

## Course outline

## About NPTEL

How does an NPTEL online course work?

## Week 0

## Week 1

## Week 2

## Week 3

## Week 4

● Lecture 16: Sensor Networks-Part-III

● Lecture 17: Sensor Networks-Part-IV

● Lecture 18: Sensor Networks-Part-V

● Lecture 19: UAV Networks

● Lecture 20: Machine to Machine Communication

● Lecture material of Week 4

● Quiz: Week 04: Assignment 04

● Week 4 Feedback Form

## Week 5

## Week 6

## Week 7

## Week 8

## Week 9

## Week 10

## Week 11

## Week 12

## Assignment Solutions

## Books

## Text Transcripts

## Live Interactive Session

## Week 04: Assignment 04

The due date for submitting this assignment has passed.

Due on 2025-08-20, 23:59 IST.

Assignment submitted on 2025-08-18, 18:49 IST

1) If transmission range &gt; 2\* sensing range, 0 points

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

No, the answer is incorrect.

Score: 0

Accepted Answers:

d.

2) What is the full form of AUV in the context of mobile wireless sensor networks? 1 point

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

Yes, the answer is correct.

Score: 1

Accepted Answers:

d.

3) State whether the following statement is true or false. 1 point

Statement: Agricultural intrusion detection uses NFC sensors.

- a. True
- b. False

Yes, the answer is correct.

Score: 1

Accepted Answers:

b.

4) The objective of coverage in WSN is to use a \_\_\_\_\_ number of sensors and \_\_\_\_\_ the network lifetime. 1 point

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

Yes, the answer is correct.

Score: 1

Accepted Answers:

d.

5) WSN in agriculture uses what for processing? 1 point

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

Yes, the answer is correct.

Score: 1

Accepted Answers:

b.

6) Which of the following is/are options for communication among nanodevices? 1 point

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

Yes, the answer is correct.

Score: 1

Accepted Answers:

c.

7) State whether the following statement is true or false. 1 point

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

Yes, the answer is correct.

Score: 1

Accepted Answers:

a.

8) State whether the following statement is true or false. 1 point

Statement: UAV networks use a ring topology.

- a. True
- b. False

Yes, the answer is correct.

Score: 1

Accepted Answers:

b.

9) In multi-UAV networks, the scalability is \_\_\_\_\_. 1 point

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

No, the answer is incorrect.

Score: 0

Accepted Answers:

d.

10) Single UAV system uses \_\_\_\_\_ antenna. 1 point

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

Yes, the answer is correct.

Score: 1

Accepted Answers:

b.

11) Which of the following is/are constraint/constraints of UAV network? 1 point

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

Yes, the answer is correct.

Score: 1

Accepted Answers:

b.

12) Low-end sensor nodes are - 1 point

- 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

Yes, the answer is correct.

Score: 1

Accepted Answers:

c.

13) State whether the following statement is true or false. 1 point

Statement: FANETs are flying ad hoc networks.

- a. True
- b. False

Yes, the answer is correct.

Score: 1

Accepted Answers:

a.

14) State whether the following statement is true or false. 1 point

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

- a. True
- b. False

Yes, the answer is correct.

Score: 1

Accepted Answers:

a.

15) State whether the following statement is true or false. 1 point

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

- a. True
- b. False

Yes, the answer is correct.

Score: 1

Accepted Answers:

b.