Code No: 156DR

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD
B. Tech III Year II Semester Examinations, August - 2022
FUNDAMENTALS OF INTERNET OF THINGS
(Common to EEE, CSE, IT)

Time: 3 Hours   **Max.Marks:75**

Answer any five questions
All questions carry equal marks
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1.a)   What are the main challenges in Internet of Things (IoT)?
 b)   What kind of information do Internet of Things (IoT) objects communicate?   [8+7]

2.a)   How might wireless communications have an effect on the development and implementation of the Internet of Things (IoT)? Explain.
 b)   Explain the protocol used to link the devices in IoT.   [8+7]

3.a)   How data collection and analysis approaches differ in M2M and IOT?
 b)   Define ETSI M2M domains and High-level capabilities.   [8+7]

4.a)   Explain about interfacing an LED and switch with Arduino.
 b)   What is the difference between Sensors and Actuators? Explain with an example. [8+7]

5.a)   Discuss in detail the use of embedded computing in the design of IoT Systems.
 b)   Explain in detail the Raspberry Pi interfaces.   [7+8]

6.a)   What is the use of SPI and I2C interfaces on Raspberry pi?
 b)   Describe how SDN can be used at various levels of IOT.   [8+7]

7.a)   Discuss the role of Data Analytics in Internet of Things (IoT).
 b)   Explain about various components and business model patterns in the Internet of Things.   [10+5]

8.   Explain the following:
      a) Cloud Platform for IoT/M2M Applications/Services
      b) Cloud Service Models.   [8+7]

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