



R20 Regulation

Subject code: 305BB

# TKR COLLEGE OF ENGINEERING AND TECHNOLOGY

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

B.Tech V Semester Supplementary Examinations, November 2025

## COMPUTER NETWORKS

(EEE)

Maximum Marks: 70

Date: 14.11.2025

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.  
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)		Marks	CO	BTL
1	What is OSI?	2M	1	L1
2	Define Computer Network.	2M	1	L1
3	List out the functions of the Data Link Layer.	2M	2	L1
4	What is meant by Bit Stuffing?	2M	2	L1
5	What is unicast communication?	2M	3	L1
6	Define Broad Casting.	2M	3	L1
7	Compare connectionless service and Connection Oriented service.	2M	4	L1
8	What are the advantages of using UDP over TCP?	2M	4	L1
9	Define www.	2M	5	L1
10	What is Simple mail transfer protocol?	2M	5	L1

### Part-B

Answer All the following questions. (5X10M=50Marks)		Marks	CO	BTL
11	What is TCP/IP Model? Explain the functions, protocols and services of each layer. Compare it with OSI Model.	10M	1	L2
OR				
12	a) Explain briefly about ISDN. b) What are the differences between Narrow-Band and Broad-Band?	5M 5M	1	L2
13	What is ALOHA? Explain in detail about pure ALOHA and Slotted ALOHA.	10M	2	L2
OR				
14	a) Compare and contrast Stop-and-Wait and Sliding window protocols. b) Explain about address MAC in Data Link Layer.	5M 5M	2	L2
15	List the difference between Time-Division Multiplexing and Frequency Division Multiplexing.	10M	3	L2
OR				
16	What is the purpose of CSMA with Collision Detection? Explain it.	10M	3	L2
17	Explain about ATM Adaptation Layer(AAL) and its functions.	10M	4	L2

	OR			
18	What are the general principles of congestion prevention policies and explain it?	10M	4	L2
19	Explain about DNS and its Applications.	10M	5	L2
	OR			
20	a) Explain SNMP. b) Explain different types of electronic mails.	5M 5M	5	L2