**What is a fundamental difference between Wireless Sensor Networks (WSN) and the Internet of Things (IoT)?**

a) WSN is limited to industrial applications, while IoT is for consumer use.

b) WSN consists of sensor nodes for data collection, while IoT involves a broader range of devices beyond sensors.

c) WSN and IoT are two terms used interchangeably to describe the same technology.

d) WSN primarily uses wired connections, while IoT relies solely on wireless communication.

Answer: b) WSN consists of sensor nodes for data collection, while IoT involves a broader range of devices beyond sensors.

**Which of the following statements is true regarding the scope of applications for WSN and IoT?**

a) WSN is mainly used for monitoring and control in industrial settings, while IoT is applicable only in agriculture.

b) WSN is typically limited to environmental monitoring, while IoT spans various domains, including healthcare, transportation, and smart homes.

c) WSN and IoT both focus exclusively on healthcare applications.

d) WSN and IoT are terms that describe the same technology, so their application scope is identical.

Answer: b) WSN is typically limited to environmental monitoring, while IoT spans various domains, including healthcare, transportation, and smart homes.

**In WSN, the primary focus is on:**

a) Collecting and processing data from sensors.

b) Connecting everyday objects to the internet.

c) Creating smart cities with advanced infrastructure.

d) Building networks for smartphones and tablets.

Answer: a) Collecting and processing data from sensors.

**What distinguishes IoT devices from WSN sensor nodes?**

a) IoT devices are not capable of wireless communication.

b) IoT devices have limited processing power, while WSN nodes are highly powerful.

c) IoT devices often have additional functionalities beyond sensing, such as actuators or displays.

d) IoT devices are exclusively used in industrial environments, whereas WSN nodes are for consumer applications.

Answer: c) IoT devices often have additional functionalities beyond sensing, such as actuators or displays.

**Which of the following is a common feature of IoT but not typically associated with WSN?**

a) Low-power communication protocols.

b) Scalability to accommodate a large number of devices.

c) Real-time data analytics capabilities.

d) Environmental monitoring.

Answer: c) Real-time data analytics capabilities.

**What is a primary concern in the design of WSN that may not be as critical in IoT deployments?**

a) Data security and privacy.

b) Energy efficiency and battery life.

c) Scalability to handle a large number of devices.

d) Compatibility with existing internet infrastructure.

Answer: b) Energy efficiency and battery life.

**In which scenario is the term "Internet of Things" (IoT) more likely to be used rather than "Wireless Sensor Network" (WSN)?**

a) Monitoring temperature and humidity levels in a server room.

b) Controlling the lighting and thermostat in a smart home.

c) Tracking the location of inventory items in a warehouse.

d) Measuring air quality in an industrial facility.

Answer: b) Controlling the lighting and thermostat in a smart home.

**What distinguishes IoT devices from WSN sensor nodes in terms of their connectivity?**

a) IoT devices are always connected to the internet, while WSN nodes are not.

b) WSN nodes use Bluetooth for communication, while IoT devices use Wi-Fi.

c) IoT devices can communicate with each other and the internet, whereas WSN nodes typically communicate within a local network.

d) Both IoT devices and WSN nodes exclusively use wired connections.

Answer: c) IoT devices can communicate with each other and the internet, whereas WSN nodes typically communicate within a local network.