

20U372

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Name:

Reg. No:

THIRD SEMESTER B.Voc. DEGREE EXAMINATION, NOVEMBER 2021

(Regular/Supplementary/Improvement)

CC18U SDC3 ED12 - ELECTRONICS DEVICES AND CIRCUIT DESIGN FOR IOT,

IOT WITH RASPBERRY Pi

(Information Technology)

(2018 Admission onwards)

Time: Three Hours

Maximum: 80 Marks

PART A

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

1. Certificates are used to validate the _____ of high value entities on the internet.
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. PWM stands for _____
6. The transducer whose resistance varies in accordance with a quantity is known as _____
7. Photodiode always operates in _____ condition.
8. The process of using a pulse signal to represent information is called _____
9. In sequential circuits the output states depends upon _____
10. The process of making the signal more compatible with the medium is called _____

(10 × 1 = 10 Marks)

PART B

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

11. What is the use of public and private parts of a certificate?
12. What do you mean by URL?
13. What are the arguments in the CONNECT () method?
14. Write the important reasons to bridge between protocols in IoT.
15. Write the advantages of CoAP protocol.
16. What do you mean by HTTP request/response pattern?
17. List any two applications of sensor.
18. Define half adder and full adder.
19. List out the ideal characteristics of OPAMP?
20. Define Flip flop.

21. What is photoemissive cell?
22. What is propagation delay?

(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 is the use of abstraction model in building protocol gateway?
26. Explain the different clayer libraries.
27. Explain the operation of OPAMP as summing amplifier.
28. What are microcontrollers? Explain with diagram?
29. Explain the basic working principle of Resistive strain gauge.
30. Explain elements of communication system.
31. Define the term modulation. Name three different types of modulation used for a message signal. Explain the meaning of any one of them.

(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 is the need of interoperability in IoT?
34. Explain the working of LVDT with advantages, disadvantages and applications.
35. a) Explain logic family and its type?
b) What are the characteristics of logic families?

(2 × 15 = 30 Marks)
