Subject: Advanced Embedded Programming
Subject Code: CA326

Branch: BCA

Question Bank
(MCQ / Short Questions)

Prepared By:
Dr. Shailesh Khant

AIOT (CA616) MCQs and short questions

1. What is sensor?
A sensor is a device that produces an output signal (Electrical signal) for the purpose of sensing of a physical phenomenon. (It is an input device for controller)

2. sensor is _____ device
1. input
2. output
(input)

3. (16 x 2) LCD display is having
A. 16 rows and 2 columns
B. 2 rows and 16 columns
C. 16 rows and 16 columns
D. 2 rows and 2 columns
(2 rows and 16 columns)

4. Which embedded device converts electrical signal to sound signal?
1. Microphone
2. LED
3. Speaker
4. LCD
(speaker)

5. Which sensor is used to detect an object with distance using sound energy?
1. ultrasonic sensor
2. thermistor
3. IR sensor
4. Potentiometer
(ultrasonic sensor)

6. Which embedded device converts temperature to electrical signal?
1. Photocell
2. Thermistor
3. Microphone
4. Speaker
(Thermistor)

7. How many analog inputs / output pins are there on Arduino UNO board?
1. 4
2. 5
3. 6
4. 7
(6)

8. How many digital inputs / output pins are there on Arduino UNO board?
1. 8
2. 9
3. 12
4. 14

(14)

9. How many Ground pins are there on Arduino UNO board?
1. 3
2. 2
3. 1
4. 4

(3)

10. How many +5v pins are there on Arduino UNO board? (1)
1. 3
2. 2
3. 1
4. 4

(1)

11. What is the use of pinMode() Function?
1. declaring pin as input or output
2. declaring pin as only input
3. declaring pin as only output
4. creating new pin

(declaring pin as input or output)

12. Which of the following is not an Arduino function?
A. AnalogRead(pin)
B. AnalogWrite(pin, value)
C. serial.begin(baud rate)
D. AnalogStore(pin)

(AnalogStore(pin))

13. delay(5000); stands for
A. Wait 5 minutes
B. Wait 5 seconds
C. Wait 50 seconds
D. Wait 50 mili second

(Wait 5 seconds)

14. digitalWrite(13, LOW); turns the light
A. on
B. off
C. dim
D. No change

(OFF)
15. A forward slash is used for A. code B. output C. comments D. input **(Comments)**
16. An LED is an _____ device. A. output B. input **(Output)**
17. Pushbutton is an _____ device. A. output B. input **(Input)**
18. Knob is an _____ device. A. output B. input **(Input)**
19. Servomotor is an _____ device. A. output B. input **(Output)**
20. A sketch is _____ A. an Arduino file B. an Arduino picture C. an Arduino board D. an Arduino IDE **(an Arduino file)**

21. How long is the LED on?
 	
digitalWrite(13, HIGH);
delay(1000);
digitalWrite(13, LOW);
delay(1000);
 	
A. 1000 seconds
B. 100 seconds
C. 1 second
D. 100 milliseconds

(1 second)

22. At Which pin the jumper wire is connected to?
digitalWrite(13, HIGH);
delay(1000);
digitalWrite(13, LOW);
delay(1000);
A. 13
B. 12
C. 100
D. 10
(13)

23. Which statement do you change to alter the time?
A. delay
B. void loop
C. digitalWrite
D. pinMode
(delay)

24. Which function will run forever?
A. pinMode
B. void setup
C. void loop
D. digitalWrite
(Void Loop)

25. Which constant is used to make LED ON?
A. HIGH
B. LOW
C. TRUE
D. FALSE
(HIGH)

26. Which constant is used to make LED OFF?
A. HIGH
B. LOW
C. TRUE
D. FALSE
(LOW)

27. Which symbol begins a comment?
A. ;
B. :
C. .
D. //
(//)

28. The entire code must end with
A. Semicolon ;
B. Parenthesis)
C. Comma,
D. Curly Brace }
(Curly Brace)

29. Which symbol ends a statement?
A. Semicolon ;
B. Parenthesis)
C. Comma,
D. Curly Brace }
(Semicolon ;)

30. Why does the LED have different length legs?
A. For ease of inserting into the breadboard.
B. To indicate which side is negative and which side is positive.
C. To ensure it does not easily break.
D. To separate it from RGB LED.
(To indicate which side is negative and which side is positive.)

