R18 Regulation *Subject code:* **2E7EI**

TKR COLLEGE OF ENGINEERING AND TECHNOLOGY

(Autonomous, Accredited by NAAC with 'A' Grade)

B.Tech VII Semester Regular/Supplementary Examinations, November 2022

INTERNET OF THINGS
(Professional Elective)

(Computer Science and Engineering)

Maximum Marks: 70 Date:05.12.2022 Duration: 3 hours

Note: 1.This question paper contains two parts A and B.
2. Part A is compulsory which carries 20 marks. Answer all questions in Part A.
3. Part B consists of 5 Units. Answer any one full question from each unit which carries 10M.
4. Each question carries 10 marks and may have a, b, c, d as sub questions.

Part-A

All the following questions carry equal marks (10x2M=20 Marks)

1 Write the characteristics of IoT
2 List the IoT Communication Models
3 Which communication protocols are used for M2M local area networks?
4 List the advantages of SDN?
5 What are variable length arguments?
6 What is the use of keyword argument in Python?
7 List out the Raspberry Pi interfaces?
8 Write the purpose of I2C Raspberry Pi interface?
9 List out the cloud storage models?
10 What is Xively cloud service?

Part-B

Answer All the following questions. (5X10M=50Marks)

11 A. Describe the characteristics of IoT and physical design of IoT with interoperable communications protocols. 5M
B. Discuss about any three IoT enabling technologies. 5M

OR

12 A. Explain the IoT communication APIs with neat diagrams 5M
B. What are applications of IoT? Explain in detail. 5M

13 A. Compare the differences between IoT and M2M in detail. 5M
B. Describe the network function virtualization (NFV) of IoT with NFV infrastructure and NFV Management Orchestration. 5M

OR

14 A. Discuss in detail about Simple Network Management Protocol. 5M
B. What is the function of centralized network controller in SDN? 5M

15	A. Explain the IoT Design Methodology in detail.	5M
	B. Discuss in detail about various IoT data types and data structures with example by using python.	5M
	OR	
16	Explain: i) Control flow	3M
	ii) Packages	3M
	iii) File handling of IoT.	4M
17	A. Discuss Raspberry Pi GPIO with PINs	4M
	B. Explain briefly about the Raspberry Pi with Linux and Raspberry Pi interfaces with an example	6M
	OR	
18	Write short notes of Raspberry Pi other devices of i) pc Duino	3M
	ii) BeagleBone	3M
	iii) Black,Cubieboard	4M
19	A. Explain about service and deployment models used in IoT Cloud? Write in detail about various API's used in IoT cloud.	5M
	B. Explain about IoT cloud with home automation.	5M
	OR	
20	A. What is Django architecture? Discuss in detail about the various WEB application frameworks.	5M
	B. Discuss the case study of agriculture in IoT.	5M