NPTEL Online Certification Courses

Indian Institute of Technology Kharagpur

Introduction to Internet of Things

Assignment-Week 1

TYPE OF QUESTION:MCQ/MSQ

Number ofquestions:15 **Total marks: 15 X 1= 15**

QUESTION 1:

Which of the following are the enablers of IoT?

a. RFID
b. Nanotechnology
c. Sensors
d. All of the these

Correct Answer: d. All of the these

Detailed Solution: The enablers of IoT are –

a. RFID
b. Nanotechnology
c. Sensors

See lecture 1 (Introduction to IoT – Part - I) @ 12:41

QUESTION 2:

Which of the following is/are NOT a characteristic of IoT?

a. Efficient, scalable and associated architecture.
b. Ambiguous naming and addressing.
c. Abundance of sleeping nodes, mobile and non-IP devices.
d. None of these

Correct Answer: b.Ambiguous naming and addressing.

Detailed Solution:The characteristics of IoT are –

a. Efficient, scalable and associated architecture

b. Unambiguous naming and addressing

c. Abundance of sleeping nodes, mobile and non-IP devices

See lecture 1 (Introduction to IoT – Part - I) @ 16:02

QUESTION 3:

State whether the following statement is True or False.

Statement: The increasing number of devices in IoT is expected to result in an address crunch.

a. True
b. False

Correct Answer: a. True

Detailed Solution: The increasing number of devices in IoT is expected to result in an address crunch.

See lecture 2 (Introduction to IoT – Part - II) @ 01:19

QUESTION 4:

State whether the following statement is True or False.

Statement: The gateway has a unique network prefix, which can be used to identify them globally.

a. True
b. False

Correct Answer: a. True

Detailed Solution: The gateway has a unique network prefix, which can be used to identify them globally.

See lecture 2 (Introduction to IoT – Part - II) @ 6:58

QUESTION 5:

Sometimes, when there is a need for the nodes to communicate directly to the Internet, _____ can be used.

a. Sensors
b. Actuators
c. Tunneling
d. None of these

Correct Answer: c. Tunneling

Detailed Solution: Sometimes,there is a need for the nodes to communicate directly to the Internet. This is achieved by tunneling.

See lecture 2 (Introduction to IoT – Part - II) @ 11:44

QUESTION 6:

In _____ a node/network is connected to multiple networks for improved reliability.

a. Transparent roaming
b. Multi-homing
c. None of these
d. Both (a) and (b)

Correct Answer: b. Multi-homing

Detailed Solution: In multi-homing, a node/network is connected to multiple networks for improved reliability.

See lecture 2 (Introduction to IoT – Part - II) @ 15:22

QUESTION 7:

The IPv6 notation uses _____ values.

a. Roman
b. Hexadecimal
c. Both (a) and (b)
d. None of these

Correct Answer: b. Hexadecimal

Detailed Solution: The IPv6 notation uses hexadecimal values.

See lecture 2 (Introduction to IoT – Part - II) @ 16:33

QUESTION 8:

A _____ detects (senses) changes in the ambient conditions or in the state of another device or a system, and forwards or processes this information in a certain manner.

a. Sensor
b. Actuator
c. Both (a) and (b)
d. None of these

Correct Answer: a. Sensor.

Detailed Solution: A sensor detects (senses) changes in the ambient conditions or in the state of another device or a system, and forwards or processes this information in a certain manner..

See lecture3 (Sensing) @ 03:17

QUESTION 9:

A microphone is an example of an _____.

a. Input device and actuator
b. Only actuator
c. Only Transducer
d. Input device and transducer

Correct Answer: d. Input device and transducer

Detailed Solution:A microphone is an example of an input device and transducer.

See lecture 3 (Sensing) @ 10:31

QUESTION 10:

The _____ of a sensor is the smallest change it can detect in the quantity that it is measuring.

a. Resolution
b. Bias
c. Noise
d. None of these

Correct Answer: a. Resolution

Detailed Solution: The resolution of a sensor is the smallest change it can detect in the quantity that it is measuring.

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See lecture 3 (Sensing) @ 12:33

QUESTION 11:

Based on the data type, sensors are classified as _____.

a. Scalar and Vector/Multimedia
b. Only scalar
c. Both (a) and (b)
d. Only vector

Correct Answer: a. Scalar and Vector/Multimedia

Detailed Solution: Based on the data type, sensors are classified as Scalar and Vector/Multimedia.

See lecture 3 (Sensing) @ 13:05

QUESTION 12:

Solenoid valve is an example of _____.

a. Sensor
b. Actuator
c. Processing unit
d. None of these

Correct Answer: b. Actuator

Detailed Solution: Solenoid valve is an example of actuator.

See lecture 4 (Actuation) @ 02:49

QUESTION 13:

An actuator requires a _____ and _____.

a. Control signal and a bias signal
b. Control signal and a source of energy
c. Noise signal and a source of energy
d. None of these

Correct Answer: b. Control signal and source of energy

Detailed Solution: An actuator requires a control signal and source of energy.

See lecture 4 (Actuation) @ 03:50

QUESTION 14:

State whether the following statement is True or False.

Statement: Pneumatic rack and pinion actuators are used for valve controls of water pipes.

a. True
b. False

Correct Answer: a. True

Detailed Solution: Pneumatic rack and pinion actuators are used for valve controls of water pipes. See lecture 4 (Actuation)@ 07:52

QUESTION 15:

Which of the following is NOT a function of an IoT gateway?

a. Switching
b. Routing
c. Protocol conversion
d. Generating noise

Correct Answer: d. Generating noise

Detailed Solution: Switching, routing, and protocol conversion are the functions of an IoT gateway.

See lecture 5 (Basics of IoT Networking – Part - I) @ 19:27

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