1. Which phase of the IoT design methodology involves gathering user needs and defining system functionality?

a) Requirement
b) Process
c) Model
d) Service

Answer: a) Requirement

Explanation: The specification phase begins with gathering user requirements to understand what the IoT system needs to accomplish.

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2. Which view of the IoT design methodology focuses on how the system operates and interacts with its environment?

a) Functional
b) Operational
c) Structural
d) Behavioral

Answer: b) Operational

Explanation: The operational view examines the behavior and interactions of the IoT system within its environment.

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3. What is a primary concern in IoT privacy and security solutions?

a) Data encryption
b) User authentication
c) Device interoperability
d) Power efficiency

Answer: a) Data encryption

Explanation: Data encryption ensures that information transmitted and stored within an IoT system remains secure and confidential.

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4. Which IoT device is commonly used for prototyping and development due to its flexibility and ease of use?

a) Raspberry Pi
b) Arduino
c) ESP32
d) BeagleBone

Answer: b) Arduino

Explanation: Arduino devices are widely used for IoT prototyping and development due to their simplicity and versatility.

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5. In the context of IoT, what does Raspberry Pi primarily offer?

a) High computational power
b) Low-cost hardware
c) Real-time operating system
d) Energy efficiency

Answer: a) High computational power

Explanation: Raspberry Pi devices are known for their relatively high computational capabilities compared to other IoT platforms.

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6. Which IoT design methodology phase involves creating a representation of the system’s structure and behavior?

a) Process
b) Model
c) Service
d) Requirement

Answer: b) Model

Explanation: The model phase involves creating models that represent the structure and behavior of the IoT system.

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7. What is a key aspect of IoT security solutions to prevent unauthorized access?

a) Device authentication
b) Protocol optimization
c) Sensor calibration
d) Cloud integration

Answer: a) Device authentication

Explanation: Device authentication ensures that only authorized devices can access the IoT network or services, preventing unauthorized access.

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8. Which IoT device platform is commonly used for its low-cost and energy-efficient characteristics?

a) Raspberry Pi
b) Arduino

c) ESP8266
d) Intel Edison

Answer: c) ESP8266

Explanation: ESP8266 devices are popular for IoT applications due to their affordability and low power consumption.

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9. What aspect of IoT design methodology involves defining the sequence of tasks performed by the system?

a) Requirement
b) Process
c) Model
d) Service

Answer: b) Process

Explanation: The process phase involves defining the sequence of tasks performed by the IoT system to achieve its objectives.

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10. Which IoT security measure focuses on protecting data integrity during transmission and

storage?

a) Firewall configuration
b) Intrusion detection
c) Data encryption
d) User authentication

Answer: c) Data encryption

Explanation: Data encryption ensures that data remains intact and unaltered during transmission and storage, enhancing data integrity within an IoT system.