PREVIEW QUESTION BANK

Module Name : ntr24-ed01 Internet of Things- Design Concepts and Use Cases-ENG
Exam Date : 18-May-2024   Batch : 09:00-12:00

Sr. No.	Client Question ID	Question Body and Alternatives	Marks	Negative Marks
		Objective Question		
1	15681001	What is the full form of IoT? 1. Internet of Technology 2. Incorporate of Things 3. Internet of Things 4. Incorporate of Technology A1 : 1 A2 : 2 A3 : 3 A4 : 4	2.0	0.00
		Objective Question		
2	15681002	When was the actual term "Internet of Things" coined? 1. 1998 2. 1999 3. 2000 4. 2002 A1 : 1 A2 : 2 A3 : 3 A4 : 4	2.0	0.00
		Objective Question		
3	15681003	Which of the following is used to capture data from the physical world in IoT devices? 1. Sensors 2. Actuators 3. Microprocessors 4. Microcontrollers A1 : 1 A2 : 2	2.0	0.00

A3 : 3

A4 : 4

Objective Question			
4	15681004		2.0	0.00

Which of the following is not a sensor in IoT?

1. BMP280
2. DHT11
3. Photoresistor
4. LED

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question			
5	15681005		2.0	0.00

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

1. They are used by sensors to have analog input
2. They are used by sensors to have digital input
3. They are used by actuators to have analog input
4. They are used by actuators to have digital input

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question			
6	15681006		2.0	0.00

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

1. Serial Monitor
2. Verify
3. Upload
4. Terminate

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question			
7	15681007	What is ESP8266? 1. WIFI module 2. Sensor 3. Board 4. USB cable A1 : 1 A2 : 2 A3 : 3 A4 : 4	2.0	0.00

Objective Question			
8	15681008	How many pins does temperature sensor have? 1. 5 legs 2. 2 legs 3. 4 legs 4. 3 legs A1 : 1 A2 : 2 A3 : 3 A4 : 4	2.0	0.00

Objective Question			
9	15681009	Arduino Codes are referred to as _____ in the Arduino IDE. 1. Sketches 2. Drawings 3. Links 4. Notes A1 : 1 A2 : 2 A3 : 3	2.0	0.00

A4 : 4

Objective Question				
10	15681010	What will happen if we supply a voltage of 25V to the Vcc of the IR sensor? 1. Damage is caused 2. Sensor will work fine 3. Sensor will not respond for the time the voltage is applied 4. Sensor will function normally A1 : 1 A2 : 2 A3 : 3 A4 : 4	2.0	0.00

Objective Question				
11	15681011	What is the use of the LDR Sensor? 1. Monitors Motion 2. Monitors Air Pressure 3. Monitors Light Intensity 4. Monitors Heartbeat A1 : 1 A2 : 2 A3 : 3 A4 : 4	2.0	0.00

Objective Question				
12	15681012	What is the operating frequency of the Arduino UNO Board? 1. 20 MHz 2. 16 MHz 3. 6 MHz 4. 10 MHz A1 : 1 A2 : 2 A3 : 3 A4 : 4	2.0	0.00

Objective Question				
13	15681013	What is the full form of EEPROM? 1. Electrically Erasable Programmable Read Only Memory 2. Electrically Encoded Programmable Read Only Memory 3. Electronic Embedded Programmable Read Only Memory 4. Encrypted Electronic Programmable Read Only Memory A1 : 1 A2 : 2 A3 : 3 A4 : 4	2.0	0.00

Objective Question				
14	15681014	What is a gateway in IoT? 1. A device that connects IoT devices to the internet 2. A device that stores data collected by IoT devices 3. A device that analyzes data collected by IoT devices 4. A device that provides a user interface for IoT devices A1 : 1 A2 : 2 A3 : 3 A4 : 4	2.0	0.00

Objective Question				
15	15681015	Which of the following is a disadvantage of IoT? 1. Increased efficiency and productivity 2. Improved decision-making and analytics 3. Privacy and security concerns 4. Greater connectivity and collaboration A1 : 1 A2 : 2 A3 : 3 A4 : 4	2.0	0.00

Objective Question				
16	15681016		2.0	0.00

What is the output of Arduino code?

```
void setup()

{

Serial.begin(9600);

}

void setup()

{

Serial.print(40);

}
```

1. Send a signal to pin 40 on the Arduino board
2. Send a octal number of 40 through the Serial pins
3. Print a value 40 on the console
4. Print a hexadecimal number of 40 through the Serial pins

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

17	15681017		2.0	0.00

How many digital pins are in Arduino Uno?

1. 14
2. 12
3. 16
4. 20

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

18	15681018		2.0	0.00

What is a smart home in IoT?

1. A home that is equipped with IoT devices and systems
2. A home that is powered by renewable energy sources
3. A home that uses advanced security systems
4. A home that is completely automated

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

| 19 | 15681019 | | 2.0 | 0.00 |

CoAP is specialized in _____

1. Internet applications
2. Device applications
3. Wireless applications
4. Wired applications

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

| 20 | 15681020 | | 2.0 | 0.00 |

Which layer is CoAP?

