AUTUMN END SEMESTER EXAMINATION-2018
7th Semester B.Tech

INTERNET OF THINGS
IT-4021

[For 2016(L.E) & 2015 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. (a) What do you mean by "Internet of Things"?   [2 × 10]

   (b) How the "Internet of Everything" can be correlated with the "Internet Of Things"?

   (c) What is the role of a networked device in the "Internet of Everything"?

   (d) List the constraints of M2M.

   (e) Mention two impacts of Internet of Things on social and cultural growth.

   (f) What are the basic elements of "Internet of Everything"?

   (g) Mention important components of Internet of Things.

   (h) Highlight major challenges of Internet of Things.

   (i) Justify the use of Wi-fi protocol for Internet of Things.

   (j) Briefly explain Zigbee protocol for Internet of Things.

2. (a) "Internet of Things" is workable in the Internet only or in dedicated Wide Area Network (WAN) or both. Justify your statement with suitable example. [4]

   (b) Differentiate between "Industrial Internet of Things (IIoT)" and "Internet of Things (IoT)" with real time example. [4]

3. (a) Explain with real time examples about how cyber security has started affecting the development & implementation of "Internet Of Things (IoT)", in India. [4]

   (b) What is "Bluetooth Low Energy (BLE)" protocol for Internet of Things (IoT)? [4]

4. (a) Give schematic layout about the "IoT Design Methodology" [4]

   (b) What are basic building blocks of an IoT Device? Explain with suitable block diagrams. [4]

5. (a) "Web Application Messaging Protocol (WAMP) is a sub-protocol of WebSocket which provides publish–subscribe and remote procedure call (RPC) messaging patterns" Justify this statement with WAMP concepts with suitable example. [4]

   (b) Explain how TaskTracker in Hadoop cluster accepts the Map, Reduce and Shuffle tasks from the JobTracker. [4]

6. (a) Explain how massive scale data can be processed and analyzed using MapReduce programming model. [4]

   (b) What do you mean by a "Smart City"? Explain in the context of "Internet of Things (IoT)". [4]

7. (a) Explain the major risks and challenges of "Internet of   -[4]
         Things (IoT)".

    (b) How high-speed internet may affect the development &   {4]
         implementation of "Internet of Things (IoT)"? Justify
         with examples.

8.   Write short notes on *any two*: -   [4 × 2]

    (a) Applications of IoT in logistics

    (b) Any 4 differences between M2M and IoT

    (c) Raspberry Pi vs. Desktop Computer

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