**Nodes:**

What do "nodes" in WSNs refer to?

a) Internet-connected devices

b) Individual devices with sensing, processing, and communication capabilities

c) Wireless routers

d) Data storage servers

Answer: b) Individual devices with sensing, processing, and communication capabilities

What is the primary role of nodes in a WSN?

a) To store large amounts of data

b) To provide internet access

c) To collect and process environmental data

d) To serve as wireless repeaters

Answer: c) To collect and process environmental data

In WSNs, what do "nodes" refer to?

a) Devices that are only equipped with sensors

b) Devices that communicate using physical connections

c) Devices with sensing, processing, and communication capabilities

d) Devices used for network management

Answer: c) Devices with sensing, processing, and communication capabilities

What is the primary function of nodes in a WSN?

a) Transmitting data to external networks

b) Collecting and processing data from sensors

c) Generating electricity from environmental parameters

d) Cooling the surrounding environment

Answer: b) Collecting and processing data from sensors

Which communication method is used between nodes in a WSN?

a) Wired communication

b) Bluetooth communication

c) Wireless communication

d) Optical communication

Answer: c) Wireless communication

**Connecting Nodes:**

What does "connecting nodes" primarily refer to in the context of WSNs?

a) Physically linking sensor nodes

b) Establishing communication links between different nodes

c) Charging the batteries of sensor nodes

d) Configuring the IP addresses of sensor nodes

Answer: b) Establishing communication links between different nodes

How do sensor nodes typically communicate with each other in a WSN?

a) Using physical cables

b) Via optical fibers

c) Wirelessly through communication protocols

d) Through satellite connections

Answer: c) Wirelessly through communication protocols

What is the role of network topology in connecting nodes?

a) It defines the physical size of sensor nodes.

b) It determines the color of sensor nodes.

c) It specifies the arrangement of sensor nodes and their connections.

d) It indicates the type of sensors used in the nodes.

Answer: c) It specifies the arrangement of sensor nodes and their connections.

What does "connecting nodes" refer to in the context of WSNs?

a) Establishing communication links between different nodes

b) Installing physical cables between nodes

c) Upgrading the firmware of sensor nodes

d) Disassembling sensor nodes

Answer: a) Establishing communication links between different nodes

Which of the following is NOT a common aspect of connecting nodes in WSNs?

a) Wireless Communication

b) Network Topology

c) Energy Generation

d) Neighbor Discovery

Answer: c) Energy Generation

**Networking Nodes:**

What distinguishes networking nodes from regular sensor nodes in a WSN?

a) Networking nodes have more advanced sensors.

b) Networking nodes cannot communicate wirelessly.

c) Networking nodes have more advanced communication and processing capabilities.

d) Networking nodes are always physically larger.

Answer: c) Networking nodes have more advanced communication and processing capabilities.

What is one of the key functions of networking nodes in a WSN?

a) Measuring environmental parameters

b) Charging the batteries of sensor nodes

c) Implementing routing protocols

d) Providing illumination to the surroundings

Answer: c) Implementing routing protocols

In some cases, networking nodes may act as gateways. What is the role of gateways?

a) To restrict access to the network

b) To aggregate data from sensor nodes and relay it to external networks

c) To perform data encryption on sensor nodes

d) To provide power backup to sensor nodes

Answer: b) To aggregate data from sensor nodes and relay it to external networks

What role do networking nodes play in terms of energy efficiency in a WSN?

a) They consume the most energy in the network.

b) They determine the physical locations of sensor nodes.

c) They coordinate sensor nodes to minimize energy consumption.

d) They generate energy from environmental parameters.

Answer: c) They coordinate sensor nodes to minimize energy consumption.

What are "networking nodes" responsible for in a WSN?

a) Sensing environmental parameters

b) Managing the network's communication infrastructure

c) Storing data collected from sensors

d) Controlling actuators

Answer: b) Managing the network's communication infrastructure

Which function is typically NOT performed by networking nodes in a WSN?

a) Data Aggregation and Fusion

b) Managing Network Topology

c) Real-time sensor data collection

d) Routing Data Between Nodes

Answer: c) Real-time sensor data collection

In some cases, networking nodes may act as gateways between the WSN and external networks. What is the purpose of this gateway functionality?

a) To aggregate data from sensor nodes and forward it to higher-level systems or the internet

b) To perform data encryption within the WSN

c) To control the physical placement of sensor nodes

d) To provide power backup to the sensor nodes

Answer: a) To aggregate data from sensor nodes and forward it to higher-level systems or the internet

What is the significance of adaptability in networking nodes?

a) Networking nodes can adapt to any type of sensor node

b) Networking nodes can adjust their size to accommodate more sensors

c) Networking nodes can dynamically reconfigure routing paths to optimize data delivery in response to network changes

d) Networking nodes can change their physical location as needed

Answer: c) Networking nodes can dynamically reconfigure routing paths to optimize data delivery in response to network changes