Total No. of Printed Pages:2

T.E. (Information Technology) Sem V (RC 2019-20)
EXAMINATION JAN/FEB, 2022
IT 534 INTERNET OF THINGS

[Duration : Three Hours] **[Total Marks : 100]**

Instructions:
1. Answer any two questions each from Part-A and Part-B.
   Answer any one question from Part-C
2. Draw Diagrams wherever necessary.
3. Assume additional data if required.

PART A

Answer any TWO question:

Q.1
a. Summarise the various IOT Enabled technologies **(08mks)**
b. Explain the need for IOT System Management **(06mks)**
c. Describe the characteristics and physical design of IOT **(06mks)**

Q.2
a. Summarise the various applications of IOT in different domains **(10mks)**
b. List out the advantages and disadvantages of M2M communication **(06mks)**
c. Write a short note on SNMP **(04mks)**

Q.3
a. Explain the potential and benefits of an IOT oriented approach over M2M by considering a health band as the real-world use case example. Compare the main characteristics of M2M and IOT **(10mks)**
b. Describe the various IOT communication Models **(06mks)**
c. What is the function of a centralised Network Controller in SDN **(04mks)**

PART B

Answer any TWO questions:

Q.4
a. Illustrate the different types of control flow statements available in Python with flowcharts **(06mks)**
b. Write a python program to prompt for a score between 0.0 and 1.0. If the score is out of range, print an error. If the score is between 0.0 and 1.0 print a grade using the following table. **(08mkc)**

Score	Grade
>=0.9	A
>=0.8	B
>=0.7	C
>=0.6	D
<0.6	E

d. Explain the building blocks of an IOT Device **(06mks)**

Q.5 a. Explain the following list methods with an example: **(08mks)**
i) Append iii) Insert
ii) Index iv) Sort

b. Write a short note on the following: **(06mks)**
i) JSON ii) XML

c. Write a python program to calculate area of triangle and circle and print the result. Take input from the user **(06mks)**

Q.6 a. Explain different file handling operations in Python **(06mks)**

b. Write a short note on Raspberry Pi Board **(06mks)**

c. Write a python program for blinking an LED using Raspberry Pi **(04mks)**

d. Explain the concept of Exception Handling in Python **(04mks)**

PART C

Answer any ONE questions:

Q.7 a. Design the protocol layer of IOT and explain the various protocols used in each layer **(08mks)**

b. Justify the reasons for using M2M and IOT **(05mks)**

c. Devise a python program to multiply all items in a list **(03mks)**

d. Explain the IOT Deployment Level-1 using suitable example **(04mks)**

Q.8 a. Write a short note on Network Function Virtualization **(04mks)**

b. Explain the concept of functions in python with appropriate example **(06mks)**

c. Explain the different IOT communication APIs **(06mks)**

d. Write a python program depicting the following concepts: **(04mks)**

i) Inheritance ii) Function Overriding