

Question Paper

Exam Date & Time: 29-Nov-2018 (10:00 AM - 01:00 PM)



MANIPAL ACADEMY OF HIGHER EDUCATION

SCHOOL OF INFORMATION SCIENCES

FIRST SEMESTER MASTER OF ENGINEERING - ME (EMBEDDED SYSTEMS / EMBEDDED SYSTEMS & INSTRUMENTATION)

Internet of Things [ESD 615.9]

Marks: 100

Duration: 180 mins.

END SEMESTER DEGREE EXAMINATION NOVEMBER 2018

Answer all the questions.

- 1) Define IoT. Explain the characteristics of IoT. (10)
- 2) Describe an example of IoT services that uses publish-subscribe communication model. (10)
- 3) Explain REST-based communication API. (10)
- 4) What is MQTT? Explain working of MQTT. (10)
- 5) Explain standard data types in Python with examples. (10)
- 6) Briefly explain different addresses available in Bluetooth. (10)
- 7) Explain the Frame Structures in Zigbee (10)
- 8) A. What is 6LoWPAN? Write the features of 6LoWPAN technology. (10)

B. Compare IPv6 with IPv4 network protocol
- 9) Explain the design challenges in WSN. Discuss SPIN Protocol. (10)
- 10) What is a SOCKET. Explain client server interaction in socket programming (10)

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