Question Paper Code: R22A31EC06

R22

ANURAG Engineering College

(An Autonomous Institution)

III B.Tech I Semester Regular Examinations, December – 2024

ELECTRONIC MEASUREMENTS AND INSTRUMENTATION

(ELECTRONICS AND COMMUNICATION ENGINEERING)

Time: 3 Hours **Max. Marks: 60**

Section – A (Short Answer type questions) (10 Marks)

Answer All Questions		Course Outcome	B.T Level	Marks
1.	List the types of errors	CO1	L1	1M
2.	State working principle of D'Arsonval movement	CO1	L2	1M
3.	Differentiate between wave analyzer and spectrum analyzer	CO2	L2	1M
4.	Define a wave analyzer?	CO2	L1	1M
5.	List the major components of a CRT	CO3	L1	1M
6.	Compare dual beam and dual trace CRO.	CO3	L1	1M
7.	List the factors to be considered while selecting a transducer	CO4	L2	1M
8.	Define a transducer.	CO4	L1	1M
9.	What is a bridge.? What is the importance of a bridge?	CO5	L1	1M
10.	Define flow?	CO5	L1	1M

Section B (Essay Questions)

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

11. A)	Explain static and dynamic characteristics of an instrument?	CO1	L2	10M
	OR			
B)	Analyze how a PMMC can be used as a basic voltmeter.	CO1	L3	10M
12. A)	Describe with a diagram the operation of a heterodyne wave analyzer	CO2	L2	10M
	OR			
B)	Describe with the help of a neat block diagram the working of a standard signal Generator. Identify the limitations of a standard signal generator	CO2	L3	10M
13. A)	State and explain the need of a time base generator.	CO3	L2	10M
	OR			
B)	Describe with diagram the operation of a dual beam CRO.	CO3	L3	10M
14. A)	Explain with the help of a diagram and characteristics the operation of LVDT.	CO4	L2	10M
	OR			
B)	Describe with the diagram the operations of a piezo-electric transducer.	CO4	L3	10M
15. A)	Describe with diagram the operation of Kelvin's bridge	CO5	L3	10M
	OR			
B)	Explain with a block diagram a generalized DAS and also state the various configurations of a DAS.	CO5	L2	10M