

UNIT I

S.No	Questions	BT	CO	PO
Part – A (Short Answer Questions)				
1	Define a sensor and a transducer.	2	1	1,2
2	State the basic principles of sensing.	1	1	1,2
3	Classify sensors based on the transduction principle.	2	1	1,2
4	What are static characteristics of a sensor?	1	1	1,2
5	What are dynamic characteristics of a sensor?	1	1	1,2
6	What are electromechanical sensors?	2	1	1,2
7	Give applications of electromechanical sensors.	1	1	1,2
8	Differentiate active and passive sensors.	1	1	1,2
9	State-the reasons for fire accidents in-electrical system	2	1	1,2
10	Explain the principle of inductive transducers.	2	1	1,2
Part – B (Long Answer Questions)				
11	a) Explain the construction and working of a strain gauge.	2	1	1,2
	b) Derive the expression for gauge factor of a strain gauge.	1	1	1,2
12	a) Explain static and dynamic characteristics of sensors.	2	1	1,2
	b) Explain electromechanical sensors and their applications.	2	1	1,2
13	a) Describe different types of electromechanical transducers.	2	1	2,3
	b) Compare resistance strain gauges and semiconductor strain gauges.	2	1	2,3
14	a) Discuss the construction, operation, and characteristics of semiconductor strain gauges.	2	1	1,2
	b) Explain the any for categories of controlling accessories in	2	1	1,2
	Electrical wiring.			
15	a) Explain the construction and operation of an electrostatic transducer with diagram.	2	1	1,2
	b) Discuss the characteristics and applications of electrostatic transducers.	2	1	1,2
16	a) Explain the principle, construction, and working of ultrasonic	2	1	1,2
	sensors.			
	b) Describe distance measurement using ultrasonic sensors.	2	1	2,3

QUESTION BANK



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