

1.What is the primary purpose of downloading the Arduino IDE software?

- a) To connect to the internet
- b) To manage firmware on connected devices
- c) To write, compile, and upload code to Arduino boards
- d) To create visual diagrams of electronic circuits

**ANS: C**

2.When installing the Arduino IDE, which of the following is a required step *after* downloading the software?

- a) Connect the Arduino board to a power source only
- b) Select the specific Arduino board model in the IDE
- c) Launch the Arduino IDE and open a new sketch
- d) Power up your Arduino board with a USB cable

**ANS: d**

3.What is the function of the `setup()` function in an Arduino program?

- a) It runs repeatedly until the board is powered off
- b) It runs only once when the board is powered on or reset
- c) It is used to read input from analog pins
- d) It initializes libraries and sets up variables

**ANS: b**

4.How does a user typically connect the Arduino IDE to a computer to upload code?

- a) Via Bluetooth
- b) Via Wi-Fi
- c) Via a USB cable
- d) Via an Ethernet cable

**ANS: c**

5.Which step is necessary to ensure the Arduino IDE correctly compiles the code for your specific board?

- a) Plug in the USB cable
- b) Use the correct port
- c) Select the correct board from the Tools menu
- d) Open the Serial Monitor

**ANS: c**

6.Which of the following is *not* a necessary component for basic Arduino IDE installation and use?

- a) An Arduino boards
- b) A USB cables
- c) An internet connection to download the IDE
- d) The Arduino IDE software

**ANS: d**

7.What is the function of the `loop()` function in an Arduino program?

- a) It runs only once when the board is powered on or reset
- b) It executes the initial setup for the Arduino IDE
- c) It runs repeatedly after the `setup()` function has finished
- d) It is used to define variables

**ANS:b**

**For writing infinite loop in Arduino, which function it uses?**

- (a) void setup( )
- (b) void loop( )
- (c) void main( )
- (d) None of these

**ANS: b**

**Normally, an LED is connected to \_\_\_\_\_ pin of Arduino.**

- (a) Analog
- (b) Digital
- (c) Analog and Digital
- (d) None of these

**ANS: b**

**The output of following code will be:**

```
void setup()
{
    pinMode(2,OUTPUT);
    digitalWrite(2,HIGH);
}
Void loop()
{
```

- (a) Logic '1' at pin 2
- (b) Digit 1 at pin 2
- (c) Decimal value '1' at pin 2
- (d) error

**Ans:d**

```
delay(200);
```

**Above line in arduino IDE generates the delay of \_\_\_\_\_**

- (a) 0.2s
- (b) 20s
- (c) 0.02s
- (d) 200s

**ANS: a**

**A function to generate micro second delay in Arduino is**

- (a) delayms( )
- (b) delayus( )
- (c) delay( )
- (d) delayMicroseconds( )

Ans:d

**How many minimum functions must be written in any arduino code?**

- (a) 0
- (b) 1
- (c) 2
- (d) 3

**ANS: C**

- When writing a sketch, how do you decide which features belong in the `setup` function and which belong in the `loop` function?
  - a) Features that need to be initialized go in setup
  - b) Features that need to be initialized go in loop
  - c)Features that need to run continuously go in setup
  - d)Features that need to run continuously go in loop

**ANS: a**

3. If we use the Arduino Uno or the Ethernet shield to write data to an SD card, this data can be read by any computer.

- True
- False

**ANS: TRUE**

4. The Arduino Uno can keep track of the real-time date and time right out of the box.

- True
- False

**ANS: FALSE**

5. The HTTP response code that indicates successful transmission of the message request is \_\_\_\_\_.  
 a)300  
 b)302  
 c)200  
 d)401

ANS: c

6. How can you hook up multiple Arduinos to your local network?

- a) Give them a unique MAC address
- b) Give them a unique IP address
- c)Give them a unique MAC address and a unique IP address
- d)Give them a unique MAC address and match your router's IP address

ANS: c



8. An Arduino sketch does not have the traditional main () function that's generally present in C programs.

- True
- False

ANS: true

9. What is the differentiating aspect between the two numeric types: **char** and **byte**?

- a)Range
- b)No. of bytes/Size
- c)**char** is used in highly specific applications
- d)**byte** is used to save memory

