

## Unit 8 - Week 6

## Course outline

How does an NPTEL online course work?

Week 0

Week 1

Week 2

Week 3

Week 4

Week 5

Week 6

- Lecture 26 : Key Enablers of Industrial IoT: Sensing-Part 1

- Lecture 27 : Key Enablers of Industrial IoT: Sensing-Part 2

- Lecture 28 : Key Enablers of Industrial IoT: Connectivity-Part 1

- Lecture 29 : Key Enablers of Industrial IoT: Connectivity-Part 2

- Lecture 30 : Key Enablers of Industrial IoT: Connectivity-Part 3

- Week 6 Lecture Material

- Quiz : Assignment 6

- Week 6 Feedback Form

Week 7

Week 8

Week 9

Week 10

Week 11

Week 12

Download Videos

Text Transcripts

Detailed Assignment Solution

Live Interactive Session

## Assignment 6

The due date for submitting this assignment has passed.  
As per our records you have not submitted this assignment.

Due on 2020-03-11, 23:59 IST.

1) 1 point

- Why do we need IIoT?
- Detecting machine failure
  - Improving safety
  - Preventing machine failure
  - All of the above

- a.  
 b.  
 c.  
 d.

No, the answer is incorrect.  
Score: 0

Accepted Answers:  
d.

2) 1 point

- An IoT device consists of \_\_\_\_\_.
- Sensor
  - Wireless communication module
  - Processor
  - All of the above

- a.  
 b.  
 c.  
 d.

No, the answer is incorrect.  
Score: 0

Accepted Answers:  
d.

3) 1 point

- What is the suitable peripheral interfacing protocol of accelerometer ADXL335 sensor?
- UART
  - I2C
  - ADC
  - None of the above

- a.  
 b.  
 c.  
 d.

No, the answer is incorrect.  
Score: 0

Accepted Answers:  
c.

4) 1 point

- Gas sensing in calorimetric method is based on
- Fluorescence properties of the sensing material
  - Change in temperature at the catalyst surface
  - Change in the resistance of the sensing material
  - Both b and c

- a.  
 b.  
 c.  
 d.

No, the answer is incorrect.  
Score: 0

Accepted Answers:  
b.

5) 0 points

- Which of the following is not true about the Chemi-resistive gas sensor?
- In n-type sensor the resistance decreases when exposed to reducing gas
  - In n-type sensor the resistance increases when exposed to reducing gas
  - In p-type sensor the resistance decreases when exposed to reducing gas
  - Both b & c are true

- a.  
 b.  
 c.  
 d.

No, the answer is incorrect.  
Score: 0

Accepted Answers:  
a.

6) 1 point

- What do you understand by stability of the sensor?
- If a sensor reaches its stable output in time constant period
  - Robustness in the gas sensing property of gas sensor in a long time period when exposed to hostile ambience.
  - Slow aging
  - Stability is associated with aging of sensor

- a.  
 b.  
 c.  
 d.

No, the answer is incorrect.  
Score: 0

Accepted Answers:  
b.

7) 1 point

- What is the data rate for Ethernet/IP protocol?
- 1000 bytes
  - 1200 bytes
  - 1500 bytes
  - All of the above

- a.  
 b.  
 c.  
 d.

No, the answer is incorrect.  
Score: 0

Accepted Answers:  
d.

8) 1 point

- Which of the following is considered as the root for Profinet?
- Ethernet/IP
  - EtherCat
  - Both (a) and (b)
  - None of the above

- a.  
 b.  
 c.  
 d.

No, the answer is incorrect.  
Score: 0

Accepted Answers:  
a.

9) 1 point

- Which of the following is characteristic for Time-Sensitive Networking (TSN)?
- Time-aware
  - Time-schedule
  - Both (a) and (b)
  - None of the above

- a.  
 b.  
 c.  
 d.

No, the answer is incorrect.  
Score: 0

Accepted Answers:  
c.

10) 0 points

- Which of the following topology is supported by Profibus?
- Ring
  - Star
  - Bus
  - All of the above

- a.  
 b.  
 c.  
 d.

No, the answer is incorrect.  
Score: 0

Accepted Answers:  
d.

11) 1 point

- Which of the following is a bit-oriented system?
- CC-Link/LT
  - CC-Link IE
  - CC Link Safety
  - None of the above

- a.  
 b.  
 c.  
 d.

No, the answer is incorrect.  
Score: 0

Accepted Answers:  
a.

12) 1 point

- Which encoding scheme is followed by DeviceNet while signal transmission?
- Return to Zero
  - Non return to Zero
  - No encoding
  - None of the above

- a.  
 b.  
 c.  
 d.

No, the answer is incorrect.  
Score: 0

Accepted Answers:  
b.

13) 1 point

- Which of the following modulating technology is considered by Digital Subscriber Line (DSL)?
- Discrete Multitone Technology
  - Carrierless Amplitude Modulation
  - Multiple Virtual Line
  - All of the above

- a.  
 b.  
 c.  
 d.

No, the answer is incorrect.  
Score: 0

Accepted Answers:  
d.

14) 1 point

- A fault has been discovered in a manufacturing process. The system has been taken offline and a system engineer has been tasked with fixing the problem. What type of analytics should he run?
- Baseline analytics
  - Prognostic analytics
  - Diagnostic analytics
  - None of the above

- a.  
 b.  
 c.  
 d.

No, the answer is incorrect.  
Score: 0

Accepted Answers:  
c.

15) 1 point

- Improvement of business value due to IIoT analytics stems from:
- Data-driven insights
  - Better connectivity
  - Real-time processing
  - Both a) and c)

- a.  
 b.  
 c.  
 d.

No, the answer is incorrect.  
Score: 0

Accepted Answers:  
d.