



**Introduction to
Internet of Things
Assignment-Week 4**

TYPE OF QUESTION: MCQ/MSQ

Number of questions: 15

Total marks: 15 X 1= 15

QUESTION 1:

If transmission range $> 2^*$ sensing range,

- a. Coverage implies connectivity
- b. Coverage implies greater coverage
- c. Both (a) and (b)
- d. None of these

Correct Answer: d. None of these

Detailed Solution: If transmission range $\geq 2^*$ sensing range, coverage implies connectivity.

See lecture 17 (Sensor Networks-IV) @ 04:14

QUESTION 2:

What is the full form of AUV in the context of mobile wireless sensor networks?

- a. Aerial and Underwater Vehicle
- b. Ambient and Underprivileged Vehicle
- c. Astronomical Underwater Vehicle
- d. None of these

Correct Answer: d. None of these

Detailed Solution: The full form of AUV is Autonomous Underwater Vehicle.

See lecture 18 (Sensor Networks-V) @ 07:56



QUESTION 3:

State whether the following statement is true or false.

Statement: Agricultural intrusion detection uses NFC sensors.

- a. True
- b. False

Correct Answer: b. False

Detailed Solution: Agricultural intrusion detection uses PIR and Ultrasonic sensors.

See lecture 16 (Sensor Networks-III) @ 13:22

QUESTION 4:

The objective of coverage in WSN is to use a _____ number of sensors and _____ the network lifetime.

- a. minimum, minimize
- b. maximum, minimize,
- c. maximum, maximize
- d. None of these

Correct Answer: d. None of these

Detailed Solution: The objective of coverage in WSN is to use minimum number of sensors and maximize the network lifetime.

See lecture 17 (Sensor Networks-IV) @ 08:47

QUESTION 5:

WSN in agriculture uses what for processing?

- a. Microprocessor
- b. Microcontroller
- c. Both (a) and (b)
- d. None of these

Correct Answer: b. Microcontroller

Detailed Solution: WSN in agriculture uses Microcontroller for processing.

See lecture 16 (Sensor Networks-III) @ 17:07



QUESTION 6:

Which of the following is/are options for communication among nanodevices?

- a. Electromagnetic
- b. Molecular
- c. Both (a) and (b)
- d. None of these

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

Detailed Solution: Electromagnetic and molecular are options for communication among nanodevices

See lecture 16 (Sensor Networks-III) @ 25:11

QUESTION 7:

State whether the following statement is true or false.

Statement: Voluntary Sensing allows distributed sensing carried by humans and the goal is not just to collect data but to allow the common people to assess and share the knowledge.

- a. False
- b. True

Correct Answer: a. False

Detailed Solution: Participatory sensing allows distributed sensing carried by humans and the goal is not just to collect data but to allow the common people to assess and share the knowledge.

See lecture 18 (Sensor Networks-V) @ 13:01



QUESTION 8:

State whether the following statement is true or false.

Statement: UAV networks use a ring topology.

- a. True
- b. False

Correct Answer: b. False

Detailed Solution: The following are the features of UAV networks -

- a. Mesh or star networks
- b. Multi-tasking
- c. Large coverage area

See lecture 19 (UAV Networks) @ 02:43

QUESTION 9:

In multi-UAV networks, the scalability is _____.

- a. Low
- b. Very Low
- c. Poor
- d. None of these

Correct Answer: d. None of these

Detailed Solution: In multi-UAV networks, the scalability is high.

See lecture 19 (UAV Networks) @ 08:00

QUESTION 10:

Single UAV system uses _____ antenna.

- a. Uni-directional
- b. Omni-directional
- c. Both (a) and (b)
- d. None of these

Correct Answer: b. Omni-directional

Detailed Solution: A Single UAV system uses omnidirectional antenna.

See lecture 19 (UAV Networks) @ 08:00



QUESTION 11:

Which of the following is/are constraint/constraints of UAV network?

- a. Infrequent link breakages
- b. Malfunction
- c. Both (a) and (b)
- d. None of these

Correct Answer: b. Malfunction

Detailed Solution: Frequent link breakages and malfunction are constraints of UAV network.

See lecture 19 (UAV Networks) @ 10:33

QUESTION 12:

Low-end sensor nodes are -

- a. Whose deployment has high density in order to increase network lifetime and survivability.
- b. Who perform basic functions such as data aggregation, auto configuration, and power saving.
- c. Both (a) and (b)
- d. None of these

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

Detailed Solution: Low-end sensor nodes are -

- a. Whose deployment has high density in order to increase network lifetime and survivability.
- b. Who perform basic functions such as data aggregation, auto configuration, and power saving.

See lecture 20 (Machine to Machine Communication) @ 10:46



QUESTION 13:

State whether the following statement is true or false.

Statement: FANETs are flying ad hoc networks.

- a. True
- b. False

Correct Answer: a. True

Detailed Solution: FANETs are flying ad hoc networks.

See lecture 19 (UAV Networks) @ 14:11

QUESTION 14:

State whether the following statement is true or false

Statement: SCADA is designed for isolated systems using proprietary solutions, whereas M2M is designed for cross-platform integration.

- a. True
- b. False

Correct Answer: a. True

Detailed Solution: SCADA is designed for isolated systems using proprietary solutions, whereas M2M is designed for cross-platform integration.

See lecture 20 (Machine to Machine Communication) @ 04:28

QUESTION 15:

State whether the following statement is true or false

Statement: Low-end sensor nodes are static, energy-hungry, and complex.

- a. True
- b. False

Correct Answer: b. False

Detailed Solution: Low-end sensor nodes are static, energy-efficient and simple.

See lecture 20 (Machine to Machine Communication) @ 10:57