

21U370S

(Pages: 2)

Name:

Reg. No:

THIRD SEMESTER B.Voc. DEGREE EXAMINATION, NOVEMBER 2022

(Supplementary/Improvement)

**CC18U SDC3 ED12 - ELECTRONICS DEVICES AND CIRCUIT DESIGN FOR IOT,
IOT WITH RASPBERRY Pi**

(Information Technology)

(2018 to 2020 Admissions)

Time: Three Hours

Maximum: 80 Marks

PART A

Answer *all* questions. Each question carries 1 mark.

1. ----- part of the certificate is used to encrypt data.
2. SCRAM-SHA-1 and SCRAM-SHA-1-PLUS are examples of ----- methods.
3. URL stands for -----
4. Devices connected to an I²C bus are handled using the ----- class.
5. ----- Class handles a software-controlled pulse width modulation output.
6. The SR latch consists of ----- inputs.
7. SSL stands for -----
8. A sensor that requires external power to operate it is known as -----
9. Strain gauge is a device used to measure -----
10. LVDT stands for -----

(10 × 1 = 10 Marks)

PART B

Answer any *eight* questions. Each question carries 2 marks.

11. What is Jabber ID (JID)?
12. What do you mean by URL?
13. What do you mean by Man in the Middle (MITM) attack?
14. Write the important reasons to bridge between protocols in IoT.
15. Write the advantages of CoAP protocol.
16. What are the uses of sensors, actuators and controllers?
17. Define ASK.
18. Define op amp.
19. What is piezoelectric sensor?
20. What are the uses of flip flops?
21. Identify the types of bounded strain gauge.

22. Define phase modulation.

(8 × 2 = 16 Marks)

PART C

Answer any *six* questions. Each question carries 4 marks

23. Explain HTTP protocol and its internet architecture.
24. What is XMPP protocol?
25. What are the different tools for achieving security in IoT?
26. Explain the different Clayster libraries.
27. Explain Clocked RS Flip-flops
28. What are microcontrollers? Explain with diagram.
29. Discuss the V-I characteristics of photodiode with neat diagram.
30. Explain the basic working principle of Resistive sensor.
31. Compare Frequency and Phase Modulation.

(6 × 4 = 24 Marks)

PART D

Answer any *two* questions. Each question carries 15 marks.

32. What do you mean by MQTT protocol and how to add MQTT support to sensor?
33. a) What are the different tools for achieving security in IoT?
b) What are the different modes of attack in IoT?
34. a) Explain digital modulation techniques.
b) Explain elements of communication system.
35. a) Explain
 - i) Half adder
 - ii) Full adder
b) What are the differences between latches and flip flops?

(2 × 15 = 30 Marks)
