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P.E.S. College of Engineering, Mandya - 571 401

(An Autonomous Institution affiliated to VTU, Belgaum)

Seventh Semester, B.E. - Information Science and Engineering

Semester End Examination; Dec - 2016/Jan - 2017

Internet of Things

Time: 3 hrs

Max. Marks: 100

Note: Answer FIVE full questions, selecting ONE full question from each unit.

UNIT - I

- 1 a. Define Internet of Things. Give two illustrative examples for IOT. 5
- b. 'IOT is an Infrastructure'. Justify this with two examples. 10
- c. What is e-health? List out some health care related sensors. 5
- 2 a. What is the role of IPv6 in IOT and its advantages? 6
- b. What are the different ITU-T views for IOT? Briefly explain them. 6
- c. How are the applications of IOT categorized? List out five applications in each category. 8

UNIT - II

- 3 a. Explain the role of IOT in city automation. 6
- b. What are smart cards? List out the applications of smart cards. 6
- c. Tabulate the properties and requirements of M₂M applications. 8
- 4 a. Briefly explain the technologies that can be deployed in integrated open air surveillance. 10
- b. Explain the various approaches of identifying the object of IOT. 10

UNIT - III

- 5 a. What is RFID? Briefly explain the basic concepts of RFID and characteristics of RFID tag. 12
- b. What is MTC? Discuss on different features of MTC. 8
- 6 a. Discuss on various standards of RFID and differentiate between contactless card and RFID. 12
- b. What is constrained application protocol? What are its features? 8

UNIT - IV

- 7 a. What are Networking nodes? Explain various IOT applications with respect to secured communication through WSN. 10
- b. Explain the Global Architectural frame work of RFID. 10
- 8 a. Explain the principles of RFID. 5
- b. Discuss on design issues and Technological challenges of RFID. 8
- c. State different data link layer protocols of RFID. 7

UNIT - V

- 9 a. What are the different key applications of IOT? How can we manage demand in smart Grid? 10
- b. What is Electronic Vehicle Charging? Discuss on any one use case. 10
- 10 a. Discuss on the case study of RTE in France using smart Grid. 10
- b. State different charging standards for electric vehicles charging. 10