1. Control layer
2. Transport layer
3. Service layer
4. Application layer

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

| 21 | 15681021 | | 2.0 | 0.00 |

The Arduino Uno has 14 Digital I/O Pins of which _____ pins can provide PWM output.

1. 1
2. 4
3. 6
4. 8

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

| 22 | 15681022 | | 2.0 | 0.00 |

Match List-I with List-II:

List-I	List-II
(Hardware Unit)	(Type)
(A). Servo Motor	(I). Sensor
(B). Push Button	(II). Actuator
(C). Arduino Uno	(III). Input
(D). MQ135	(IV). Microcontroller

Choose the correct answer from the options given below:

1. (A) - (I), (B) - (II), (C) - (III), (D) - (IV)
2. (A) - (II), (B) - (III), (C) - (IV), (D) - (I)
3. (A) - (III), (B) - (II), (C) - (IV), (D) - (I)
4. (A) - (III), (B) - (IV), (C) - (II), (D) - (I)

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

| 23 | 15681023 | | 2.0 | 0.00 |

The function that repeatedly executes in the main program in Arduino IDE?

1. Setup
2. Loop
3. While
4. For

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

24	15681024		2.0	0.00

The Atmega328 is an _____ bit chip.

1. 8
2. 16
3. 32
4. 64

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

25	15681025		2.0	0.00

Find the correct syntax

1. digitalRead(2)
2. Serial.Write(a)
3. digital.write(2,LOW)
4. serial.print("Hi")

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

26	15681026		2.0	0.00

The SCL and SDA pins in Arduino is configured on

1. A5 and A4 respectively
2. A4 and A5 respectively
3. A0 and A1 respectively
4. A1 and A0 respectively

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

| 27 | 15681027 | | 2.0 | 0.00 |

Which of the following is the correct syntax for setting the mode of a digital pin as an output in an Arduino sketch?

1. pinMode(pin, OUTPUT)
2. pinMode(pin, INPUT)
3. pinMode(pin, HIGH)
4. pinMode(pin, LOW)

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

| 28 | 15681028 | | 2.0 | 0.00 |

Match **List-I** with **List-II**

List-I	List-II
(Hardware/Software)	(Type/Application)
(A). ATmega328	(I). Arduino Software
(B). ESP8266	(II). Microcontroller
(C). Arduino IDE	(III). Wi-Fi Module
(D). ThingSpeak	(IV). IoT analytics platform

Choose the **correct** answer from the options given below:

1. (A) - (I), (B) - (III), (C) - (II), (D) - (IV)
2. (A) - (I), (B) - (II), (C) - (III), (D) - (IV)
3. (A) - (I), (B) - (II), (C) - (IV), (D) - (III)
4. (A) - (II), (B) - (III), (C) - (I), (D) - (IV)

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

29	15681029		2.0	0.00

If an LDR is connected to an LED and a battery and is brought from the dark to the light, what will be the state of the LED?

1. Lit
2. Not Lit
3. Damaged by Voltage Change
4. Damaged by power surge

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

30	15681030		2.0	0.00

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

1. TCP/IP
2. Network
3. UDP
4. HTTP

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question			
31	15681031		2.0 0.00

The output of the following code will be:

```
void setup()
{
  Serial.begin(9600);
  Serial.print("Hi");
}
void loop()
{
}
```

1. Printing "Hi" continuously on serial monitor with new line
2. Printing "Hi" continuously on serial monitor without new line
3. Printing "Hi" single time on serial monitor
4. Printing "Hi" single time on serial monitor and new line

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question			
32	15681032		2.0 0.00

1. For routing _____ protocols are used in 6LOWPAN routing

1. RPL protocol
2. LOADng protocol
3. Both (A) and (B)
4. CoAP

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

| 33 | 15681033 | | 2.0 | 0.00 |

What is the role of cloud computing in IoT?

1. To store and process data collected by IoT devices
2. To provide connectivity between IoT devices
3. To analyze data generated by IoT devices
4. To manage and control IoT devices

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

| 34 | 15681034 | | 2.0 | 0.00 |

Match **List-I** with **List-II**

List-I	List-II
(Sensors)	(Parameters)
(A). DHT11	(I). CO_2 & VOC
(B). MQ7	(II). Light Intensity
(C). LDR	(III). Carbon Monoxide
(D). CCS811	(IV). Temp & Hum

Choose the **correct** answer from the options given below:

1. (A) - (I), (B) - (II), (C) - (III), (D) - (IV)
2. (A) - (IV), (B) - (III), (C) - (II), (D) - (I)
3. (A) - (I), (B) - (II), (C) - (IV), (D) - (III)
4. (A) - (III), (B) - (IV), (C) - (I), (D) - (II)

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

| 35 | 15681035 | | 2.0 | 0.00 |

What will be the compilation output of the following program?

```
#define LED 4

void setup() {

Serial.begin(9600);

pinMode(LED, OUTPUT);

}

void loop() {

Serial.print(LED, HIGH)

}
```

1. Turn on LED on Pin 4
2. Print HIGH on Serial Monitor
3. Error
4. Run and Do Nothing

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

| 36 | 15681036 | | 2.0 | 0.00 |

If 1 means an object is detected and 0 meaning no object is detected, then considering the sensor is stationary, what can be said about the movement of the object if the output by the sensor is 111000?

