UNIT-V

Multiple Choice questions

1	**A smart sensor consists of a sensing element and:**
	A) Heater B) Microprocessor/Signal Processing Unit C) Battery only D) Antenna only
2	**The primary sensor in a smart sensor system is used to:**
	A) Process data B) Store data C) Detect a physical quantity D) Display output
3.	**Excitation in a sensor system refers to:**
	A) Power supplied to the sensor B) Cooling the sensor C) Data transmission D) Calibration
4.	**The function of an amplifier in a smart sensor is to:**
	A) Reduce signal strength B) Increase signal strength C) Store data D) Filter noise only
5	**Filters are used in sensor systems to:**
	A) Increase power consumption B) Remove unwanted noise signals C) Generate signals D) Store information
6.	**An Analog-to-Digital Converter (ADC) converts:**
	A) Digital signals into analog signals B) Analog signals into digital signals C) Temperature into voltage D) Pressure into current
7	**Compensation in smart sensors is mainly used to:**
	A) Increase sensor size B) Correct measurement errors C) Generate noise D) Reduce sensitivity intentionally
8.	**Information coding in smart sensors helps in:**

	A) Signal amplification B) Data representation and processing C) Cooling the sensor D) Increasing dimensions
9	**Which protocol is commonly used for smart sensor communication?**
	A) I^2C B) HTTP only C) SMTP D) FTP

10.	**Smart sensor interfaces are standardized to ensure:**
	A) Increased cost B) Compatibility and interoperability C) Larger sensor size D) Reduced accuracy
11.	**Which sensor is commonly used in automobiles for engine management?**
	A) Oxygen Sensor B) LDR C) Strain Gauge only D) Capacitor
12.	**In home appliances, temperature sensing is commonly achieved using:**
	A) Thermistors B) Synchro's C) LVDTs D) Tachogenerators
13.	**Aerospace sensors are primarily designed for:**
	A) Low reliability B) Harsh operating environments C) Indoor applications only D) Entertainment systems
14	**Manufacturing industries use sensors mainly for:**
	A) Process monitoring and control B) Decoration C) Advertising D) Music generation
15	**Environmental monitoring sensors are commonly used to measure:**
	A) Air and water quality B) Television signals C) Computer memory D) Internet speed
	Fill in the Blanks
1.	**A smart sensor combines a sensing element with a _____ unit.**
2.	**. The component that detects the physical quantity is called the _____ sensor.**
3.	**Sensor excitation provides the necessary _____ to operate the sensor.**
4.	**An amplifier increases the _____ of a signal.**
5	**Filters help remove unwanted _____ from sensor signals.**
6	**An ADC converts analog signals into _____ signals.**

7	**Compensation techniques improve sensor _____.**
8	**Information coding is used for efficient data _____.**
9	**Data communication enables transfer of sensor _____.**
10	**I²C and SPI are examples of communication _____.**
11	**Oxygen sensors are widely used in _____ systems.**
12	**Thermistors are commonly found in home _____.**
13	**Aerospace sensors must operate reliably under _____ conditions.**
14	**Manufacturing sensors are used for process _____ and control.**
15	**Environmental monitoring sensors help measure pollution levels in the _____.** **.**