ANS: b

10. The numeric type **double** is the same as **float**

- True
- False

ANS: False



13. Which function executes first when a sketch is built?

- loop()

- setup()
- init()
- main()

ANS: setup

15. Select the function that you can use to detect a button press on the Arduino

- buttonRead()
- buttonPress()
- analogRead()
- digitalWrite()

ANS: digital read()

16. An Arduino Uno is most suited for \_\_\_\_\_.

- a. Controlling peripherals
- b. Powering peripherals
- c. Controlling and powering peripherals

ANS: c

17. The core processor of the Arduino Uno (Atmega328p) has a 16MHz crystal oscillator for the processor clock.

- True
- False

ANS: true

18. The 3.3V regulator on the Arduino Uno has an output current of \_\_\_\_\_.

- 50 mA
- 100 mA
- 150 mA
- 200 Ma

ANS: 50mA

19. An LED driver is an example of \_\_\_\_\_.

- Input
- Output

ANS: output

20. `delay(100000)` results in a delay of \_\_\_\_\_.

- 100000 seconds
- 100 seconds
- 1 second
- 10 seconds

ANS: 100s

21. Select the correct statement(s)

- PWM pins mimic analog signals
- Sensors generate analog readings that are read by the analog pins
- Analog signals are converted using an analog-to-digital converter by analog pins
- All of the above

ANS: all

22. An Arduino sketch undergoes pre-processing to turn into a \_\_\_\_\_ program

- C/C++
- Java
- Assembly
- Arduino

ANS: c/c++

23. It's impossible to store a higher number of characters in an array than the declared size of the array.

- True
- False

ANS: true

24. Select the true statements

- a. You can store multiple values in an array and use a loop to iterate through each of the values
- b. A variable that was previously used to store an integer can be repurposed to store a float value instead
- c. You can convert a variable from one data type to another
- d. You can store a single value in two different data types using a single variable

ANS:a

)



7. To use the I2C communication protocol, you can use the \_\_\_\_\_ library in your sketch.

- Serial
- SPI
- Wire
- ComI2C

ANS: wire

28. Select the sensor that measures pressure relative to atmospheric pressure.

- Vacuum pressure sensor
- Absolute pressure sensor
- Gauge pressure sensor
- Differential pressure sensor

ANS:

Gauge pressure sensor

29. Select the type of temperature sensor that you are most likely to find in an Integrated Circuit.

- Thermistor
- Semiconductor based sensor
- Resistance Thermometer
- Thermocouple

ANS: Semiconductor based sensor

30. A hygrometer is a \_\_\_\_\_ sensor.

- Humidity
- Water content
- Wetness
- Air pressure

ANS: Humidity

32. Select the right measurement units for a humidity sensor.

- DEW/Frost point (D/F PT)
- Parts Per Million (PPM)
- RH

ANS: RH



33. \_\_\_\_\_ sensors measure moisture using humidity.

- Seismoscope
- Capacitive
- Resistive
- Both Resistive and Capacitive

ANS: Both Resistive and Capacitive

35. This proximity sensor can sense metals as well as the levels of liquids.

- Inductive proximity sensor
- Capacitive proximity sensor
- Ultrasonic proximity sensor
- Magnetic proximity sensor

ANS: Capacitive proximity sensor

36. Select the communication protocol(s) that allows multiple Masters instead of just one.

- a.SPI
- b.I2C
- c.CAN
- d. both b &c

ANS:d

37. Select the communication protocol(s) that allow the Master and Slaves to communicate with each other simultaneously.

- a.CAN
- b.SPI
- c.I2C
- d. both a & b

ANS:d

38. If you are optimizing for performance, and have no shortage of pins, which communication protocol/hardware would you choose?

