Question Paper Code: R18A31EC06

R18

ANURAG Engineering College

(An Autonomous Institution)

III B.Tech I Semester Supplementary Examinations, June/July - 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 precision and accuracy.	CO1	L1	2M
2.	What are the different types of errors possible in an instrument?	CO1	L2	3M
3.	List out the applications of function generator.	CO2	L1	2M
4.	List out the different types of wave analyzers.	CO2	L1	3M
5.	Define dual trace oscilloscope?	CO3	L1	2M
6.	What are the different types of CRO probes.	CO3	L2	3M
7.	List the classification of transducers?	CO4	L1	2M
8.	Why are strain gauges used in bridge arrangement?	CO4	L2	3M
9.	Draw the circuit of a Wheatstone bridge and derive the conditions of balance.	CO5	L1	2M
10.	How does the basic circuit of Kelvin's bridge differ from that of a wheat stone's bridge?	CO5	L2	3M

Section B (Essay Questions)

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

11. A)	Discuss about D'Arsonval Movement with a neat diagram.	CO1	L2	10M
	OR			
B)	Describe the function of DC voltmeter and multirange voltmeter with neat operation explanation?	CO1	L2	10M
12. A)	Draw the block diagram of a function generator and explain its operation.	CO2	L3	10M
	OR			
B)	Explain the operation of a basic signal generator in detail.	CO2	L2	10M
13. A)	Explain the working of Dual trace CRO with neat block diagram.	CO3	L2	10M
	OR			
B)	Explain in detail about Delay lines in Cathode Ray Oscilloscopes	CO3	L2	10M
14. A)	Explain the Principle, working, Construction, characteristics and applications of LVDT.	CO4	L2	10M
	OR			
B)	Define and explain the principle and working of Hot-wire Anemometer.	CO4	L3	10M
15. A)	List the different types of data acquisition system and explain detail?	CO5	L2	10M
	OR			
B)	An unbalanced Wheatstone bridge has the following standard arms: R1=1K Ω, R2=2K Ω, R3=3K Ω, R4=4K Ω, Rg=300 Ω and E=5V. Calculate the current through the galvanometer.	CO5	L3	10M