



Introduction to Internet
of Things Assignment-
Week 3

TYPE OF QUESTION: MCQ/MSQ

Number of questions: 15

Total marks: 15 X 1 = 15

QUESTION 1:

HART operates only in _____ GHz ISM band.

- a. 2.3
- b. 4.8
- c. Both (a) and (b)
- d. None of these

Correct Answer: d. None of these

Detailed Solution: HART operates only in 2.4 GHz ISM band.

See lecture 11 (Connectivity Technologies-III) @ 05:43

QUESTION 2:

State whether the following statement is true or false.

Statement: The HART physical layer is derived from IEEE 802.15.4 protocol and operates only in 2.5 GHz ISM band.

- a. False
- b. True

Correct Answer: a. False

Detailed Solution: The HART physical layer is derived from IEEE 802.15.4 protocol and operates only in 2.4 GHz ISM band.

See lecture 11 (Connectivity Technologies-III) @ 05:43



QUESTION 3:

State whether the following statement is True or False

Statement: Each node is supervised by the application manager and it guides them on when and where to send packets.

- a. True
- b. False

Correct Answer: b. False

Detailed Solution: The Network manager supervises each node in the network and guides them on when and where to send packets.

See lecture 11 (Connectivity Technologies-III) @ 12:14

QUESTION 4:

_____ identifies channels consistently affected by interference and removes them from use.

- a. Channel hopping
- b. Channel aggregating
- c. Channel blacklisting
- d. Frequency aggregating

Correct Answer: c. Channel Blacklisting

Detailed Solution: Channel Blacklisting identifies channels consistently affected by interference and removes them from use.

See lecture 11 (Connectivity Technologies-III) @ 07:30

QUESTION 5:

State whether the following statement is true or false.

Statement: The Network Manager supervises each node in the network and guides them on when and where to send packets.

- a. True
- b. False

Correct Answer: a. True

Detailed Solution: The Network manager supervises each node in the network and guides them on when and where to send packets.



See lecture 11 (Connectivity Technologies-III) @ 12:14

QUESTION 6:

Which layer of HART incorporates channel hopping and channel blacklisting?

- a. Surface Layer
- b. Troposphere
- c. Data Link Layer
- d. None of these

Correct Answer: c. Data Link Layer

Detailed Solution: HART Data Link Layer incorporates channel hopping and channel blacklisting.

See lecture 11 (Connectivity Technologies-III) @ 07:30

QUESTION 7:

WirelessHART relies on _____ for its communication.

- a. Star networking
- b. Bus networking
- c. Both (a) and (b)
- d. None of these

Correct Answer: d. None of these

Detailed Solution: WirelessHART relies on mesh networking.

See lecture 11 (Connectivity Technologies-III) @ 08:39

QUESTION 8:

State whether the following statement is true or false.

NFC devices work on the principle of magnetic induction.

- a. True
- b. False

Correct Answer: b. False

Detailed Solution: NFC devices work on the principle of magnetic induction.

See lecture 11 (Connectivity Technologies-III) @ 20:00



QUESTION 9:

Bluetooth technology is based on Ad-hoc technology also known as _____.

- a. Ad-hoc meshnet
- b. Ad-hoc Piconets
- c. Ad-hoc starnet
- d. None of these

Correct Answer: b. Ad-hoc Piconets

Detailed Solution: Bluetooth technology is based on Ad-hoc technology also known as Ad-hoc Piconets.

See lecture 12 (Connectivity Technologies-IV) @ 02:25

QUESTION 10:

State whether the following statement is true or false

Statement: Booking in Bluetooth is the process of forming a connection between two Bluetooth devices.

- a. True
- b. False

Correct Answer: b. False

Detailed Solution: Paging in Bluetooth is the process of forming a connection between two Bluetooth devices.

See lecture 12 (Connectivity Technologies-IV) @ 05:32

QUESTION 11:

State whether the following statement is true or false.

Statement: Class 1 Bluetooth radios are used primarily in industrial use cases and have a range of 100 meters or 300 feet.

- a. True
- b. False

Correct Answer: a. True



Detailed Solution: Class 1 Bluetooth radios are used primarily in industrial use cases and have a range of 100 meters or 300 feet.

See lecture 12 (Connectivity Technologies-IV) @ 04:58

QUESTION 12:

Zwave uses _____ topology.

- a. Ring
- b. Star
- c. Mesh
- d. None of these

Correct Answer: c. Mesh

Detailed Solution: Zwave uses Mesh topology.

See lecture 13 (Connectivity Technologies-V) @ 2:51

QUESTION 13:

Which of the following is an OS for sensor nodes?

- a. MicroOS
- b. LiteOS
- c. TinyOS
- d. None of these

Correct Answer: c. TinyOS

Detailed Solution: TinyOS is an OS for sensor nodes.

See lecture 14 (Sensor Networks-I) @ 13:13

QUESTION 14:

State whether the following statement is true or false.

Statement: Selfish nodes are typified by their unwillingness to cooperate, as the protocol requires whenever there is a personal cost involved.

- a. True
- b. False

Correct Answer: a. True



Detailed Solution: Selfish nodes are typified by their unwillingness to cooperate, as the protocol requires whenever there is a personal cost involved.

See lecture 15 (Sensor Networks-II) @ 05:14

QUESTION 15:

Dumb behavior of sensor nodes is _____ in nature (as it is dependent on the effects of the environmental conditions).

- a. Temporal
- b. Spatial
- c. Both (a) and (b)
- d. None of these

Correct Answer: a. Temporal

Detailed Solution: Dumb behavior of sensor nodes is Temporal in nature (as it is dependent on the effects of the environmental conditions).

See lecture 15 (Sensor Networks-II) @ 05:40

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