- UART**
- SPI**
- I2C**
- CAN**

**ANS: SPI**

**39. This is the communication protocol used by SD (Secure Digital) cards.**

- I2C**
- UART**
- SPI**
- USART**

**ANS: SPI**

**40. A tactile sensor is also known as a \_\_\_\_\_ sensor.**

- Temperature**
- Humidity**
- Pressure**
- Touch**

**ANS: Touch**

**1. What is the full form of IoT?**

- a) Internet of Technology
- b) Incorporate of Things
- c) Internet of Things
- d) Incorporate of Technology

**Answer: c**

Explanation: The full form of IoT is the “Internet of Things”. IoT means accessing and controlling equipment and devices that are used daily through the Internet.

**2. What is IoT?**

- a) network of physical objects embedded with sensors
- b) network of virtual objects
- c) network of objects in the ring structure
- d) network of sensors

**Answer: a**

Explanation: The Internet of Things (IoT) is a network of physical objects embedded with sensors, software, and other technologies for exchanging data with other devices over the internet.

3. Who coined the term “Internet of Things”?
- a) Kevin Aston
  - b) John Wright
  - c) Edward Jameson
  - d) George Garton

**Answer: a**

Explanation: Kevin invented coined the term “Internet of Things” in 1999 during his work at Procter & Gamble to describe the network connecting objects in the physical world with the Internet.

4. When was the actual term “Internet of Things” coined?

- a) 1998
- b) 1999
- c) 2000
- d) 2002

**Answer: b**

Explanation: The actual term “Internet of Things” was coined in 1999 by technologist Kevin Aston during his work at Procter & Gamble while giving a presentation about technology and the internet.

5. Which of the following is not an IoT device?

- a) Table
- b) Laptop
- c) Arduino
- d) Tablet

**Answer: a**

Explanation: IoT devices are embedded with sensors, microprocessors, actuators, etc. Laptop, Arduino, and Tablet are embedded systems and they can be operated with the internet, thus they are IoT devices.

6. Which of the following is false about IoT devices?

- a) IoT devices use the internet for collecting and sharing data
- b) IoT devices need microcontrollers
- c) IoT devices use wireless technology
- d) IoT devices are completely safe

**Answer: d**

Explanation: IoT devices are wireless devices and they use the internet for collecting and sharing data. They are not completely safe because they store data and sometimes hackers access them.

7. Which of the following is not an IoT platform?

- a) Amazon Web Services
- b) Microsoft Azure
- c) Salesforce
- d) Flipkart

Answer: d

Explanation: Amazon Web Services, Microsoft Azure, and Salesforce provide cloud computing IoT services. But Flipkart is an e-commerce website that provides marketing facilities.

8. Which of the following is not an application of IoT?

- a) BMP280

- b) Smart home
- c) Smart city
- d) Self-driven cars

Answer: a

Explanation: Smart homes, smart cities, and self-driven cars are applications of IoT. BMP280 is a sensor that is used to measure air pressure. It is a component of IoT devices.

9. Which of the following is not a fundamental component of an IoT system?

- a) Sensors
- b) Connectivity and data processing
- c) User interface
- d) Transformer

Answer: d

Explanation: Sensors are required to collect data, network connectivity is required for data processing and to interface with the user. Transformers are not required as they are used for voltage transformation.

10. What is the full form of IIOT?

- a) Index Internet of Things
- b) Incorporate Internet of Things
- c) Industrial Internet of Things
- d) Intense Internet of Things

Answer: c

Explanation: The full form of IIOT is the “Industrial Internet of Things”. It is for industry-oriented applications and communication transportation is done through both wired and wireless devices.

11. Which layer is used for wireless connection in IoT devices?

- a) Application layer
- b) Network layer
- c) Data link layer
- d) Transport layer

Answer: c

Explanation: Data link layer is used for Ethernet and wireless connections. The network layer is used for Internet Protocols. The transport layer is used for TCP/UDP protocols and the application layer directly interacts with the application.

12. Which of the following is false about the IoT components?

- a) A light sensor (photoresistor) is an analog sensor
- b) A microphone is a digital sensor
- c) A push button is a digital sensor
- d) A keyboard is a digital sensor

Answer: b

Explanation: A light sensor is an analog sensor because it senses light intensity. A microphone is also an analog sensor because it senses sound. Push buttons and keyboards are operated digitally so, they are digital sensors.

