When was the concept of Wireless Sensor Networks (WSN) first introduced?

a) In the 1970s

b) In the 1990s

c) In the 2000s

d) In the 1980s

Answer: b) In the 1990s

WSNs gained prominence due to advancements in which field?

a) Telecommunications

b) Microelectronics

c) Aerospace engineering

d) Environmental science

Answer: b) Microelectronics

What is the primary purpose of Wireless Sensor Networks (WSN)?

a) To provide high-speed internet access

b) To enable long-distance communication

c) To collect and transmit data from remote sensors

d) To track the movement of satellites

Answer: c) To collect and transmit data from remote sensors

Which of the following is a key characteristic of WSNs?

a) Wired connectivity

b) High energy consumption

c) Centralized data processing

d) Scalability and self-organization

Answer: d) Scalability and self-organization

In the context of WSNs, what does "sensor node" refer to?

a) A central processing unit

b) A device that collects data from the internet

c) A self-contained unit equipped with sensors and wireless communication capabilities

d) A high-capacity battery

Answer: c) A self-contained unit equipped with sensors and wireless communication capabilities

Which application domain played a significant role in the early development of WSN technology?

a) Social networking

b) Military and defense

c) Entertainment industry

d) Agriculture

Answer: b) Military and defense

What is the primary advantage of using WSNs in environmental monitoring?

a) Reduced data accuracy

b) Lower deployment cost

c) Elimination of the need for sensors

d) Real-time data collection in remote areas

Answer: d) Real-time data collection in remote areas

Which communication technology is commonly used in WSNs for transmitting data between sensor nodes?

a) Fiber optics

b) Satellite communication

c) Radio frequency (RF)

d) Infrared communication

Answer: c) Radio frequency (RF)

WSNs are often employed in applications such as:

a) Data centers

b) Internet of Things (IoT)

c) Video game development

d) Nuclear energy production

Answer: b) Internet of Things (IoT)

In the context of WSNs, what does "energy efficiency" primarily refer to?

a) The ability to transmit data over long distances

b) The capability to operate in extreme weather conditions

c) Minimizing energy consumption to prolong node battery life

d) The ability to transmit data at extremely high speeds

Answer: c) Minimizing energy consumption to prolong node battery life