1. What does WSN stand for?

a) Wireless Service Network
b) Wired Sensor Network
c) Wireless Sensor Network
d) Wireless Signal Network

Answer: c) Wireless Sensor Network

Explanation: A Wireless Sensor Network (WSN) is a network comprised of spatially distributed autonomous sensors to monitor physical or environmental conditions, such as temperature, sound, pressure, etc., and to cooperatively pass their data through the network to a main location.

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2. Which of the following is NOT a component of WSN architecture?

a) Sensor nodes
b) Base station
c) Routers
d) Satellites

Answer: d) Satellites

Explanation: The components of WSN architecture typically include sensor nodes, which are dispersed throughout the area of interest, a base station for data aggregation, and routers for

communication between nodes and the base station. Satellites are not typically part of the WSN architecture.

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3. What is the purpose of coverage and placement in WSN?

a) To maximize energy consumption
b) To minimize network connectivity
c) To optimize sensor node deployment
d) To increase data latency

Answer: c) To optimize sensor node deployment

Explanation: Coverage and placement in WSN involves strategically deploying sensor nodes to ensure adequate coverage of the monitored area while minimizing redundancy and maximizing network efficiency.

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4. Which of the following is NOT a topology management technique in WSN?

a) Hierarchical clustering
b) Random deployment
c) Grid-based deployment
d) Geographic routing

Answer: d) Geographic routing

Explanation: Geographic routing is not a topology management technique but rather a routing protocol used in WSN to determine the path of data transmission based on the geographical locations of nodes.

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5. Which application is NOT commonly associated with WSN?

a) Environmental monitoring
b) Industrial automation
c) Social media networking
d) Healthcare monitoring

Answer: c) Social media networking

Explanation: While WSN can be applied to various domains such as environmental monitoring, industrial automation, and healthcare monitoring, it is not commonly associated with social media networking.

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6. What is a characteristic feature of Mobile WSN?

a) Fixed sensor nodes

b) Dynamic topology
c) Limited energy consumption
d) Low data transmission rate

Answer: b) Dynamic topology

Explanation: Mobile WSN involves sensor nodes that are capable of mobility, leading to a dynamic topology as nodes move within the network.

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7. Which technology is commonly used for sensor nodes in WSN?

a) Wi-Fi
b) Bluetooth
c) Zigbee
d) NFC

Answer: c) Zigbee

Explanation: Zigbee is a commonly used technology for sensor nodes in WSN due to its low power consumption, low cost, and ability to form mesh networks suitable for WSN applications.

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8. Underwater WSN is primarily used for which purpose?

a) Deep-sea exploration
b) Crop monitoring
c) Air quality monitoring
d) Traffic management

Answer: a) Deep-sea exploration

Explanation: Underwater WSN is utilized for deep-sea exploration to monitor oceanographic phenomena, underwater habitats, and resource exploration.

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9. Which aspect of WSN security ensures secure communication between sensor nodes?

a) MAC protocols
b) Routing protocols
c) Transport protocols
d) Encryption techniques

Answer: d) Encryption techniques

Explanation: Encryption techniques are used in WSN to secure communication between

sensor nodes by encoding transmitted data, ensuring confidentiality and integrity.

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10. Which protocol is responsible for managing access to the communication medium in WSN?

a) MAC protocol
b) Routing protocol
c) Transport protocol
d) Application protocol

Answer: a) MAC protocol

Explanation: The Medium Access Control (MAC) protocol is responsible for managing access to the communication medium in WSN, regulating how sensor nodes access the shared wireless channel to transmit data while avoiding collisions and ensuring efficient use of bandwidth.