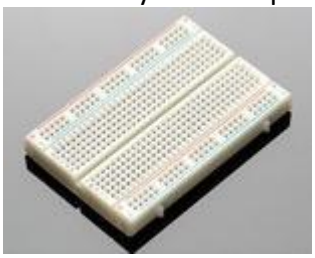
31. What is the microcontroller used in Arduino UNO?
A. ATmega328
B. ATmega2560
C. ATmega32114
D. AT91SAM3x8E
(ATmega328)

32. Which function is called once when the program starts:
A. loop()
B. setup()
C. map()
D. max()
(setup())

33. If a line of code starts with /* and continues until */ What does this do?
A. Loads a sketch
B. Makes comment
C. Compiles quicker
D. Makes stars appear
(Makes comment)

34. pinMode(led, INPUT); is a correct declaration.
A. True
B. False
(False)

35. Identify this component



A. Multimeter
B. Bread board
C. Arduino
D. Raspberry PI

(Bread Board)

36. Arduino can interact with _____.

1. LED
2. Keypad
3. Sensors
4. All of these

(All of these)

37. What is the meaning of delay(1000) Function?

1. provide delay of 1000 seconds
2. provide delay of 1000 mili seconds
3. provide delay of 1000 micro seconds
4. provide delay of 1000 minutes

(provide delay of 1000 mili seconds)

38. What is PWM ?

1. Pulse Width Modulation
2. Pulse Wide Modulation
3. Peak Width Modulation
4. Pulse Width Marker

(Pulse Width Modulation)

39. Which pins of Arduino UNO boards are used for Tx and Rx (Transmit and receive)?

1. digital pin 1 and 0
2. digital pin 1 and 2
3. digital pin 1 and 10
4. digital pin 1 and 11

(digital pin 1 and 0)

40. What is the correct syntax of analogread() function?

1. analogread(A0)
2. analogread(A0, A1)
3. analogread(A0,0)
4. analogread(A0, 1)

(analogread(A0))

41. A program written with the IDE for Arduino is called _____
A. IDE source
B. Sketch
C. Cryptography
D. Source code
(sketch)

42. Arduino IDE is an open-source platform.
A. TRUE
B. FALSE
C. Can be true or false
D. Cannot say
(true)

43. In Arduino IDE, IDE stands for?
A. Integrated Digital Environment
B. Integrated Development Environment
C. Instruction Development Environment
D. Integrated Development Embedded
(Integrated Development Environment)

44.

Identify the component.
A. Gas sensor
B. IR sensor
C. Ultrasonic sensor
D. Wifi module
(Ultrasonic sensor)

45. _____ sensor is used to detect smoke in industrial or residential area.
A. Gas sensor
B. Ultrasonic sensor
C. Temperature sensor
D. Pressure sensor
(Gas sensor)

46. _____ sensor is used to detect the distance of an object.

A. Gas sensor
B. Ultrasonic sensor
C. Temperature sensor
D. Pressure sensor
(Ultrasonic sensor)

47. Which one is DC motor driver IC?
A. L293D
B. L293A
C. L292D
D. None of above
(L293D)

48. L293D is a _____ Pin Motor Driver IC.
A. 2
B. 4
C. 8
D. 16
(16)

49. _____ is used to control the circuits by employing a low power signal.
A. Relay
B. Switch
C. Flip flop
D. Resistor
(Relay)

50. In arduino IDE, there are two functions. What are they?
A. setup() and loop()
B. setup() and timer()
C. main() and setup()
D. main() and loop()
(setup() and loop())

51. GPIO stand for
A. General purpose inner outer
B. General purpose input output
C. General purpose interested objects
D. None of the above
(General purpose input output)

52. **The command which is used to display the characters in the serial monitor is**
A. Serial
B. Serial.type
C. Serial.println
D. Serial.printing
(Serial.println)

53. what is the name of following device?

