

CBCS SCHEME

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21ME644

Sixth Semester B.E. Degree Examination, June/July 2024 Internet of Things (IOT)

Time: 3 hrs

Max. Marks: 100

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

Module-1

- 1 a. Explain in detail about Internet of Things. (08 Marks)
- b. Give an equation for Internet of Things. (02 Marks)
- c. Discuss about Calm and Ambient Technology. (10 Marks)

OR

- 2 a. Describe in detail about web thinking for connected devices. (10 Marks)
- b. State and explain how Affordances are related to IOT. (10 Marks)

Module-2

- 3 a. Discuss in detail about SOC (System On Chip). (10 Marks)
- b. State the factors affecting to choose a platform under embedded computing basics. (10 Marks)

OR

- 4 Write a note on :
 - (i) Arduino.
 - (ii) Developing on the Arduino. (20 Marks)

Module-3

- 5 a. Write a note on Raspberry Pi. (05 Marks)
- b. Explain about cases and Extension Boards under Raspberry Pi. (08 Marks)
- c. Develop and control a program between any two actuators connected to the development board using Bluetooth. (07 Marks)

OR

- 6 a. Explain in detail about other notable platforms like mobile phone and Tablets. (10 Marks)
- b. Develop a program to create any cloud platform account, explore IOT services and register a thing on the platform. (10 Marks)

Module-4

- 7 a. Explain in detail about IP address which includes DNS, static IP address Assignment, Dynamic IP Address assignment, IPV6. (16 Marks)
- b. Explain in detail about MAC Address. (04 Marks)

OR

- 8 a. Discuss in detail about TCP and UDP ports with an example. (10 Marks)
- b. State and explain about application layer protocols. (10 Marks)

Module-5

- 9 a. How to write a New API (Application Programming Interface)? (10 Marks)
- b. Explain in detail about Real-Time Reactions. (10 Marks)

OR

- 10 a. Explain the following :
- (i) Mashing up APIs
 - (ii) Scraping.

(10 Marks)

- b. Explain the following :
- (i) MQ Telemetry Transport.
 - (ii) Constrained Application Protocol.

(10 Marks)

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