13. Which of the following is used to capture data from the physical world in IoT devices?

- a) Sensors

- b) Actuators
- c) Microprocessors
- d) Microcontrollers

Answer: a

Explanation: Sensors are used to capture data from the physical world. Microprocessors and microcontrollers are used to control the operations and actuators are for outputs of IoT devices.

14. Which of the following command is used to trigger the Amazon echo IOT device?

- a) Hello
- b) Suri
- c) Alexa
- d) Hey

Answer: c

Explanation: Amazon Echo is a hands-free speaker that can be controlled with the human voice. It connects to Alexa voice services and “Alexa” command is used to trigger Amazon echo IoT device.

15. Which of the following is false about the MANET IoT network?

- a) It is a self-configuring network
- b) It has a low data rate
- c) It doesn't have any encryption
- d) Power is readily available for complex security

Answer: d

Explanation: MANET is an unstable network. It is self-configuring and it has a low data rate. It doesn't have power availability for complex security. It also doesn't have any encryption.

16. Which of the following is not a sensor in IoT?

- a) BMP280
- b) DHT11
- c) Photoresistor
- d) LED

Answer: d

Explanation: BMP280 is an air pressure sensor. DHT11 is a humidity and temperature sensor. A photoresistor is a light sensor. LED is not a sensor as it emits light.

17. Which of the following is not an actuator in IoT?

- a) Stepper motor
- b) A fan
- c) An LED
- d) Arduino

Answer: d

Explanation: An actuator converts electrical signals into a corresponding physical quantity. A stepper motor or a fan can rotate. An LED can emit light. So, they are actuators. But Arduino is not.

18. What is the use of PWM signals in IoT development boards?

- a) They are used by sensors to have analog input
- b) They are used by sensors to have digital input
- c) They are used by actuators to have analog input
- d) They are used by actuators to have digital input

Answer: c

Explanation: PWM signals are used for power regulation. Actuators mostly need analog signals to operate. So, PWM signals are used by actuators to have analog input.

19. Which of the following is used to reprogram a Bootloader in IoT devices?

- a) VHDL programming
- b) IDE
- c) ICSP
- d) MANET

Answer: c

Explanation: Bootloader is firmware on a microcontroller. ICSP is used to reprogram a Bootloader in IoT devices. ICSP stands for In-Circuit Serial Programming. It is a special programming method to program firmware.

20. Which of the following is true about Arduino IoT devices?

- a) They are open-source software
- b) They can only read analog inputs
- c) They have their own operating systems
- d) They don't have pre-programmed firmware

Answer: a

Explanation: Arduino designs are open-source software. They can read both analog and digital inputs. They don't have operating systems and firmware is pre-programmed inside them.

21. How many number of elements in the Open IoT Architecture?

- a) 3 elements
- b) 7 elements
- c) 8 elements
- d) 6 elements

Answer: b

Explanation: The 7 main elements are: sensor middleware (X-GSN), cloud data storage, scheduler, service delivery, and utility manager, request definition, request presentation, configuration and monitoring.

22. IoT-A stands for \_\_\_\_\_

- a) Internet of Things Area
- b) Industrial of things Architecture
- c) Internet of Things Address
- d) Internet of Things Architecture

Answer: d

Explanation: The EU's Internet of Things Architecture is another example of the way in which we can solve IoT related challenges.

23. Which of the following is not a feature of the Raspberry PI model B IoT device?

- a) It has 256 MB SDRAM
- b) It has a single USB connector
- c) It has its own operating system
- d) It has an Ethernet port

Answer: a

Explanation: Raspberry PI model B has a single 2.0 USB connector and an on-board 10/100 Ethernet RJ45 jack. It has its own operating system and 512 MB SDRAM memory.

24. Which of the following processor is used in the Raspberry PI 3 IoT device?

- a) Broadcom BCM2711
- b) Broadcom BCM2837
- c) Broadcom BCM2838
- d) Intel 8085

Answer: b

Explanation: Raspberry PI 3 has Broadcom BCM2837 microprocessor. It is a 64-bit Quad-core microprocessor. Broadcom BCM2711 is the microprocessor of Raspberry PI 4 Model B.

