23U373 (Pages: 2) Name: .....

Reg.No: .....

THIRD SEMESTER B.Voc. DEGREE EXAMINATION, NOVEMBER 2024

(CBCSS - UG)

(Regular/Supplementary/Improvement)

CC21U SDC3 CD10 - CIRCUIT DESIGN FOR IOT, IOT WITH RASPBERRY PI

(Information Technology - Skill Component Course)

(2021 Admission onwards)

Time : 2.5 Hours Maximum : 80 Marks

Credit : 4

Part A (Short answer questions)

Answer ***all*** questions. Each question carries 2 marks.

1. Why SoftwarePwm class is used the actuator project?
2. What is a web service?
3. What are the two event objects used by the controller to control the actuator using HTTP?
4. What is an ad-hoc network?
5. What is the c# command to create a UPnP server?
6. Discribe the protocol archetecture of MQTT
7. How will you create a COAP endpoint for a sensor?
8. What is the use hash wild card character?
9. How authentication takes place in XMPP network?
10. What is the principle of working of the provisioning server in XMPP?
11. What you mean by Jbber ID?
12. Write any two applications of capacitive sensors.
13. Breifly explain breaking cipher.
14. Write down the charecterestic equation of resistive sensors.
15. What is fiber optical sensors?

(Ceiling: 25 Marks)

Part B (Paragraph questions)

Answer ***all*** questions. Each question carries 5 marks.

16. Breifly explain a) sensor b) actuator, c) controller
17. Breifly explain SOAP and REST.

18. Breifly explain SCPD.
19. Explain the importance of binary headers in COAP.
20. Why an actuator tries to publish current outputs to corresponding topics of subscription? Explain with an example.
21. Explain the reason for ensuring full JID instead of bare JID in XMPP communications.
22. Explain the selection of an IOT platform.
23. Explain how VPNs helps to achieve interoperability.

(Ceiling: 35 Marks)

Part C (Essay questions)

Answer any ***two*** questions. Each question carries 10 marks.

24. Explain camera project in detail.
25. How to add UPnP support to the actuator?
26. Explain XMPP protocol in detail.
27. Discuss the operation of strain gauge and how to make use of it as force sensor.

(2 × 10 = 20 Marks)

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