Question Paper Code: R18A31EC03

R18

ANURAG Engineering College

(An Autonomous Institution)

III B.Tech I Semester Supplementary Examinations, December - 2024

ELECTRONIC MEASUREMENTS AND INSTRUMENTATION

(ELECTRONICS AND COMMUNICATION 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.	Define instrument?	CO1	L1	2M
2.	Explain ohmmeter and its classification.	CO1	L2	3M
3.	List out the applications of Function Generator?	CO2	L1	2M
4.	List out the different types of wave analyzers.	CO2	L2	3M
5.	Define CRO?	CO3	L1	2M
6.	Discuss about the Lissajous figures.	CO3	L2	3M
7.	List the classification of transducers?	CO4	L1	2M
8.	What is difference between active and passive transducers.	CO4	L2	3M
9.	Define a Bridge? What is the importance of a bridge?	CO5	L1	2M
10.	Compare AC and DC bridges.	CO5	L2	3M

Section B (Essay Questions)

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

11. A)	Define and express the following terms, a) Fidelity b) Speed of response c) Lag d) Dynamic error.	CO1	L2	10M
	OR			
B)	Describe the function of DC voltmeter and multirange voltmeter with neat operation explanation?	CO1	L2	10M
12. A)	With the help of block diagram explain the functioning of a conventional standard signal generator.	CO2	L3	10M
	OR			
B)	Draw the block diagram of a function generator and explain its operation.	CO2	L2	10M
13. A)	Construct and explain the cathode ray oscilloscope?	CO3	L2	10M
	OR			
B)	Explain the working of Dual trace CRO with neat block diagram.	CO3	L2	10M
14. A)	Define resistance thermometers? Discuss in detail about resistance thermometers.	CO4	L2	10M
	OR			
B)	Analyze the operation of LVDT with neat sketch?	CO4	L3	10M
15. A)	Construct and explain about the Maxwell bridge method	CO5	L2	10M
	OR			
B)	In a certain Wheatstone bridge circuit measurements, RA=200k Ω, RB=400k Ω, RC=100k Ω, RD=300k Ω. E=1.5V, Rg=100 Ω, with usual notation. Determine the current through the detector galvanometer	CO5	L3	10M