25. Which library is used to access I2C in Arduino IoT devices?

- a) EEPROM
- b) Wire
- c) DHT11
- d) ArduinoJson

Answer: b

Explanation: I2C is a synchronous and serial communication protocol. Wire library is used to access this protocol in Arduino. Initialization is done with Wire.begin() command.

26. Which of the following is not related to Arduino IDE IoT software?

- a) Serial monitor
- b) Verify
- c) Upload
- d) Terminate

Answer: d

Explanation: Verify option is used to verify or compile the Arduino code and the upload option is used to upload the code to the Arduino development board. Serial monitor is used to display the data.

27. Which of the following is a complete line of home IoT devices that include smart switches?

- a) Belkin's WeMo
- b) Cinder
- c) Awair
- d) Canary

Answer: a

Explanation: Belkin's WeMo is a complete line of home IoT devices that includes smart switches, cameras, lights, an air purifier and more. It allows the end user to control a lot of different devices with one smartphone app.

28. IoT gateway must provide \_\_\_\_\_

- a) Protocol abstraction
- b) Data storage
- c) Security with hardware
- d) Simple and fast installation

Answer: a

Explanation: IoT gateway must provide:

Protocol abstraction

Computing and I/O performance

Integration communication capability.

29. What IoT collects?

- a) Device data
- b) Machine generated data
- c) Sensor data
- d) Human generated data

Answer: b

Explanation: IoT is aggregating and compressing massive amounts of low latency/ low duration/high volume machine generated data coming from a wide variety of sensor to support real time use cases.

30. Which of the following protocol is used to link all the devices in the IoT?

- a) HTTP
- b) UDP
- c) Network
- d) TCP/IP

Answer: d

Explanation: The internet of Thing is the global system of interconnected computer networks that use the Internet Protocol suite (TCP/IP) to link billions of devices worldwide.

31. Which service permits the changes to the IoT services?

- a) Update
- b) Registered service status
- c) Enable from suspension
- d) Enable

Answer: a

Explanation: Update service permits changes to the IoT services. In particular, it allows for the updating of the service's lifecycle metadata according to the requested changes.

32. What is the role of Cloud in smart grid architecture of IoT?

- a) Security
- b) Collect data
- c) Manage data
- d) Store data

Answer: c

Explanation: Cloud to edge Middleware: manage data and edge devices, data streaming and event processing, control authorized access.

33. What is the component of an IoT system that executes a program?

- a) A sensor
- b) A microcontroller
- c) An actuator
- d) A digital to analog converter

Answer: b

Explanation: Microcontroller is the component of an IOT device that executes a program. It contains a control unit, converters, timers, flash memory, etc. These are used to control the program execution.

34. Which programming language is used by Arduino IDE IoT software for writing codes?

- a) Python
- b) Java
- c) C/C++
- d) JavaScript

Answer: c

Explanation: C and C++ programming languages are used in Arduino IDE for writing, compiling, and uploading codes. Several in-built libraries are also imported for better coding efficiency.

35. What is the full form of DHCP in IoT communication protocols?

- a) Dynamic Host Communication Protocol
- b) Domain Host Communication Protocol
- c) Dynamic Host Control Protocol
- d) Domain Host Control Protocol

Answer: a

Explanation: DHCP is a network management protocol used on internet protocol networks to automatically assign IP addresses. DHCP stands for Dynamic Host Communication Protocol.

36. What is the full form of IDE in Arduino IDE IoT software?

- a) Intra Reference Environment
- b) Intra Development Environment
- c) Integrated Development Environment
- d) Integrated Deployed Environment

Answer: c

Explanation: The full form of IDE in Arduino IDE IoT software is Integrated Development Environment. It is a cross-platform application for Windows, macOS, and Linux operating systems.

37. dweet.io provides \_\_\_\_\_ to send data from IoT devices.

- a) Web API
- b) POST HTTP
- c) JSON
- d) HTTP

Answer: a

Explanation: The dweet.io data sharing utility provides Web API so that we can send data from our IoT device, known as thing in dweet.io documentation.

