R22 Regulation *Subject code:4E5FA*

TKR COLLEGE OF ENGINEERING AND TECHNOLOGY

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

B.Tech V Semester Supplementary Examinations, April 2026

COMPUTER NETWORKS

(IT)

Maximum Marks: 60 Date:17.04.2026 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)	Why the network cable is twisted?	1M	1	2
b)	State the advantages of coaxial cables	1M	1	2
c)	What is a frame?	1M	2	1
d)	Which ethernet standard supports full duplex transmission?	1M	2	2
e)	What is multiplexing	1M	3	1
f)	Is routing a local activity or global activity? Justify	1M	3	2
g)	What is a socket?	1M	4	1
h)	Why UDP is called connectionless?	1M	4	2
i)	Mention the record types of DNS resource record	1M	5	1
j)	What are the components of URL?	1M	5	1

Part-B

Answer All the following questions. (5X10M=50Marks)		Marks	CO	BTL
2	What is network topology? List any 3 network topologies and cite an advantage of each type.	10M	1	2
	OR			
3	Explain the functionality of each layer in OSI reference model.	10M	1	2
4	a) Explain about error detection and correction in data link layer. b) Explain the working principle of one bit sliding window protocol.	5M 5M	2 2	2 2
	OR			
5	a) Explain the importance of variable sized sliding window in TCP. b) Explain the types of transfer modes in HDLC.	5M 5M	2 2	2 2
6	Explain distance vector routing with example.	10M	3	3
	OR			
7	Explain ATM networks in Network layer.	10M	3	2
8	a) Explain IPv4 header format.	5M	4	2

	b) Explain the congestion control algorithms.	5M	4	2
	OR			
9	a) Explain about class full addressing and CIDR. b) Explain any three congestion prevention policies.	5M 5M	4 4	2 2
10	a) Describe in brief about different agents involved in sending and receiving e-mails. b) Describe in brief about HTTP request methods.	5M 5M	5 5	2 2
	OR			
11	a) Briefly explain about the architecture of www. b) Explain the services provided by DNS servers and how it works.	5M 5M	5 5	2 2