SPRING END SEMESTER EXAMINATION-2018
8th Semester B.Tech & B.Tech Dual Degree

INTERNET OF THINGS
IT-4044

[For 2015(L.E.), 2014 & Previous Admitted Batches]

Time: 3 Hours   Full Marks: 60

Answer any SIX questions including question No.1 which is compulsory.
The figures in the margin indicate full marks.
*Candidates are required to give their answers in their own words as far as practicable
and all parts of a question should be answered at one place only.*

1.   Answer all questions. $[2 \times 10]$

(a)   What is a "thing" in the context of Internet Of Things (IoT)?

(b)   Which communication protocols are used for M2M local area networks?

(c)   What are the components of operational view specification?

(d)   Describe the role of a controller service in an IoT system.

(e)   Will IoT actually work over the Internet or will it have its own dedicated Wide Area Network? Justify your answer.

(f)   What is the purpose of information model?

(g)   Differentiate between physical and virtual entity.

(h)   What are architectural constraints of REST?

(i)   Differentiate between clustering and classification.

(j)   How is Raspberry Pi different from a desktop computer?

2. (a) Describe different type of protocols in application layer of IoT device. [4]

(b) What are different types of IoT communication models? Describe each IoT communication models. [4]

3. (a) Describe level-8 of IoT system with a neat diagram. [4]

(b) Describe applications of IoT in logistics. [4]

4. What are different steps in IoT design methodology? Neatly draw the process flow diagram of IoT design methodology. How each step will contribute towrds the design methodology of IoT? (Write the main requirement of each step.) [8]

5. (a) Draw a domain model for smart medication IoT system and describe any 4 components of it. [4]

(b) What are different server side web technologies for IoT? Explain the use of at least one server side web technologies fot IoT. [4]

6. (a) Describe different modules based on functional attributes in an IoT device. [4]

(b) What are the major privacy and security issues in case of Internet of Things? [4]

7. (a) How wireless communications might affect the development and implementation of the Internet Of Things? Explain with an example. [4]

(b) Describe different components of a hadoop cluster and draw a diagram of it. [4]

8.   Answer *any two*.   [4 × 2]

   (a) Raspberry Pi Board
   (b) Home Intrusion Detection
   (c) IoT vs M2M

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