6. Which of the following is false about IoT devices?

- a) IoT devices use the internet for collecting and sharing data
- b) IoT devices need microcontrollers
- c) IoT devices use wireless technology
- d) IoT devices are completely safe

Answer: d

Explanation: IoT devices are wireless devices and they use the internet for collecting and sharing data. They are not completely safe because they store data and sometimes hackers access them.

7. Which of the following is not an IoT platform?

- a) Amazon Web Services
- b) Microsoft Azure
- c) Salesforce
- d) Flipkart

Answer: d

6. Which of the following is false about IoT devices?

- a) IoT devices use the internet for collecting and sharing data
- b) IoT devices need microcontrollers
- c) IoT devices use wireless technology
- d) IoT devices are completely safe

Answer: d

Explanation: IoT devices are wireless devices and they use the internet for collecting and sharing data. They are not completely safe because they store data and sometimes hackers access them.

7. Which of the following is not an IoT platform?

- a) Amazon Web Services
- b) Microsoft Azure
- c) Salesforce
- d) Flipkart

Answer: d

Which of the following is not an application of IoT?

- a) BMP280
- b) Smart home
- c) Smart city
- d) Self-driven cars

Answer: a

Explanation: Smart homes, smart cities, and self-driven cars are applications of IoT. BMP280 is a sensor that is used to measure air pressure. It is a component of IoT devices.

9. Which of the following is not a fundamental component of an IoT system?

- a) Sensors
- b) Connectivity and data processing
- c) User interface
- d) Transformer

Ans:d

Which layer is used for wireless connection in IoT devices?

- a) Application layer
- b) Network layer
- c) Data link layer
- d) Transport layer

Answer: c

Explanation: Data link layer is used for Ethernet and wireless connections. The network layer is used for Internet Protocols. The transport layer is used for TCP/UDP protocols and the application layer directly interacts with the application.

12. Which of the following is false about the IoT components?

- a) A light sensor (photoresistor) is an analog sensor
- b) A microphone is a digital sensor
- c) A push button is a digital sensor
- d) A keyboard is a digital sensor

Answer: b

Which of the following is used to capture data from the physical world in IoT devices?

- a) Sensors
- b) Actuators
- c) Microprocessors
- d) Microcontrollers

Answer: a

Explanation: Sensors are used to capture data from the physical world. Microprocessors and microcontrollers are used to control the operations and actuators are for outputs of IoT devices.

14. Which of the following command is used to trigger the Amazon echo IOT device?

- a) Hello
- b) Suri
- c) Alexa
- d) Hey

Ans:c

Which of the following is not an actuator in IoT?

- a) Stepper motor
- b) A fan
- c) An LED
- d) Arduino

Answer: d

Explanation: An actuator converts electrical signals into a corresponding physical quantity. A stepper motor or a fan can rotate. An LED can emit light. So, they are actuators. But Arduino is not.

18. What is the use of PWM signals in IoT development boards?

- a) They are used by sensors to have analog input
- b) They are used by sensors to have digital input
- c) They are used by actuators to have analog input
- d) They are used by actuators to have digital input

Answer: c

Which of the following is not a feature of the Raspberry PI model B IoT device?

- a) It has 256 MB SDRAM
- b) It has a single USB connector
- c) It has its own operating system

d) It has an Ethernet port

Answer: a

Which of the following processor is used in the Raspberry PI 3 IoT device?

- a) Broadcom BCM2711
- b) Broadcom BCM2837
- c) Broadcom BCM2838
- d) Intel 8085

Answer: b

Explanation: Raspberry PI 3 has Broadcom BCM2837 microprocessor. It is a 64-bit Quad-core microprocessor. Broadcom BCM2711 is the microprocessor of Raspberry PI 4 Model B.

25. Which library is used to access I2C in Arduino IoT devices?

Which library is used to access I2C in Arduino IoT devices?

- a) EEPROM
- b) Wire
- c) DHT11
- d) ArduinoJson

Answer: b

Explanation: I2C is a synchronous and serial communication protocol. Wire library is used to access this protocol in Arduino. Initialization is done with Wire.begin() command.

