



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

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| 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

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| 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 M ₂ M 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

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| 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

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| 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

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| 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 |