

R17**Code No: 844AX****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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