Code No: 844AX

R17

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD
MCA IV Semester Examinations, March/April - 2022
INTERNET OF THINGS

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

Answer any five questions
All questions carry equal marks
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1.a) Discuss one example of IoT service that uses publish-subscribe based communication model.
  b) Draw the protocol stack of IoT system with brief descriptions.   [8+7]

2.a) Discuss the differences between REST vs RESTful API.
  b) Discuss the various communication models that can be used for weather monitoring.[7+8]

3.a) Discuss the key elements of NFV architecture in details.
  b) Discuss with an example how NFV can be used for virtualization of the home networks.
                                                                          [7+8]

4.a) Describe the various steps that are needed for IoT device management with NETCONF_YANG.
  b) Which limitations make SNMP unsuitable for IoT systems? Discuss in detail.   [8+7]

5.a) How to send an e-mail using SMTPLib in Python. Describe with an example.
  b) What are the parameters of import SMTPLib? Discuss with python code.
  c) Discuss the various python data types and data structures.   [5+5+5]

6.a) Write a python program to check whether the string is Symmetrical or Palindrome.
  b) Write a python program to find Maximum and Minimum K elements in Tuple using list slicing + sorted ().   [7+8]

7.   Write a complete python code to build a web user interface for the temperature monitoring system.   [15]

8.a) Discuss the different types of APIs in IoT services.
  b) Discuss the various rules for designing an API using the RESTful paradigm.   [7+8]

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