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:

The full form of MQTT is

a. Message Queue Telemetry Transport
b. Message Query Telemetry Transport
c. Message Queue Telemedicine Transport
d. None of these

Correct Answer: a. Message Queue Telemetry Transport

Detailed Solution: The full form of MQTT is Message Queue Telemetry Transport.

See lecture 6 (Basics of IoT Networking – Part II) @ 01:51

QUESTION 2:

In MQTT, a _____ controls the publish-subscribe messaging pattern.

a. Publishers
b. Message Broker
c. Subscribers
d. All of these

Correct Answer: b. Message Broker

Detailed Solution: In MQTT, a message broker controls the publish-subscribe messaging pattern..

See lecture 6 (Basics of IoT Networking – Part II) @ 03:33

QUESTION 3:

Which of the following is NOT a component of MQTT?

a. Publishers
b. Users
c. Brokers
d. None of these

Correct Answer: b. Users

Detailed Solution: The three components of MQTT are –

a) Publishers

b) Subscribers

c) Brokers

See lecture 6 (Basics of IoT Networking – Part II) @ 04:50

QUESTION 4:

_____ is an extension of MQTT which uses lightweight attribute based encryption. It has _____ main stages.

a. SMQTT, three
b. BMQTT, three
c. SMQTT, four
d. None of these

Correct Answer: c. SMQTT, four

Detailed Solution: SMQTT is an extension of MQTT which uses lightweight attribute based encryption. It has four main stages.

See lecture 6 (Basics of IoT Networking – Part II) @ 13:45

QUESTION 5:

Which of the following is based on Request-Response model between end-points.

a. MQTT
b. CoAP
c. Both (a) and (b)
d. Neither (a) nor (b)

Correct Answer: b. CoAP

Detailed Solution: CoAP is based on Request-Response model between end-points.

See lecture 7 (Basics of IoT Networking – Part III) @ 00:31

QUESTION 6:

The two sub-layers of CoAP are -

a. Messaging and Holding
b. Messaging and Backoff
c. Messaging and Teardown
d. Messaging and Request/response

Correct Answer: d. Messaging and Request/response

Detailed Solution: CoAP has two sub-layers which are –

a) Messaging

b) Request/response

See lecture 7 (Basics of IoT Networking – Part III) @ 04:44

QUESTION 7:

Which of the following is used for real-time exchange of structured data?

a. MQTT
b. SMQTT
c. XMPP
d. CoAP

Correct Answer: c. XMPP

Detailed Solution: XMPP is used for real-time exchange of structured data.

See lecture 7 (Basics of IoT Networking – Part III) @ 11:28

QUESTION 8:

XMPP uses the _____ architecture.

a. Publish-subscribe
b. Client-server
c. Both (a) and (b)
d. Neither (a) nor (b)

Correct Answer: b. Client-server

Detailed Solution: XMPP uses the client-server architecture.

See lecture 7 (Basics of IoT Networking – Part III) @ 12:03

QUESTION 9:

With respect to AMQP, which of the following message delivery guarantees allow for each message to be delivered certainly as well as to be delivered multiple times.

a. At-least-once
b. At-most-once
c. Exactly-once
d. Both (a) and (b)

Correct Answer: a. At-least-once

Detailed Solution: The message delivery guarantees of AMQP are –

- At-most-once – each message is delivered once or never.
- At-least-once – each message is certain to be delivered, but may do so multiple times.
- Exactly-once – message will always certainly arrive and do so only once.

See lecture 8 (Basics of IoT Networking – Part IV) @ 05:35

QUESTION 10:

Which of the following is/are NOT an AMQP frame type?

a. Open
b. Close
c. End
d. None of these

Correct Answer: d. None of these

Detailed Solution: Open, close, and end are valid frame types of the AMQP protocol.

See lecture 8 (Basics of IoT Networking – Part IV) @ 06:34

QUESTION 11:

Which of the following is/are NOT the function/functions of the Bindings component of the AMQP protocol?

a. Receives messages and routes them to queues
b. Separate queues for separate business process
c. Consumer receive messages from queues
d. All of these

Correct Answer: d. All of these

Detailed Solution: The Bindings component of the AMQP protocol manages the rules for distributing messages (who can access what messages, destination of the message)

See lecture 8 (Basics of IoT Networking – Part IV) @ 08:05

QUESTION 12:

Which of the following is/are NOT exchange types in AMQP?

a. Direct
b. Indirect
c. Fan-out
d. Topic

Correct Answer: b. Indirect

Detailed Solution: The AMQP exchange types are –

a) Direct

b) Fan-out

c) Topic

d) Header

See lecture 8 (Basics of IoT Networking – Part IV) @ 08:56

QUESTION 13:

State whether the following statement is True or False.

Statement: The IEEE 802.15.4 is a well-known standard for low data-rate Wireless Personal Area Network (WPAN).

a. True
b. False

Correct Answer: a. True

Detailed Solution: The IEEE 802.15.4 is a well-known standard for low data-rate Wireless Personal Area Network (WPAN).

See lecture 9 (Connectivity Technologies – Part-I) @ 02:57

QUESTION 14:

The networking topologies supported in the IEEE 802.15.4 are -

a. Only Star
b. Star and Mesh
c. Only Mesh
d. None of these

Correct Answer: b. Star and Mesh

Detailed Solution: The networking topologies defined in IEEE 802.15.4 are star and mesh.

See lecture 9 (Connectivity Technologies – Part-I) @ 08:56

QUESTION 15:

State whether the following statement is True or False.

Statement: Periodic transmission of beacon messages does not occur in beacon enabled networks (IEEE 802.15.4).

a. False
b. True

Correct Answer: a. False

Detailed Solution: Periodic transmission of beacon messages occur in beacon enabled networks (IEEE 802.15.4).

See lecture 9 (Connectivity Technologies – Part-I) @ 13:21

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