1. Object is stationary
2. Object is oscillating side by side
3. Object is continuously moving away
4. Object is continuously moving closer

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

| 37 | 15681037 | | 2.0 | 0.00 |

What is the use of the Vin pin present on some Arduino Boards?

1. To ground the Arduino Board
2. To power the Arduino Board
3. To provide a 5V output
4. Is used for plugging in 3V supply

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

| 38 | 15681038 | | 2.0 | 0.00 |

Which of the following statements is true about the loop() function in an Arduino sketch?

1. It runs once at the beginning of the sketch
2. It runs continuously while the sketch is running
3. It handles the input/output operations of the sketch
4. It is used to define custom functions in the sketch

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

| 39 | 15681039 | | 2.0 | 0.00 |

Here is sample Arduino IDE code to turn Builtin LED On and Off:

```
void setup() {

  pinMode(LED_BUILTIN, OUTPUT);

}


void loop() {

  digitalWrite(LED_BUILTIN, ON);

  delay(1000);

  digitalWrite(LED_BUILTIN, OFF);

  delay(1000);

}
```

1. Code is right
2. Code will cause error
3. Code will only turn LED ON
4. Code will only turn LED OFF

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

| 40 | 15681040 | | 2.0 | 0.00 |

Why use Wire Library in Arduino IDE?

1. Printing on serial monitor
2. Printing on LCD board
3. Turn on Microcontroller
4. To Communicate with I2C devices

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

| 41 | 15681041 | | 2.0 | 0.00 |

Find out the Wrong syntax below:

A. Serial.print("24")

B. digital.Write("Hello")

C. lcd.print(89)

D. void Setup()

1. A & B
2. B & C
3. D & C
4. B & D

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

| 42 | 15681042 | | 2.0 | 0.00 |

What will be the error in below code?

int A = 5;

B = 19;

void setup() {

Serial.begin(9600);

}

void loop() {

Serial.print(A + B);

}

1. No Analog Pin A
2. 'B' does not name a type
3. Serial.begin is unwanted
4. Nothing to print

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

| 43 | 15681043 | | 2.0 | 0.00 |

Which of the below pins can be used for serial communication in Arduino Uno?

1. D15 & D16
2. A1 & A2
3. A4 & A5
4. D0 & D1

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

| 44 | 15681044 | | 2.0 | 0.00 |

Identify right sequence of operations on Arduino IDE:

1. Verify – Compile – Set Board – Set Port – Upload
2. Compile – Set Port – Set Board – Upload – Serial Monitor
3. Verify – Set Board – Set Port – Upload – Serial Monitor
4. Verify – Upload – Set Board – Set Port

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

| 45 | 15681045 | | 2.0 | 0.00 |

The number of COM port while connecting Arduino IDE to USB of Arduino Uno is usually:

1. Same as the available number of hardware ports on Laptop/Computer
2. Greater than the number of hardware ports on Laptop/Computer
3. Less than number of hardware ports on Laptop/Computer
4. Can be less than or greater than available number of hardware ports on Laptop/Computer

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

| 46 | 15681046 | | 2.0 | 0.00 |

Which of the following can be used as a gateway unit for IoT:

A. Arduino Uno

B. ESP8266

C. NodeMCU

D. Raspberry Pi

1. B & C
2. B, C & D
3. A & D
4. B & D

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question				
47	15681047	Which of the following can be used as microcontroller for IoT: A. Arduino Uno B. ESP8266 C. NodeMCU D. Raspberry Pi 1. B & C 2. A & D 3. A, C & D 4. B, C & D A1 : 1 A2 : 2 A3 : 3 A4 : 4	2.0	0.00
Objective Question				
48	15681048	For IoT field data analysis, ThingSpeak is equipped with one of these software tools: 1. Python 2. Matlab 3. Scilab 4. R Studio	2.0	0.00

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question				
49	15681049	Which of the following can be used as microcontroller & gateway (both) for IoT applications: A. Arduino Uno B. ESP8266 C. NodeMCU D. Raspberry Pi 1. B & C 2. A, C & D 3. A, B & D 4. C & D A1 : 1 A2 : 2 A3 : 3 A4 : 4	2.0	0.00
Objective Question				
50	15681050		2.0	0.00

Identify errors in below code:

```
void setup() {

  // put your setup code here, to run once:

serial.begin(9600);

}

void loop() {

Serial.print("Hello World!")

  // put your main code here, to run repeatedly:

}
```

(A). Missing Semicolon

(B). Missing Bracket

(C). Wrong Declaration in Setup Section

(D). Wrong Declaration in Loop Section

Choose the *correct* answer from the options given below:

1. A & C
2. A, C & D
3. B & C
4. A & D

A1 : 1

A2 : 2

A3 : 3

A4 : 4