Code No: 156BJ **R18**

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD
B. Tech III Year II Semester Examinations, March - 2024
INTERNET OF THINGS
(Common to IT, CSE(AI&ML))

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

Note: i) Question paper consists of Part A, Part B.
ii) Part A is compulsory, which carries 25 marks. In Part A, Answer all questions.
iii) In Part B, Answer any one question from each unit. Each question carries 10 marks and may have a, b as sub questions.

PART – A

(25 Marks)

1.a)	Differentiate between cloud computing and embedded computing.	[2]
b)	Define IoT and its features and characteristics.	[3]
c)	Explain about NETCOZF.	[2]
d)	Compare M2M vs IoT.	[3]
e)	Discuss about HTTPLib, and SMTPLib.	[2]
f)	Explain date and time functions in Python.	[3]
g)	Give the status of LED in Raspberry Pi.	[2]
h)	How is Raspberry -Pi used in IoT?	[3]
i)	How does the Web server for IoT work?	[2]
j)	What are the key considerations for cloud storage?	[3]

PART – B

(50 Marks)

2.a)	Discuss different levels of IOT and write the procs and cons of each level.	
b)	Explain how IoT system is useful in health and lifestyle.	[5+5]
	OR	
3.a)	What are the functional blocks of IOT? Discuss.	
b)	Explain IoT protocols and communication models.	[5+5]
4.a)	Explain about Software Defined Networks (SDN) in detail.	
b)	Discuss the IoT system management with YANG- NETCONF.	[5+5]
	OR	
5.a)	How NFV can be used for virtualizing IoT devices? Discuss.	
b)	Explain the IoT system management with SNMP and NETOPEER.	[5+5]
6.a)	With suitable illustrations, discuss the languages features available in Python.	
b)	What are the different loop control statements available in python? Explain with suitable examples.	[5+5]
	OR	
7.a)	Explain how exception handling is used in Python with suitable examples.	
b)	What is JSON file? Explain with an example program about the usage of JSON module in python.	[5+5]

8.a) Explain the concepts involved in Raspberry Pi and analyze its features.
b) Write a Python program with Raspberry PI to interface external gadget. [5+5]

OR

9.a) List and explain popular commands used in Raspberry Pi.
b) Write a Python program on Raspberry Pi to blink an LED. [5+5]

10.a) Explain the data acquiring and storage mechanism for IoT.
b) How to design a RESTful Web API? Discuss. [5+5]

OR

11.a) With a neat sketch, describe Python web application framework.
b) How cloud models relied on communication APIs? Discuss. [5+5]

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