A. Resistor’
B. Switch
C. Sensor
D. Potentiometer

(Potentiometer)

54. For the LCD screen, what does "lcd.begin()" do?

A. It turns on the LCD
B. It makes "Hello World" appear on the LCD
C. It turns on the backlight
D. It turn off the backlight.

(It turns on the LCD)

55. What does "lcd.clear()" do?

A. It clears the script from the Arduino
B. It clears the LCD screen of any characters
C. It clears the power and ground connections to the LCD screen
D. It clears the resistance on the LCD screen

(It clears the LCD screen of any characters)

56. What does "lcd.setCursor()" do?

A. It powers on the backlight of the LCD screen
B. It clears the LCD screen of all characters
C. It sets the position of the potentiometer on the LCD screen
D. It sets the position of the cursor on the LCD screen

(It sets the position of the cursor on the LCD screen)

57. A resistor with color code red, red, orange has its value of_____.

1. 22 K ohm
2. 220 k ohm
3. 22 ohm
4. 220 ohm

(22Kohm)

58. A 10 K ohm resistor is having following color code printed on it.

1. Brown, black, orange
2. Brown, black, red
3. black, orange, red
4. black, red, red

(Brown, black, orange)

59. write the syntax of map() function.
map(value, fromLow, fromHigh, toLow, toHigh)
map(x, 1, 50, 50, 1)

60. _____ constant is used to assign +5v value to given variable or pin.
1. HIGH
2. LOW
(HIGH)

61. LiquidCrystal lcd (rs, enable, d4, d5, d6, d7) declaration is an example of _____ pin configurations.
1. 10
2. 6
3. 7
8. 11
(6)

62. What are the 2 arguments in "lcd.setCursor()" ?
A. 1st: column number, 2nd: row number
B. 1st: row number, 2nd: column number
C. 1st: row number, 2nd: row number
D. 1st: Power, 2nd: Ground
(1st: column number, 2nd: row number)

63. How many times does the loop() function run on every startup of Arduino system?
A. 1
B. depends on setup() function
C. Infinitely till the power is supplied.
D. 3
(Infinitely till the power is supplied.)

64. What are the two modes that pinMode() function sets for a particular pin?
A. Digital and analog
B. High and Low
C. INPUT and OUTPUT
D. Transmit and Receive
(INPUT and OUTPUT)

65. Which Arduino board uses Atmega328 controller?
A. Arduino UNO
B. Arduino Mega
C. Arduino Nano
D. Arduino Due
(Arduino UNO)

66. How many arguments does the digitalread() have?
A. 1
B. 2
C. 3
D. 4
(1)

67. Which of the following is temperature sensor?
A. LM25
B. MQ5
C. LM35
D. MQ6
(LM35)

68. IoT stands for:

A. Internet of Tech
B. Incorporation of Things
C. Internet of Things
D. Incorporation of Technology

Answer:- C

69. Which of the following can not be considered an IoT device?

A. Smartwatch
B. Andriod Phone
C. Laptop
D. Tubelight

Answer:- D

70. Which is not an IoT platform?

A. Xiaomi Cloud
B. GoogleCloud
C. Myntra
D. AWS(Amazon Web Services)

Answer:- C

71. IoT is based on _____ technology.

A. Hardware
B. Software
C. None
D. Both of these

Answer:- D

72. What is an IoT network?

A. a collection of networked devices
B. a collection of Interconnected devices
C. a collection of signalled devices
D. None of the above

