



Electrical Measurements and Sensors

UNIT-V: Sensors

1. A transducer is a device that:

- A) Stores electrical energy
- B) Converts one form of energy into another
- C) Increases voltage only
- D) Measures power only

Answer: B) Converts one form of energy into another

2. Which of the following is used for measuring temperature?

- A) LVDT
- B) Thermocouple
- C) Strain Gauge
- D) Ultrasonic Sensor

Answer: B) Thermocouple

3. Which sensor is commonly used to detect the presence of nearby objects without physical contact?

- A) Pressure Sensor
- B) Proximity Sensor
- C) Strain Gauge
- D) Rotor Position Sensor

Answer: B) Proximity Sensor

4. The primary function of an LVDT (Linear Variable Differential Transformer) is to measure:

- A) Temperature
- B) Pressure
- C) Linear displacement
- D) Light intensity

Answer: C) Linear displacement

5. A strain gauge is used to measure:

- A) Humidity
- B) Mechanical strain or deformation
- C) Speed of rotation
- D) Magnetic field strength

Answer: B) Mechanical strain or deformation

6. Which transducer works on the piezoelectric effect?

- A) Thermocouple
- B) Piezoelectric Transducer
- C) LVDT
- D) Photodiode

Answer: B) Piezoelectric Transducer

7. Which of the following devices converts light energy directly into electrical energy?

- A) Photoconductive Cell

- B) Photovoltaic Cell
- C) IR Sensor
- D) Pressure Sensor

Answer: B) Photovoltaic Cell

8. HART communication in smart instruments is mainly used for:

- A) Wireless charging
- B) Digital communication over analog signals
- C) Measuring resistance only
- D) Increasing sensor sensitivity

Answer: B) Digital communication over analog signals

9. MEMS stands for:

- A) Mechanical Energy Measurement System
- B) Micro Electro Mechanical Systems
- C) Magnetic Electrical Measuring Sensors
- D) Multiple Electronic Monitoring System

Answer: B) Micro Electro Mechanical Systems

10. AMI (Advanced Metering Infrastructure) is mainly used for:

- A) Manual meter reading only
- B) Automatic collection, communication, and analysis of energy consumption data
- C) Measuring transformer losses only
- D) Measuring only voltage and current

Answer: B) Automatic collection, communication, and analysis of energy consumption data