**6M**

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