R22 Regulation *Subject code:4P6EE*

TKR COLLEGE OF ENGINEERING AND TECHNOLOGY

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

B. Tech VI Semester Regular/Supplementary Examinations, April 2026

INTERNET OF THINGS

(CSE)

Maximum Marks: 60 Date:23.04.2026 Duration: 3 hours

Note: **1.This question paper contains two parts A and B.**
2. Part A is compulsory which carries 10 marks. Answer all questions in Part A.
3. Part B consists of 5 Units. Answer any one full question from each unit.
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 (10X1M=10 Marks)		Marks	CO	BTL
1.a)	What are IoT enabling technologies? Give any two examples.	1M	1	2
b)	Define Internet of Things (IoT) and list any two characteristics	1M	1	1
c)	What is NETCONF and its purpose?	1M	2	2
d)	Analyze how SNMP protocol helps in monitoring IoT devices.	1M	2	1
e)	List any four data types in Python 3.	1M	3	2
f)	How is file handling performed in Python? Mention any two modes.	1M	3	3
g)	What is the role of Linux OS in Raspberry Pi?	1M	4	2
h)	What is a RESTful web API?	1M	4	3
i)	How would you use IoT for weather monitoring in a local area?	1M	5	3
j)	Analyze the role of sensors in an environment monitoring system.	1M	5	1

Part-B

Answer All the following questions. (5X10M=50Marks)		Marks	CO	BTL
2	Describe the Physical Design of IoT, including devices, sensors, and communication protocols.	10M	1	3
	OR			
3	Compare and analyze IoT applications in Environment, Agriculture, and Healthcare domains.	10M	1	3
4	Describe SDN and NFV concepts and their role in IoT systems.	10M	2	3
	OR			
5	Analyze the architecture and working of IoT system management using NETCONF-YANG.	10M	2	3
6	Describe python control flow statements (if, loop, break, continue) with examples.	10M	3	4
	OR			
7	Analyze and explain the role of Python packages (like NumPy, Pandas, MQTT libraries) in IoT applications.	10M	3	4

8	Explain various interfaces of Raspberry Pi (GPIO, SPI, I2C, UART) with diagrams.	10M	4	3
	OR			
9	Illustrate the working of cloud storage models and communication APIs in IoT systems.	10M	4	3
10	Design an IoT-based Home Automation system and explain its working with a neat diagram.	10M	5	3
	OR			
11	Evaluate the effectiveness of IoT in solving environmental issues like pollution and climate monitoring.	10M	5	3