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**M.E. / M.TECH. DEGREE EXAMINATIONS, MAY 2019**

Second Semester

**CP18203 - ADVANCED INTERNET OF THINGS***(Computer Science and Engineering)***(Regulation 2018)****Time: Three Hours****Maximum : 100 Marks**Answer **ALL** questions**PART A - (10 X 2 = 20 Marks)**

1. What is ambient computing?
2. What is meant by Web Thinking for Connected devices?
3. Why prototyping is required?
4. What are the disadvantages of open source model?
5. What is a microcontroller?
6. How are prototyping done on online components?
7. What are the criteria for Funding an Internet of Things Startup?
8. What is crowd sourced sensor networks?
9. List few features of smart cities
10. Why are Asset Integration Architectures required in IOT?

**PART B - (5 X16 = 80 Marks)**

11. (a) Explain the working principles of Internet, MAC Addresses and IP Addresses assignment. **(16)**

**(OR)**

- (b) What is the use of application layer protocols? Explain various Application layer protocols in detail. **(16)**

12. (a) What are the criteria involved in choosing a microcontroller for prototyping? Illustrate with an example. **(16)**

**(OR)**

- (b) Discuss in detail about open and closed source with respect to prototyping. **(16)**

13. (a) Explain the process of developing a prototype using Arduino. Illustrate the same using a case study. **(16)**

**(OR)**

- (b) Explain with a specific scenario/application where Raspberry Pi is preferred over Arduino and list the advantages of Raspberry Pi in design of IOT prototypes. **(16)**

14. (a) Detail on various Business models. **(16)**

**(OR)**

- (b) Brief on the ethical concerns in developing an application using Internet of Things. **(16)**

15. (a) Detail on the design principles of Smart monitoring and Diagnostics Systems at Major Power Plants. **(16)**

**(OR)**

- (b) What is the role of IOT in connect vehicles? Detail on the working and applications of connect vehicles. **(16)**