19ITT302 - INTERNET OF THINGS
UNIT-2:FUNDAMENTAL MECHANISMS & KEY TECHNOLOGIES

1) Define Arduino

Arduino is a free electronics platform having easy to use hardware and software. It has a microcontroller capable of reading input from sensors to control the motors programmatically.

2) List mostly used sensors types in IoT

Mostly used sensor types in IoT are:

- Smoke sensor
- Temperature sensors
- Pressure sensor
- Motion detection sensors
- Gas sensor
- Proximity sensor
- IR sensors

3) Mention the basic difference between IoT and sensor businesses?

A sensor business does not need an active internet connection to work. Internet of Things requires a control side to work.

4) What are the functions used to read analog and digital data from a sensor in Arduino?

Functions used to read analog and digital data from a sensor in Arduino are: digitalRead() and digitalWrite().

5) Define MicroPython

MicroPython is a Python implementation, which includes a small subset of its standard library. It can be optimized to run on the ModeMCU microcontroller.

6) Mention some of the commonly used water sensors

The commonly used water sensors are:

- Turbidity sensor
- Total organic carbon sensor

- pH sensor
- Conductivity sensor

7) What are IoT publishers?

IoT Publishers are sensors that send real-time data to intermediate devices or middleware.

8) What is a library in Arduino?

Arduino library is a collection of code that is already written for controlling module or sensor.

9) Mention some of the wearable Arduino boards

Wearable Arduino boards are:

- Lilypad Arduino main board
- Lilypad Arduino simple
- Lilypad Arduino simple snap
- Lilypad Arduino USB

10) What is WSN?

The full form of WSN is Wireless Sensor Network. It is a network of notes, design to observe and to study physical parameters of the application.

11) How to install a new library in Arduino?

A new library in Arduino can be installed by selecting the library from the sketch option in Toolbar.

12) Name some important IoT hardware

IoT hardware includes varieties of devices like router, bridge, sensor, etc.

13) How to program Arduino?

Programmers can use the Arduino IDE in order to write an Arduino program. Developers can also use Node.js Johny five-module in order to control Arduino.

14) How to store the high-volume file into Arduino?

A specification called Gridfs can be used for storing high volume file into Arduino.

15) What is the basic difference between the IoT network and Wireless Sensor Network?

Wireless Sensor Network things connected to the wireless network and gather some monitoring environment or data. IoT contains a combination of:

- WSN
- Internet
- Cloud Storage
- web or mobile application

16) What is the importance of the network in IoT?

The network is the main part of the IoT. It is responsible for providing a practical and smart system that makes strong infrastructure. The network offers scalability to help devices coordinate with other lines with the Internet.

17) What is the connection between IoT and sensors in the commercial enterprise?

Sensors may be used in devices that are not net-connected, while devices need to be connected to the Net with IoT. Yet, sensing is a part of IoT, even if the device is not connected to the Net.

18) What are interrupts in Arduino?

Interrupts enable specific tasks to process in the background and are enabled by default. Its main job is to ensure the device processor responds fastly to essential events.