



## Unit 7 - Week 5

Register for  
Certification exam

### Course outline

How to access the  
portal

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

● Week 5: Lecture  
Material

● Quiz : Assignment 5

○ Feedback for Week 5

Week 6

Week 7

Week 8

Week 9

Week 10

Week 11

Week 12

DOWNLOAD VIDEOS

Assignment Solution

### Assignment 5

The due date for submitting this assignment has passed.

Due on 2019-03-06, 23:59 IST

Assignment submitted on 2019-03-05, 12:40 IST

1) Why interoperability is required in Internet of Things?

1 point

- a. Heterogeneous wireless communication protocols
- b. Different programming languages
- c. Different control models
- d. All of the above

- ☐ a
- ☐ b
- ☐ c
- ☒ d

Yes, the answer is correct.

Score: 1

Accepted Answers:

d

2) Unique identification codes associated with device interoperability are:

1 point

- a. Electronic Product Code (EPC)
- b. Universal Product Code (UPC)
- c. Uniform Resource Identifier (URI)
- d. All of these

- ☐ a
- ☐ b
- ☐ c
- ☒ d

Yes, the answer is correct.

Score: 1

Accepted Answers:

d

3) The interoperability between devices and device users in terms of syntax is termed as:

1 point

- a. Syntactic interoperability
- b. Synthetic interoperability
- c. Both a and b
- d. None of these

- ☐ a
- ☐ b
- ☒ c
- ☐ d

No, the answer is incorrect.

Score: 0

Accepted Answers:

a

4) The UMB-A adaptor:

1 point

- a. Convert physical devices into virtually abstracted ones
- b. converts local middleware's message into global metadata's message
- c. both a and b
- d. none of these

- ☐ a
- ☐ b
- ☒ c
- ☐ d

Yes, the answer is correct.

Score: 1

Accepted Answers:

c

5) Arduino UNO supports output supply voltage of:

1 point

- a. 5V
- b. 3.3 V
- c. 9 V
- d. 5V, 3.3V

- ☐ a
- ☐ b
- ☐ c
- ☒ d

Yes, the answer is correct.

Score: 1

Accepted Answers:

d

6)

1 point

What is the servo library command to move the shaft of Servo motor back and forth?

- a. Knob()
- b. Sweep()
- c. write()
- d. detach()

- ☐ a
- ☒ b
- ☐ c
- ☐ d

No, the answer is incorrect.

Score: 0

Accepted Answers:

c

7) An Arduino UNO has following number of analog inputs:

1 point

- a. 2
- b. 4
- c. 6
- d. 8

- ☐ a
- ☐ b
- ☒ c
- ☐ d

Yes, the answer is correct.

Score: 1



Accepted Answers:

c

8)

1 point

What is the functionality of the following code?

```
void setup() {  
  Serial.begin(9600);  
}  
  
void loop() {  
  int sensorValue = analogRead(A0);  
  Serial.println(sensorValue);  
  delay(1);  
}
```

- a. Reads analog values from A0 only.
- b. Reads analog values from A0 and prints on the serial port/terminal only.
- c. Reads analog values from A0 and prints on the serial port over and over again after delay of 1 millisec.
- d. None of these.

- ☐ a
- ☐ b
- ☒ c
- ☐ d

Yes, the answer is correct.

Score: 1

Accepted Answers:

c

9)

1 point

What is the functionality of the following code?

```
#include <Servo.h>  
  
Servo myservo;  
int potpin = 0; // potentiometer value initialization  
int val;  
  
void setup() {  
  myservo.attach(9);  
}  
  
void loop() {  
  val = analogRead(potpin);  
  myservo.write(val);  
  delay(15);  
}
```

- a. Reads potentiometer values on A0 only.
- b. Reads potentiometer values on A0 and writes to servo controller in a loop after a delay of 15 milliseconds.
- c. Writes values to servo motors only.
- d. None of these

- ☐ a
- ☒ b
- ☐ c
- ☐ d



Yes, the answer is correct.

Score: 1

Accepted Answers:

b

10) Pin 4 of a DHT sensor is connected to which pin of Arduino?

1 point

- a. 5V
- b. GND
- c. A0
- d. D0

- ☐ a
- ☒ b
- ☐ c
- ☐ d

Yes, the answer is correct.

Score: 1

Accepted Answers:

b

11) The function random(max) in Arduino gives:

0 points

- a. A random number between 1 and max.
- b. A random number between 0 and max.
- c. A random number sequence of length equal to max.
- d. None of these.

- ☐ a
- ☒ b
- ☐ c
- ☐ d

Yes, the answer is correct.

Score: 0

Accepted Answers:

b

12) ISR in Arduino stands for:

1 point

- a. Interrupt service routine
- b. Information service route
- c. Interrupt service route
- d. Information server route

- ☒ a
- ☐ b
- ☐ c
- ☐ d

Yes, the answer is correct.

Score: 1

Accepted Answers:

a



13) Which of the following is not a valid arithmetic operator in Arduino?

1 point

- a. \*
- b. x
- c. +
- d. -

- ☐ a
- ☒ b
- ☐ c
- ☐ d

Yes, the answer is correct.

Score: 1

Accepted Answers:

b

14) The function delay(xx) counts the values of delay in:

1 point

- a. Seconds
- b. Minutes
- c. Milliseconds
- d. Hours

- ☐ a
- ☐ b
- ☒ c
- ☐ d

Yes, the answer is correct.

Score: 1

Accepted Answers:

c

15) The number of digital I/O pins in Arduino UNO is:

1 point

- a. 6
- b. 4
- c. 8
- d. 14

- ☐ a
- ☐ b
- ☐ c
- ☒ d

Yes, the answer is correct.

Score: 1

Accepted Answers:

d



Previous Page

End

A project of



NPTEL

National Programme on  
Technology Enhanced Learning

In association with

**NASSCOM**<sup>®</sup>

Powered by

Google<sup>™</sup>

Funded by

Government of India  
Ministry of Human Resource Development

