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Reg. No. :

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Question Paper Code : 10510

M.E./M.Tech. DEGREE EXAMINATIONS, APRIL/MAY 2019.

Second Semester

Applied Electronics

CP 5292 — INTERNET OF THINGS

(Common to M.E. Biometrics and Cyber Security/M.E. Communication Systems/M.E. Communication and Networking/M.E. Computer Science and Engineering/M.E. Computer Science and Engineering (With Specialization in Networks)/M.E. Mechatronics Engineering/M.E. Mobile and Pervasive Computing/M.E. Multimedia Technology/M.E. Software Engineering/M.Tech. Information Technology)

(Regulation 2017)

Time : Three hours

Maximum : 100 marks

Answer ALL questions.

PART A — (10 × 2 = 20 marks)

1. Draw the logical design of the IoT and describe its components.
2. What is Machine to Machine Communication?
3. List the requirements of OGC architecture.
4. Define Domain model.
5. List any two IOT protocols and its purpose.
6. Differentiate IEEE 802.15 and IEEE 802.11.
7. In what way Raspberry Pi is better than Arduino?
8. Why Linux is used as OS platform in Raspberry pi?
9. Identify the sensors needed in Smart health care environment.
10. Mention the Real world design constraints for IoT applications.

PART B — (5 × 13 = 65 marks)

11. (a) List the types of levels of IoT and also mention the process of leveling up in detail. (13)

Or

- (b) Explain Domain specific IoT with an example. (13)

12. (a) Explain in detail IETF architecture for IoT. (13)

Or

- (b) (i) Discuss in detail about Functional model. (7)

- (ii) Discuss in detail about Communication model. (6)

13. (a) Describe the architecture of SCADA and RFID protocols in detail. (13)

Or

- (b) Discuss in detail about 6LoWPAN and COAP protocols. (13)

14. (a) Draw and explain the building blocks of IoT device. (13)

Or

- (b) Illustrate Programming Raspberry Pi with Python with suitable examples. (13)

15. (a) Discuss in detail the significance of Data Analytics in IoT with necessary illustrations. (13)

Or

- (b) Explain the communication APIs in IOT. (13)

PART C — (1 × 15 = 15 marks)

16. (a) Illustrate with a neat sketch IOT design for Smart health care system and justify how Privacy and Security is provided in your prototype.

Or

- (b) Formulate the requirement of scalability in IoT with an example and also discuss how addressing issues can be solved in IoT.