26. Which of the following is not related to Arduino IDE IoT software?

- a) Serial monitor
- b) Verify
- c) Upload
- d) Terminate

Answer: d

IoT gateway must provide \_\_\_\_\_

- a) Protocol abstraction
- b) Data storage
- c) Security with hardware
- d) Simple and fast installation

Answer: a

Explanation: IoT gateway must provide:

Protocol abstraction

Computing and I/O performance

Integration communication capability.

29. What IoT collects?

- a) Device data
- b) Machine generated data
- c) Sensor data
- d) Human generated data

Answer: b

Which of the following protocol is used to link all the devices in the IoT?

- a) HTTP
- b) UDP
- c) Network
- d) TCP/IP

Answer: d

Explanation: The internet of Thing is the global system of interconnected computer networks that use the Internet Protocol suite (TCP/IP) to link billions of devices worldwide.

31. Which service permits the changes to the IoT services?

- a) Update
- b) Registered service status
- c) Enable from suspension
- d) Enable

Answer: a

Explanation: Update service permits changes to the IoT services. In particular, it allows for the updating of the service's lifecycle metadata according to the requested changes.

32. What is the role of Cloud in smart grid architecture of IoT?

- a) Security
- b) Collect data
- c) Manage data
- d) Store data

Answer: c

Explanation: Cloud to edge Middleware: manage data and edge devices, data streaming and event processing, control authorized access.

33. What is the component of an IoT system that executes a program?

- a) A sensor
- b) A microcontroller
- c) An actuator
- d) A digital to analog converter

Answer: b

Explanation: Microcontroller is the component of an IOT device that executes a program. It contains a control unit, converters, timers, flash memory, etc. These are used to control the program execution.

34. Which programming language is used by Arduino IDE IoT software for writing codes?

- a) Python
- b) Java
- c) C/C++
- d) JavaScript

Answer: c

Explanation: C and C++programming languages are used in Arduino IDE for writing, compiling, and uploading codes. Several in-built libraries are also imported for better coding efficiency.

35. What is the full form of DHCP in IoT communication protocols?

- a) Dynamic Host Communication Protocol
- b) Domain Host Communication Protocol

- c) Dynamic Host Control Protocol
- d) Domain Host Control Protocol

Answer: a

Explanation: DHCP is a network management protocol used on internet protocol networks to automatically assign IP addresses. DHCP stands for Dynamic Host Communication Protocol.

36. What is the full form of IDE in Arduino IDE IoT software?

- a) Intra Defence Environment
- b) Intra Development Environment
- c) Integrated Development Environment
- d) Integrated Deployed Environment

Answer: c

Explanation: The full form of IDE in Arduino IDE IoT software is Integrated Development Environment. It is a cross-platform application for Windows, macOS, and Linux operating systems.

37. dweet.io provides \_\_\_\_\_ to send data from IoT devices.

- a) Web API
- b) POST HTTP
- c) JSON
- d) HTTP

Answer: a

Explanation: The dweet.io data sharing utility provides Web API so that we can send data from our IoT device, known as thing in dweet.io documentation.

**Identify among the following which is not a fundamental component of IoT system.**

- a .user interface
- b. sensors
- c. Transformers
- d. connectivity and data processing

Ans: c

Among the following layers ,idetify the one which is used for wireless connections in iot devices

- a. Datalinl layer
- b. Transport layer
- c. Network layer
- d. Application layer

Ans: c

Identify the language preferred for iot analytics

- a.python
- b.HTML
- c.PHP
- d.c++

Ans: a

15. How many USB ports are present in Raspberry Pi 3?

- a) 5
- b) 2
- c) 4
- d) 3

[View Answer](#)

Answer: c

**How many GPIO pins does raspberry pi model B+ have?**

- 7
- 12
- 25
- 40

Ans:40

4. The Raspberry Pi has a \_\_\_\_\_ interface to allow it to perform serial data communications.

- a) UART
- b) GPIO
- c) I2C
- d) SPI

Answer: UART

. How many USB ports are present in Raspberry Pi 3?

