19U372 (Pages: 2) Name: …….

Reg. No: …….

THIRD SEMESTER B.Voc. DEGREE EXAMINATION, NOVEMBER 2020

(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. _____ clayster library contains classes that implement common internet protocols.
2. _____ part of the certificate can decrypt data.
3. In Http the type of the content is identified by a _____ header.
4. MQTT is based on _____ architecture.
5. XMPP stands for _____
6. The SR latch consists of _____ inputs.
7. The process of using a pulse signal to represent information is called _____
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 x 1 = 10 Marks)

PART B

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

11. What do you mean by Man in the Middle (MITM) attack?
12. What do you mean by HTTP request/response pattern?
13. How to create an HTTPS server?
14. Define UPnP protocol?
15. What is Jabeer ID (JID)?
16. What is the structure of a URL?
17. Define ASK.
18. Define op amp.
19. List any two applications of sensor.
20. What are the uses of flip flops?

21. Identify the types of bounded strain gauge.

22. What is meant by the term modulation?

8 x 2 = (16 Marks)

PART C

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

23. What are the different tools for achieving security in IoT?

24. Explain MQTT protocol in detail.

25. What do you mean by protocol bridging?

26. Explain the XMPP communication pattern in detail.

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. Differentiate intrinsic and extrinsic fiber optic sensors.

31. Compare Frequency and Phase Modulation.

(6 x 4 = 24 Marks)

PART D

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

32. Explain XMPP protocol in detail.

33. a) What is the need of interoperability in IOT?

    b) What are the different modes of attack in IOT?

34. a) Explain different pulse analog 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 x 15 = 30 Marks)

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