Oct./BE/ Insem. - 550

B.E. (E&TC)

INTERNET OF THINGS

(2015 Pattern) (Semester - I) (Elective - I(D))

Time : 1 Hour]   *[Max. Marks :30*

Instructions to the candidates:

1) ***Answer Q.1 or Q.2, Q3 or Q.4, Q.5 or Q.6.***

2) ***Neat diagrams must be drawn wherever necessary.***

3) ***Figures to the right side indicate full marks.***

Q1) a) What is Internet of Things? List any four applications of IoT.   **[4]**

b) Draw the functional block diagram of internet of Things and explain in detail any one block.   **[6]**

OR

Q2) a) Draw the M2M system architecture and write about the M2M area network.   **[6]**

b) Write in brief about role of cloud computing in IoT system design.   **[4]**

Q3) a) What is RFID? What are the components of RFID system?   **[4]**

b) What are various types of actuators? Explain any one actuator   **[6]**

OR

Q4) a) A node in Wireless Sensor Network contains number of capabilities such as communication, computing, sensing etc. What are the design aspects of communication capability of the node?   **[6]**

b) If an IoT system for street light control is to be designed. Which sensor(s) will you use and why?   **[4]**

P.T.O.

Q5) a) Justify how Z-wave protocol is suitable for design of home automation application. **[4]**

b) What are IEEE 802.15.4 Reduced Function and Full Function Devices? **[6]**

OR

Q6) a) What is NFC and what are the types of NFC devices? **[4]**

b) What is MODBUS? Explain MODBUS message framing and transmission modes **[6]**

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