Assignment 7

The due date for submitting this assignment has passed. Due on 2019-03-20, 23:59 IST.
As per our records you have not submitted this assignment.

1) Which of the following is/are true?

a. An IoT node must have both computation and communication capability.

b. An IoT node must have computation capability but communication capability is optional.

c. Each IoT node is an embedded system.

d. None of these.

Score: 0
Accepted Answers:
(a)
(c)

No, the answer is incorrect.

2) How can location sensing be done in object tracking applications?

a. Using GSM/GPRS module.

b. Using parameter sensors.

c. Using GPS module.

d. All of these.

Score: 0
Accepted Answers:
(a)
(b)
(c)
(d)

No, the answer is incorrect.
Why do we use GSM in large-scale applications?

- For communication between low-cost IoT nodes.  
- For communication between mobile phone users.  
- It is an improvement over the earlier standards of EDGE and UMTS.  
- None of these.

No, the answer is incorrect.
Score: 0
Accepted Answers:
(b)

4) What is the role of the Base Station Controller in the GSM architecture?

- It controls one or more base transceiver stations.  
- It controls one or more mobile stations.  
- It controls one or more mobile switching centers.  
- None of these.

No, the answer is incorrect.
Score: 0
Accepted Answers:
(a)

5) What are AT commands used for in the GSM module?

- For sending and receiving SMS data.  
- For configuring the GSM module from the microcontroller board.  
- For checking the mobile number from where a SMS has arrived.  
- None of these.

No, the answer is incorrect.
Score: 0
Accepted Answers:
(a)
Which of the following is/are not true about the HC-05 Bluetooth module?

a. It works in the 3.6 GHz frequency band.
b. It can communicate with a maximum data rate of 5 Mbps.
c. Other than power supply and ground, only two more connections (RXD and TXD) required with the microcontroller board.
d. All of these.

No, the answer is incorrect.
Score: 0
Accepted Answers:
(a)
(b)
(c)
(d)

7) In the home automation experiment with the Arduino UNO board, what does the following statements do?

```c
SoftwareSerial SIM900A(10, 11);
...
SIM900A.begin (9600);
```

a. Setup the GSM module connection to pin numbers 10 and 11, and set the baud rate to 9600 bps.
b. Setup the GSM module connection to pin numbers 10 and 11, and set the baud rate to 9600 Kbps.
c. Configure a CoolTerm connection with the SIM900A module, and set the baud rate to 9600 bps.
d. None of these.

No, the answer is incorrect.
Score: 0
Accepted Answers:
(a)
(b)
(c)
(d)

8) What does the function `buffer.indexOf("OFF") > 0` do?

a. Tests whether there are more than zero characters in the buffer that starts with string "OFF".
b. Returns the index of the next message received from the GSM module.
c. Tests whether the character string "OFF" is present in the character array “buffer”.
d. None of these.

No, the answer is incorrect.
Score: 0
Accepted Answers:
(a)
(b)
9) What does the following function do?

```java
String readSIM900A()
{
    String buffer;
    while (SIM900A.available())
    {
        char c = SIM900A.read();
        buffer.concat(c);
        delay(10);
    }
    return buffer;
}
```

a. Concatenate the current message with the previous message in the buffer and return.
b. Read the next message from SIM900A and return it as a string.
c. Check for new messages from SIM900A every 10 seconds.
d. None of these.

10) Which of the following is true for the touch sensor module?

a. The signal output is an analog voltage that is proportional to the pressure of the touch.
b. The signal output is an analog voltage with multiple levels that depends on the direct of touch.
c. The signal output is a digital signal that represents presence or absence of touch.
d. None of these.

No, the answer is incorrect.
Score: 0
Accepted Answers:
(c)