



Introduction to

Internet of Things

Assignment-Week 2

TYPE OF QUESTION: MCQ/MSQ

Number of questions: 15

Total marks: 15 X 1= 15

QUESTION 1:

With respect to protocol design, which of the following category best defines WiFi, Bluetooth, and LPWAN?

- a. Connectivity
- b. Discovery
- c. Transport
- d. Multi-layer framework

Correct Answer: c. Transport

Detailed Solution: WiFi, Bluetooth, and LPAN falls under Communication or Transport protocol design. (Please refer Lecture 6@ 1:01)

QUESTION 2:

Which of the following refers to data protocol?

- a. MQTT
- b. EPC
- c. RPL
- d. TR-069

Correct Answer: a. MQTT

Detailed Solution: MQTT, CoAP, AMQP, Websocket, and others are referred to as data protocols. (Please refer Lecture 1@ 1:01)



QUESTION 3:

In MQTT, who controls the publish-subscribe messaging pattern?

- a. Publisher
- b. Subscriber
- c. Broker
- d. Service provider

Correct Answer: c. Broker

Detailed Solution: In MQTT, the broker controls the publish-subscribe messaging pattern. (Please refer Lecture 6@3:31)

QUESTION 4:

In what format are the topics in MQTT updated by the broker?

- a. Packet
- b. Message
- c. Bit
- d. Signal

Correct Answer: b. Message

Detailed Solution: The topics are updated and distributed in the form of messages by the broker. (Please refer Lecture 6@3:31)

QUESTION 5:

Which wildcard would you use for getting messages from an entire subtree of topics in MQTT?

- a. +
- b. -
- c. *
- d. #

Correct Answer: d. #



Detailed Solution: The wildcard + is used for one level hierarchy and # is used for the entire subtree. (Please refer Lecture 6@12:11)

QUESTION 6:

How many messaging modes does CoAP have?

- a. 1
- b. 2
- c. 3
- d. 4

Correct Answer: d. 4

Detailed Solution: Confirmable, Non-confirmable, piggyback, and separate are the 4 messaging modes in CoAP. (Please refer Lecture 7@6:51)

QUESTION 7:

What message request does CoAP use for updates?

- a. GET
- b. PUT
- c. PUSH
- d. DELETE

Correct Answer: c. PUSH

Detailed Solution: CoAP uses similar messages as HTTP. (Please refer Lecture 7@7:51)



QUESTION 8:

Which of the following is true for piggyback messages in CoAP?

- a. ACK
- b. ACK+DATA
- c. CON+DATA
- d. ACK+CON

Correct Answer: b. ACK+DATA

Detailed Solution: IoT Gateway connects the IoT LAN to a WAN to the Internet. It can implement several LANs and WANs. (Please refer Lecture 2@3:11)

QUESTION 9:

True or False?

XMPP is suitable for cloud computing deployments and does not support M2M or P2P communications.

- a. True
- b. False

Correct Answer: b. False

Detailed Solution: XMPP is suitable for cloud computing deployments and supports M2M or P2P communications across a diverse set of networks. (Please refer Lecture 7@12:12)



QUESTION 10:

Which of the following is not true for XMPP?

- a. Centralized
- b. No royalties necessary
- c. Support for security
- d. Support for interoperability

Correct Answer: a. Centralized

Detailed Solution: XMPP is decentralized and does not need central servers. (Please refer Lecture 7@13:47)

QUESTION 11:

What is the basic unit of data in the AMQP protocol?

- a. Packet
- b. Bit
- c. Frame
- d. Segment

Correct Answer: c. Frame

Detailed Solution: The basic unit of data in AMQP is a frame. (Please refer Lecture 8@0:43)

QUESTION 12:

Which IEEE 802.15.4 variant is used for industrial applications?

- a. D
- b. E
- c. F
- d. G

Correct Answer: b. E



Detailed Solution: IEEE 802.15.4/E is used for industrial applications. (Please refer Lecture 9@9:11)

QUESTION 13:

What network topology is popularly used in Zigbee networks?

- a. Bus
- b. Star
- c. Mesh
- d. Ring

Correct Answer: c. Mesh

Detailed Solution: Zigbee are popularly used in the form of mesh wireless networks. (Please refer Lecture 9@16:16)

QUESTION 14:

Which of the following is the root in a Zigbee network?

- a. Zigbee coordinator
- b. Zigbee router
- c. Zigbee end device
- d. Any of these

Correct Answer: a. Zigbee coordinator

Detailed Solution: The Zigbee coordinator acts as the root of a Zigbee network and initiates it. (Please refer Lecture 9@22:51)

QUESTION 15:

In the LOADng routing protocol, who responds to the RREQ messages?



- a. Destination
- b. Relays
- c. Sensor
- d. Both destination and relays

Correct Answer: a. Destination

Detailed Solution: Only destination responds to RREQ messages in LOADng protocol. (Please refer Lecture 10@12:53)

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