- a) 5
- b) 2
- c) 4
- d) 3

Answer: 4

Data collected by Raspberry Pi from the sensor can be

- a) Processed in Raspberry Pi
- b) Sent to other devices connected to the network
- c) Used to control/activate other devices in the network
- d) All of the above

Answer: All of the above

15. Which operating system Raspberry Pi has?

- a) Linux
- b) OpenBSD
- c) NetBSD
- d) All of the above

Answer: All of the above

The Raspberry Pi is defined as the?

- a) Mini computer

- b) Micro Computer
- c) Mega Computer
- d) Nano Computer

Answer: Mini computer

22. Which instruction set architecture is used in Raspberry Pi?

- a) X86
- b) MSP
- c) AVR
- d) ARM

Answer: ARM

Which instruction set is used in Raspberry Pi?

- a) CISC
- b) RISC
- c) MIPS
- d) None of these mentioned

Answer: MIPS

24. Which of the following variants of Raspberry Pi has an inbuilt wi-fi?

- a) Raspberry Pi 2
- b) Raspberry Pi 3
- c) Raspberry Pi A+
- d) Raspberry Pi Zero

Answer: Raspberry Pi 3

What is the use of the ESP8266 WIFI Module?

- a) Monitors Motion
- b) Evaluates air pressure
- c) Network Provider
- d) Switches circuits

Answer: c

How many pins are present in the ESP8266 WIFI Module?

- a) 12
- b) 10
- c) 8
- d) 50

Answer: c

What is the maximum source current that is required to operate the ESP8266 WIFI Module?

- a) 28 A
- b) 12 mA
- c) 100 mA

d) 1 A

Answer: b

What will happen if we supply a voltage of 250 kV to the Vcc of the ESP8266 WiFi Module?

- a) Damage is caused
- b) Module will shut down
- c) Module will not respond for the time the voltage is applied
- d) Module will function normally

Answer: a

What is the optimum supply current that is required to operate the ESP8266 WiFi Module?

- a) 28 A
- b) 13 mA
- c) 100 mA
- d) 1 A

Answer: c

What kind of device is the ESP8266 WiFi Module?

- a) Passive Sensor
- b) Active Sensor
- c) Networking Device
- d) Switching Device

Answer: c

What is the type of waves that the ESP8266 WiFi Module detects?

- a) Infrared Signal
- b) Radio Signal
- c) DC Signal
- d) Hybrid Signal

Answer: b

**What is the primary function of the ESP8266 module?**

- a) To measure temperature
- b) To function as a network provider/Wi-Fi module
- c) To act as a basic micro-controller without connectivity
- d) To control electric motors

Ans: b

**The NodeMCU ESP8266 is compatible with which development environment?**

- a) Visual Studio
- b) Arduino IDE
- c) Eclipse
- d) PyCharm

Ans:b

**3.Which pin is used for the analog input on the NodeMCU ESP8266?**

- a) D0
- b) VIN

- c) A0
- d) GPIO0

**Ans :c**

**4.What is the purpose of the TX pin on the ESP8266 module?**

- a) To provide power input
- b) To upload the program
- c) To measure analog voltage
- d) To ground the circuit

Ans: b

**What is the purpose of the EN (Enable) pin on the NodeMCU?**

- a) To measure analog voltage
- b) To reset the microcontroller
- c) To provide ground
- d) To enable the microcontroller

Ans:d

Which of the following is false about IoT devices?

- a) IoT devices use the internet for collecting and sharing data
- b) IoT devices need microcontrollers
- c) IoT devices use wireless technology
- d) IoT devices are completely safe

**Answer: d**

Which of the following is not an IoT platform?

- a) Amazon Web Services
- b) Microsoft Azure
- c) Salesforce
- d) Flipkart

Answer: d

Services provided by application layer?

- a) Web chat
- b) Error control
- c) Connection services
- d) Congestion control

**View Answer**

Answer: a

Application layer interacts directly with the \_\_\_\_\_

- a) front user
- b) end user
- c) sensors
- d) wired link

**View Answer**

Answer: b