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:

State whether the following statement is true or false.

Statement: There is no network layer in Wired HART

a. True
b. False

Correct Answer: a. True

Detailed Solution: There is no network layer in Wired HART.

See lecture 11 (Connectivity Technologies-III) @ 05:22

QUESTION 2:

HART operates only in _____ GHz ISM band.

a. 2.4
b. 4.8
c. 4.9
d. 4.4

Correct Answer: a. 2.4

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

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

QUESTION 3:

Super-frames in HART consist of grouped _____ wide timeslots.

a. 10ms
b. 20ms
c. 55ms
d. None of these

Correct Answer: a. 10ms

Detailed Solution: Super-frames in HART consist of grouped 10ms wide timeslots.

See lecture 11 (Connectivity Technologies-III) @ 07:05

QUESTION 4:

The process of identifying channels consistently affected by interference and removing them from use is known as _____.

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

Correct Answer: d. 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: 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 6:

FeliCa is commonly found in which country?

a. Japan
b. India
c. USA
d. None of these

Correct Answer: a. Japan

Detailed Solution: FeliCa is commonly found in Japan.

See lecture 11 (Connectivity Technologies-III) @ 17:52

QUESTION 7:

State whether the following state is true or false.

Statement: NFC tags found in supermarket products are examples of passive NFC.

a. True

b. False

Correct Answer: a. True

Detailed Solution: Passive NFC tags found in supermarket products are examples of passive NFC.

See lecture 11 (Connectivity Technologies-III) @ 18:47

QUESTION 8:

Active NFC devices are able to _____?

a. transmit information
b. collect information
c. Both (a) and (b)
d. None of these

Correct Answer: c. Both (a) and (b)

Detailed Solution: Active NFC devices are able to collect as well as transmit information.

See lecture 11 (Connectivity Technologies-III) @ 18:52

QUESTION 9:

A _____ in NFC emits a small electric current which creates a magnetic field that in turn bridges the physical space between the devices.

a. reader
b. writer
c. destroyer
d. None of these

Correct Answer: a. reader

Detailed Solution: A reader in NFC emits a small electric current which creates a magnetic field that in turn bridges the physical space between the devices

See lecture 11 (Connectivity Technologies-III) @ 20:31

QUESTION 10:

Bluetooth technology is based on _____.

a. WiFi
b. LoRa
c. Ad-hoc technology
d. None of these

Correct Answer: c. Ad-hoc technology

Detailed Solution: Bluetooth technology is based on Ad-hoc technology.

See lecture 12 (Connectivity Technologies-IV) @ 02:30

QUESTION 11:

Bluetooth technology operates in the unlicensed industrial, scientific and medical (ISM) band at _____ to _____ GHz.

a. 3.2, 5.6
b. 2.4, 2.485
c. 5.0, 5.89
d. None of these

Correct Answer: b. 2.4,2.485

Detailed Solution: Bluetooth technology operates in the unlicensed industrial, scientific and medical (ISM) band at 2.4 to 2.485 GHz.

See lecture 12 (Connectivity Technologies-IV) @ 04:39

QUESTION 12:

Z-wave operates at _____ MHz in the US and _____ MHz in Europe.

a. 1008, 989
b. 908.42, 868.42
c. 767.56, 855.28
d. None of these

Correct Answer: b. 908.42, 868.42

Detailed Solution: Z-wave operates at 908.42 MHz in the US and 868.42 MHz in Europe.

See lecture 13 (Connectivity Technologies-V) @ 3:40

QUESTION 13:

State whether the following statement is true or false.

Statement: Sensor nodes have limited battery life.

a. True
b. False

Correct Answer: a. True

Detailed Solution: Sensors nodes have limited battery life.

See lecture 14 (Sensor Networks-I) @ 13:15

QUESTION 14:

State whether the following statement is true or false.

Statement: The Link Manager Protocol in Bluetooth manages the establishment, authentication, link configuration.

a. True
b. False

Correct Answer: a. True

Detailed Solution: The Link Manager Protocol in Bluetooth manages the establishment, authentication, link configuration.

See Page number – 157, Chapter - 7, Book - Introduction to IoT, Authors – Sudip Misra, Anandarup Mukherjee, and Arijit Roy, Publisher – Cambridge University Press, Edition – 1 (2021)

QUESTION 15:

Zigbee commonly uses _____data rate.

a. 250 kbps
b. 250 Mbps
c. 260 kbps
d. 260 Mbps

Correct Answer: a. 250 kbps

Detailed Solution: Zigbee commonly uses 250 kbps data rate.

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