



R20 Regulation

Subject code: 3E7EL

**TKR COLLEGE OF ENGINEERING AND TECHNOLOGY**

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

**B.Tech VII Semester Regular/Supplementary Examinations, December 2024****INTERNET OF THINGS  
(CSE)****Maximum Marks: 70**

Date:02.01.2025

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)	CO	Bloom Tx
1	What is IoT, and how does it differ from traditional internet-based systems		1	L1
2	List characteristics of IoT		1	L1
3	Explain the purpose of NETCONF in managing IoT networks.		2	L2
4	Illustrate the key difference between M2M and IoT.		2	L1
5	Explain the Components of a Sensor Node		3	L2
6	What is Sensor Web		3	L1
7	What is an interrupt in Arduino, and why is it important for real-time applications		4	L1
8	List the digital pins on an Arduino, and how they are different from analog pins.		4	L1
9	Distinguish between object storage and block storage in the cloud.		5	L2
10	What is the primary advantage of using cloud-based IoT platforms like AWS IoT		5	L1

**Part-B**

Answer All the following questions.		(5X10M=50Marks)	CO	Bloom Tx
11	a) Illustrate the logical design of IoT functional blocks. [5M]		1	L2
	b) Explain the IoT enabling technologies. [5M]			L2
OR				
12	a) Explain the different IoT levels and deployment templates. [5M]		1	L2
	b) What are the different communication models in IoT? Explain each with an example. [5M]			L3
13	a) Discuss about M2M in detail [5M]		2	L2
	b) Summarize the importance of a simple network management protocol [5M]			L2
OR				

14	Discuss IoT system management using NETCONF-YANG. [10M]		2	L2
15	a) Differentiate IEEE 80.15.4 and ZigBee? [5M] b) Explain the challenges in WSN. [5M]		3	L4 L3
	OR			
16	Explain the role and functionality of IoT data protocols such as MQTT and CoAP. [10M]		3	L3
17	Explain the communication protocols and cloud platforms in the design of an IoT solution. [10M]		4	L3
	OR			
18	a) Illustrate the components of the Arduino board in detail. [5M] b) Discuss the architecture of raspberry. [5M]		4	L2 L2
19	a) Outline the key aspects of the IoT platform design methodology [5M] b) Write a short note on WAMP- AutoBahn for IoT? [5M]		5	L2 L2
	OR			
20	a) Explain the different cloud storage models used in IoT platforms [5M] b) Discuss the importance of Amazon Web Services for IoT. [5M]		5	L3 L2