

Course outline
About NPTEL
How does an NPTEL online course work?
Week 0
Week 1
Week 2
Week 3
Week 4
Week 5
● Lecture 21 : Interoperability in Internet of Things
● Lecture 22 : Introduction to Arduino-I
● Lecture 23 : Introduction to Arduino-II
● Lecture 24 : Integration of Sensors and Actuators with Arduino-I
● Lecture 25 : Integration of Sensors and Actuators with Arduino-II
● Lecture material of Week 5
● Quiz: Week 05: Assignment 05
● Week 5 Feedback Form
Week 6
Week 7
Week 8
Week 9
Week 10
Week 11
Week 12
Assignment Solutions
Books
Text Transcripts
Live Interactive Session

Week 05: Assignment 05

The due date for submitting this assignment has passed.

Due on 2025-08-27, 23:59 IST.

Assignment submitted on 2025-08-22, 18:41 IST

1) Why interoperability in IoT is an issue? 1 point

- a. IoT nodes are heterogeneous hence they communicate in different protocols
- b. IoT nodes are homogeneous and communicate with the same protocol
- c. IoT nodes do not communicate.
- d. IoT nodes are small.

Yes, the answer is correct.

Score: 1

Accepted Answers:

a.

2) UNSPSC provides a solution for which of the following? 1 point

- a. Manufacturing
- b. Supply Chain
- c. Classification
- d. Communication

Yes, the answer is correct.

Score: 1

Accepted Answers:

c.

3) Arduino development boards are equipped with micro-controller processors which are _____ with respect to their hardware configurations. 1 point

- a. closed source
- b. open source
- c. forward source
- d. up sourced

Yes, the answer is correct.

Score: 1

Accepted Answers:

b.

4) Translation of inter-device communication forms an important part in solving device interoperability. 1 point

- a. True
- b. False

Yes, the answer is correct.

Score: 1

Accepted Answers:

a.

5) With respect to the different wireless communication protocols such as Zigbee, Bluetooth, GPRS, 1 point
6LoWPAN and WiFi, which of the following terms can be associated with?

- a. Homogeneity
- b. Heterogeneity
- c. Self Service
- d. All of the given

Yes, the answer is correct.

Score: 1

Accepted Answers:

b.

6) Which among the following are valid Arduino datatypes? 1 point

- a. byte
- b. char
- c. Boolean
- d. All of the given

Yes, the answer is correct.

Score: 1

Accepted Answers:

d.

7) What is the purpose of the delay() function in Arduino programming? 1 point

- a. To speed up the execution
- b. To terminate the program
- c. To reset all parameters
- d. To make the program go to sleep for a certain duration.

Yes, the answer is correct.

Score: 1

Accepted Answers:

d.

8) Consider the following Arduino code snippet. 1 point

```
String str = "HelloWorld";
```

```
String ptr = str.ToUpper();
```

What will be the value of String ptr?

- a. HelloWorld
- b. helloworld
- c. HELLOWORLD
- d. WORLDHELLO

Yes, the answer is correct.

Score: 1

Accepted Answers:

c.

9) What does the following code snippet do in interfacing a servo motor with the Arduino MEGA board? 1 point

```
int servoPin = 12;
```

- a. Declares pin for connecting servo motor
- b. Declares pin for providing power to MEGA board
- c. Declares pin for Ground supply for servo motor
- d. None of these

Yes, the answer is correct.

Score: 1

Accepted Answers:

c.

10) State True or False. 1 point

Statement: "The "Verify" option in the Arduino IDE checks the code for compilation errors."

- a. True
- b. False

Yes, the answer is correct.

Score: 1

Accepted Answers:

a.

11) The tool used to select a particular COM port for connecting Arduino to a serial connector is called a sketch. 1 point

- a. True
- b. False

Yes, the answer is correct.

Score: 1

Accepted Answers:

b.

12) In general, with respect to any sensor that can be connected to an Arduino board, which of the following is correct? 1 point

- a. The sensor has infinite number of connecting pins
- b. The sensor will have at least 3 pins (1 +Vcc, 1 GND and 1 Data pin)
- c. The sensor need not connect to the Arduino board.
- d. The sensor will always have exactly 5 pins.

Yes, the answer is correct.

Score: 1

Accepted Answers:

b.

13) You connect the +Vcc PIN of a sensor with which of the corresponding PIN of Arduino board. 1 point

- a. 3V
- b. GND
- c. PIN A5
- d. PIN CTX

Yes, the answer is correct.

Score: 1

Accepted Answers:

b.

14) Servo is a type of _____. 1 point

- a. Sensor
- b. Actuator
- c. Modifer
- d. Pacifier

Yes, the answer is correct.

Score: 1

Accepted Answers:

b.

15) While uploading a sketch to an Arduino board, which of the following should be checked? 1 point

- a. Board
- b. Serial Port
- c. Both Board and Serial Port
- d. Neither Board nor Serial Port

Yes, the answer is correct.

Score: 1

Accepted Answers:

c.