R22 Regulation *Subject code:4E3EE*

TKR COLLEGE OF ENGINEERING AND TECHNOLOGY

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

B.Tech III Semester Regular/Supplementary Examinations, December 2024

COMPUTER NETWORKS

(Common to CSE, CSE(AI&ML) &CSE(DS))

Maximum Marks: 60 Date:13.12.2024 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.
4. Each question carries 10 marks and may have a, b, c, d as sub questions.

		Part-A	CO	Bloom Tx level
All the following questions carry equal marks (10X1M=10 Marks)				
1		Name of the software layers or user support layer in the OSI model	1	L1
2		What are the criteria used to evaluate transmission medium?	1	L1
3		What is error control?	2	L1
4		What is parity?	2	L1
5		What is mobility in networking?	3	L1
6		What is broadcasting?	3	L1
7		What are the problems with congestion in computer networks?	4	L1
8		What is meant by port or mailbox related with UDP.	4	L1
9		Mention the different levels in domain name space.	5	L1
10		In E-mail system, where the E-mail messages are stored?	5	L1
		Part-B		
Answer All the following questions. (5X10M=50Marks)				Bloom Tx level
11	a	With neat sketch explain guided and unguided transmission media. [5M]	1	L2
	b	State the difference between Bluetooth and WLAN [5M]	1	L2
		OR		
12	a	Compare and contrast different functions and protocols of each layer in TCP/IP model. [5M]	1	L4
	b	Discuss various channels supported by ISDN bit pipe. [5M]	1	L2
13	a	Define error control. Illustrate CRC with an example. [5M]	2	L2
	b	Analyze the significance and usage of persistent methods in CSMA. [5M]	2	L4
		OR		
14	a	What is Ethernet? Illustrate Channel allocation using Multiple Access Protocols. [5M]	2	L3

	b	Compare pure Aloha and slotted Aloha. [5M]	2	L4
15	a	Distinguish between virtual circuit and data gram circuit in Network layer. [5M]	3	L4
	b	Demonstrate distance vector routing algorithm with suitable example and point out its serious drawbacks. [5M]	3	L3
		OR		
16	a	Demonstrate the layered architecture of ATM Network. [5M]	3	L3
	b	Differentiate unicast, broadcast and multicast routing. [5M]	3	L4
17	a	How the connection-oriented services implemented? Explain. [5M]	4	L2
	b	Discuss briefly about TCP and UDP header format. [5M]	4	L4
		OR		
18	a	What is congestion control? Compare and contrast the leaky bucket and token bucket algorithms. [5M]	4	L4
	b	Demonstrate SMTP, POP3, IMAP protocols in e-mail. [5M]	4	L3
19	a	What are the protocols associated with WWW. Explain them. [5M]	5	L3
	b	Explain in brief about the formats of HTTP request and response messages. [5M]	5	L2
		OR		
20	a	Discuss the functions of SNMP and various versions in detail. [5M]	5	L2
	b	Illustrate domain name system with neat diagram. [5M]	5	L3