



R22 Regulation

Subject code: 4P5DB

TKR COLLEGE OF ENGINEERING AND TECHNOLOGY

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

B.Tech V Semester Regular Examinations, December 2024

DATA COMMUNICATIONS AND COMPUTER NETWORKS (ECE)

Maximum Marks: 60

Date: 03.01.2025

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		CO	Bloom Tx
All the following questions carry equal marks (10X1M=10 Marks)			
1.a)	List out the data flow in data communication.	1	L1
b)	Define the protocol and standard.	1	L1
c)	Define framing and flow control.	2	L2
d)	Explain the services provided by the network.	2	L1
e)	Explain the datagram network.	3	L1
f)	Explain the network service model.	3	L1
g)	What is the difference between TCP and UDP?	4	L2
h)	Does UDP implement flow control?	4	L1
i)	How does DNS work to resolve domain names to IP addresses?	5	L2
j)	What is the purpose of the HTTP protocol in web communication?	5	L1
Part-B			
Answer All the following questions. (5X10M=50Marks)		CO	Bloom Tx
2	A) Explain the need of OSI model in data communication and explain the OSI model [5M] B) Explain the categories of the network and interconnection of network. [5M]	1	L2
	OR		
3	Explain the IEEE 802.11 protocol and frame [10M]	1	L2
4	Explain the HDLC protocol. [10M]	2	L2
	OR		
5	Explain the ALOHA protocol [10M]	2	L2
6	A) Explain the Compare the virtual network and data gram network. [5M] B) Explain the Internet Control Message Protocol [5M]	3	L2
	OR		
7	How does TCP implement flow control? Explain the role of the Sliding Window mechanism [10M]	3	L3
8	Describe the structure of a UDP packet. [10M]	4	L2
	OR		

9	A) Explain the Go Back-N(GBN) protocol. [5M] B) Explain about stop and wait ARQ. [5M]	4	L3 L3
10	Explain the common issues when configuring SMTP, and how would resolve them? [10M]	5	L3
	OR		
11	Explain about RSA and Diffie-Hellman algorithm. [10M]	5	L3