

CBCS Scheme

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16SCS24

Second Semester M.Tech. Degree Examination, June/July 2017 Internet of Things

Time: 3 hrs.

Max. Marks: 80

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

Module-1

- 1 a. What is an IOT? Describe the high level logical partitioning of the interaction space, showing where IOT applies. (08 Marks)
b. Explain the IPV6 role in IOT. (08 Marks)

OR

- 2 a. Explain IOT framework with respect to a high level M2M system architecture (HLSA). (10 Marks)
b. Write a note on the following health monitoring applications:
(i) Chronic disease monitoring. (ii) Personal wellness monitoring. (06 Marks)

Module-2

- 3 a. Explain the structural aspects of the IOT. (08 Marks)
b. What is RFID? Compare contactless smart cards and RFID tags. (08 Marks)

OR

- 4 a. Explain IPV6 routing protocol for RPL ROLL. (08 Marks)
b. With neat diagram, describe 3GPP service model and the architecture. (08 Marks)

Module-3

- 5 a. Describe the architecture of a Bluetooth system with the HDP and applications. (08 Marks)
b. With neat diagram, explain the overall network architecture of the evolved packet system (EPS) network elements. (08 Marks)

OR

- 6 a. Draw IPV6 packet format and also explain fields in the IPV6 base header. (06 Marks)
b. Write a note on IPV6 tunneling. (06 Marks)
c. Explain the IPsec in IPV6. (04 Marks)

Module-4

- 7 a. Explain the home intrusion detection IOT system. (08 Marks)
b. Describe smart parking IOT system. (08 Marks)

OR

- 8 a. Explain the air pollution monitoring system. (08 Marks)
b. Explain an implementation of a smart irrigation system. (08 Marks)

Module-5

- 9 a. Explain the components of a Hadoop cluster. Describe Hadoop MapReduce programming model and mapreduce job execution workflow. (10 Marks)
b. Explain the key components of Hadoop YARN. (06 Marks)

OR

- 10 a. Explain Oozie workflow for computing machine status / error code with maximum count. (08 Marks)
b. Describe Apache storm for real time data analysis. (08 Marks)

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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.