Answer:- B

73. Full form of MQTT?

A. Message Queue Telemetry Transport
B. Messanger Queue Telemetry Transport
C. Message Queuery Telemetry Transport
D. None of these

Answer:- A

74. IIOT Stands for _____.
A. Industrial Internet of Things
B. Indexed Internet of Things
C. Incorporate Internet of Things
D. Industrial Internet of Technology

Industrial Internet of Things

75. An IoT network is a collection of interconnected devices.

A. True
B. False

True

76. Which of the following is the way in which an IoT device is associated with data?

A. Internet
B. Cloud
C. Automata
D. Network

Cloud

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

A. Wearables
B. Smart Grid
C. Arduino
D. Smart City

Arduino

78. The Raspberry Pi is defined as the?
1. Minicomputer
2. Micro Computer
3. Mega Computer
4. Nano Computer

Minicomputer

79. How many Total pins on board Raspberry Pi4 model B has?
1. 20
2. 30
3. 40
4. 50

40 pin

80. How many GPIO pins on board Raspberry Pi4 has?
1. 28
2. 35
3. 20
4. 50

28 pins

81. What are the capabilities of raspberry pi?
1. Browsing the internet
2. Making spreadsheets
3. Word pressing
4. All of the above

All of the above

82. How many ground pins Raspberry PI model 4B is having?
1. 2
2. 4
3. 6
4. 8

8

83. How many +5 Volt pins Raspberry PI model 4B is having?
1. 2
2. 4
3. 6
4. 8

2

84. How many +3.3 Volt pins Raspberry PI model 4B is having?
    1. 2
    2. 4
    3. 6
    4. 8

2

85. What is the standard form of SDA pin of I2C on ESP32?
    1. Serial device
    2. Single device
    3. Serial data
    4. Serial device

Serial data

86. What is the standard form of SCL pin of I2C on ESP32?
    1. Serial coding language
    2. Single coding
    3. Serial clock
    4. Serial language

Serial clock

87. What is the standard form of TXD pin of UART on ESP32?
    1. Trigger Data
    2. Transmit Data
    3. Trigger device
    4. Transmit device

Transmit Data

88. The I2C communication on the ESP32 board has _____ connections
    1. One
    2. Two
    3. Three
    4. Four

Two (SDA, SCL)

89. Which port is used to power the raspberry pi device?
    1. Ethernet port
    2. HDMI port
    3. Micro USB port
    4. USB Port

Micro USB port

90. What is the standard form of CSI?

1. Camera Serial Interface
2. Common Serial Interface
3. Complex Serial Interface
4. None of the above

Camera Serial Interface

91. What is the standard form of RFID?

A. Radio Frequency Identification
B. Radio Waves Frequency Identification
C. Radio Frequency InterDependent
D. Radio Wave Frequency Independent

Answer:- A

92. Arduino UNO is _____

1. Protocol
2. Network
3. Hardware Device
4. Software

Hardware Device

93. ESP32 can have touch sensor GPIO pins

1. True
2. False

True

94. Blynk is _____.

1. Mobile application
2. Hardware
3. Software
4. `none of these

Mobile application

95. The ESP32 is a series of chip microcontrollers developed by _____.

1. Espressif
2. Google
3. Reliance
4. Adani

Espressif

96. ESP32 has wifi capability.

1. True
2. False

True

97. ESP32 devices have more GPIO to work compare to ESP8266.
    1. True
    2. False

True

98. SaaS mobile cloud apps means _____ cloud.
    1. Software as a service
    2. Sky as a service
    3. Structure as a service
    4. All of these

Software as a service

99. The _____ is an online platform that makes it easy for you to create, deploy and monitor IoT projects.
    1. Arduino IoT Cloud
    2. Microsoft
    3. Amazon
    4. Flipkart

Arduino IoT Cloud

100. UART stands for _____.
    1. Universal Asynchronous Reception and Transmission
    2. Universal Acknowledgement Repeat transmission
    3. None of these
    4. Both

Universal Asynchronous Reception and Transmission

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