

--	--	--	--	--	--	--	--	--	--



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

(An Autonomous Institution affiliated to VTU, Belagavi)

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

Semester End Examination; May/June - 2018

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 IOT. Explain H2H, H2M and M2M communications with examples. 8
- b. What is the role of IPV6 in IOT? Explain its advantages. 6
- c. List and explain any two components of the device and gateway domain. 6
- 2 a. With example, explain the healthcare related sensors. Explain some of its benefits for MBAN technology. 10
- b. What are objects in the IOT context? Explain how they are classified with diagram? 10

UNIT - II

- 3 a. Explain the role of IOT in automotive applications with examples. 10
- b. How is tracking implemented in automotive environments? Explain any four examples. 10
- 4 a. Differentiate between contactless smart cards and RFID tags. 10
- b. Explain any five basic RFID concepts. 10

UNIT - III

- 5 a. Explain IETF IPV6 protocol for RPL roll. 10
- b. What is COAP? What are its main features? Explain the abstract layering of COAP. 10
- 6 a. With a service model diagram and examples, explain how M2M is used in 3GPP communications? 10
- b. Explain the different types of models in MTC. 4
- c. Explain the goals of the IPSO alliance. 6

UNIT - IV

- 7 a. With a circuit diagram of an RFID tag, explain the principle behind its working. 10
- b. Explain the reader and middleware component of RFID system. 10
- 8 a. Explain the RFID architecture model with a diagram. 10
- b. Explain briefly: i) NFC ii) Nano RFID and Smart dust. 10

UNIT - V

- 9 a. Explain the different charging modes specified by IEC. 10
- b. Explain the demand in response for transmission system operators. 10
- 10 a. Explain the case study about the public network stabilization and balancing mechanism in France. 10
- b. Explain briefly about the High level communication IEC15 118. 10