

Code No: 156DR

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JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD

B. Tech III Year II Semester Examinations, August - 2022

FUNDAMENTALS OF INTERNET OF THINGS

(Common to CE, ME, EIE, MCT)

Time: 3 Hours

Max. Marks: 75

Answer any five questions  
All questions carry equal marks

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1.a) Explain the characteristics and applications of IoT.  
b) Elaborate protocols used in application layer in IoT. [7+8]

2.a) Explain functional block diagram of IoT device.  
b) Analyze the push-pull communication model of IoT. [7+8]

3.a) Compare M2M Vs IoT.  
b) Explain the Arduino program structure with an example. [7+8]

4.a) What is interoperability? How to achieve it in IoT?  
b) Give the steps to integrate smoke sensor with Arduino. [7+8]

5.a) Explain Lists and tuples in Python.  
b) Write the characteristics of Python and justify it is suitable language for Raspberry Pi. [7+8]

6.a) Describe the various components in Raspberry Pi board.  
b) Give steps to control LED with switch using Raspberry Pi. [7+8]

7.a) Discuss the architecture of SDN.  
b) Explain the challenges of data analytics in IoT. [7+8]

8.a) Elaborate the impact and importance of IoT in agriculture.  
b) Discuss the requirements and challenges of IoT in industry. [7+8]

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