from a file using Python.

20MCA32

(10 Marks)

Third Semester MCA Degree Examination, Feb./Mar. 2022 Internet of Things

Time: 3 hrs.

Max. Marks: 100

Note: Answer any FIVE full questions, choosing ONE full question from each module.

| | | Module-1 | |
|----|----------|---|--------------------------|
| 1 | a. | What is IOT? Explain in detail on Genesis of IOT. | (10 Marks) |
| | b. | Explain in detail IOT Challenges. | (10 Marks) |
| | | OR | |
| 2 | a. | With a neat diagram, explain M2M IOT Standardized Architecture. | (10 Marks) |
| | b. | Explain with diagram, IOT Data management and Compute Stack. | (10 Marks) |
| | | | |
| | | Module-2 | (10 34 |
| 3 | a. | List and explain different types of Sensors. | (10 Marks) |
| | b. | Explain 802.15 MAC layer with MAC Format. | (10 Marks) |
| | | OR | |
| 1 | 0 | Explain Zigbee protocol stack using IEEE 802.15.4. | (10 Marks) |
| 4 | a. b. | Write short notes on: i) Smart objects ii) Wireless sensor Networks (WSN) | |
| | υ. | Write short notes on . If binary objects in | (10 Marks) |
| | | | |
| | | Module-3 | |
| 5 | a. | Explain key advantages of Internet protocol. | (10 Marks) |
| | b. | Explain in detail the 6LOWPAN. | (10 Marks) |
| | | OR | |
| - | | What is COAP? Draw COAP message format also compare COAP and MQTT. | (10 Marks) |
| 6 | a. b. | Explain MQTT in detail along with MQTT message format. | (10 Marks) |
| | υ. | Explain WQ11 in detail along with 11Q11 message terrain. | |
| | | Module-4 | |
| 7 | a. | Explain IOT Data Analytics Overview. | (10 Marks) |
| | b. | Write short notes on: i) Supervised learning ii) Unsupervised learning. | (10 Marks) |
| | | | |
| | 0 | OR | (10 Martis) |
| 8 | a. | Explain how IT and OT security practices and systems vary. | (10 Marks) (10 Marks) |
| | b. | Explain OCTAVE and FAIR formal risk analysis. | (10 Marks) |
| | | Module-5 | |
| 9 | a. | Explain the following with respect to Arduino programming: i) Structure ii) | Functions |
| 9 | a. | iii) Variables iv) Flow control statements v) Data type. | (10 Marks) |
| | b. | Explain Raspberry Pi learning board. | (10 Marks) |
| | U. | | |
| OR | | | |
| 10 | a. | Explain Smart City IOT Architecture. | (10 Marks) |
| 8 | b. | Write a program to flash LED at a given Ontime Offtime cycle where two time | es are taken |
| | | C C1 D-41 | (10 Marks) |

Important Note: 1. On completing your answers, compulsorily draw diagonal cross lines on the remaining blank pages.

2. Any revealing of identification, appeal to evaluator and /or equations written eg, 42+8 = 50, will be treated as malpractice.

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