Code No.: IT623PE   R20   H.T.No. [| | 8 | R | | | | | |]

CMR ENGINEERING COLLEGE: : HYDERABAD
UGC AUTONOMOUS
III–B.TECH–II–Semester End Examinations (Regular) - May- 2023
INTERNET OF THINGS
(IT)

[Time: 3 Hours]   [Max. Marks: 70]

Note: This question paper contains two parts A and B.
Part A is compulsory which carries 20 marks. Answer all questions in Part A.
Part B consists of 5 Units. Answer any one full question from each unit. Each question carries 10 marks and may have a, b, c as sub questions.

PART-A   (20 Marks)

1. a) What are the components of physical design of IoT?   [2M]
   b) Name any four sensors used in smart health care systems.   [2M]
   c) Describe the significance of the M2M protocol.   [2M]
   d) Why is network wide configuration important for IoT systems with multiple nodes? [2M]
   e) Write a python program to reverse a given list [10, 11, 12, 13, 14, 15].   [2M]
   f) Write the output of the following python program   [2M]

      thisdict =   {
        "apple": "green",
        "banana": "yellow",
        "cherry": "red"
      }
      thisdict["apple"] = "red"
      print(thisdict)

   g) In what ways Raspberry Pi is better than Arduino? Justify.   [2M]
   h) Mention the various flavors of Linux supported by Raspberry Pi.   [2M]
   i) Describe the function of URL patterns in Django.   [2M]
   j) Write the significance of RESTful Web API.   [2M]

PART-B   (50 Marks)

2. Discuss in detail various IoT levels and process of leveling up.   [10M]
                              OR
3. Discuss in detail functional model of IoT and its relationship with communication   [10M]
   model.

4. Explain how Software-Defined Networking can be used for various levels of IoT in   [10M]
   detail with a neat diagram?
                              OR
5. Explain how to manage an IoT device using the NETOPEER tools with a neat   [10M]
   diagram?

6. Write a Python program to print a set that contains all the colors from colorlist1 but   [10M]
   not in colorlist2.
   colorlist1 contains ("White", "Black", "Red")
   colorlist2 contains ("Red", "Green").
                              OR
7. Write a Python program to create all possible strings by using 'a', 'e', 'i', 'o', 'u'. Use the   [10M]
   characters exactly once.

8. Formulate the significant use of Raspberry Pi in Smart cities and Industrial appliances. [10M]

OR

9. As a preliminary step to design and develop a smart home, provide sample code for interfacing Raspberry Pi with different types of sensors. [10M]

10. How does sensor Data go from device to cloud? Describe in detail. In your point of view, explain about cloud storage of IoT data? [10M]

OR

11. How WAMP is used for IoT systems and explain key concepts of WAMP and draw WAMP session? [10M]

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