



R20 Regulation

Subject code: 3P5EC

TKR COLLEGE OF ENGINEERING AND TECHNOLOGY

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

B.Tech V Semester Regular/Supplementary Examinations, February 2024

COMPUTER NETWORKS

(CSE)

Maximum Marks: 70

Date:20.02.2024 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
All the following questions carry equal marks (10X2M=20 Marks)			
1	Define ARPANET?	CO1	L1
2	List the advantages of optical fiber over twisted-pair and coaxial cables.	CO1	L1
3	What are the issues in data link layer?	CO2	L1
4	Differentiate between Pure ALOHA and slotted ALOHA.	CO2	L2
5	What is the function of router?	CO3	L1
6	State general principles of congestion control.	CO3	L1
7	How transport layer performs duplication control?	CO4	L1
8	Compare TCP and UDP protocol.	CO4	L1
9	Define Domain name system with example?	CO5	L1
10	What is electronic mail?	CO5	L1
Part-B			
Answer All the following questions. (5X10M=50Marks)			Bloom Tx level
11	a) Explain the functionality of each layer in OSI reference model. b) Compare and contrast the OSI and TCP/IP reference model. [5+5]	CO1	L2 L4
OR			
12	a) What is Internet? Analyse the history of Internet and Internet today. b) Describe wireless transmission media. [5+5]	CO1	L4 L2
13	a) Explain in detail about simplex Stop and wait protocol? b) Explain the algorithm for CRC method of error checking with example. [5+5]	CO2	L2 L3
OR			
14	a) List and explain about various multiple access protocols. b) Explain in detail about collision free protocols. [5+5]	CO2	L2 L2

15	a) Identify the design issues of Network layer. b) With an example, explain shortest path routing. [5+5]	CO3	L3 L3
OR			
16	a) The major problem with distance vector algorithm is 'count to infinity'. How exchange of complete path from router to destination instead of delay, helps in solving count to infinity problem. b) What are the advantages of adaptive routing approach over non adaptive routing? [5+5]	CO3	L3 L4
17	a) Explain the elements of a Transport protocol? b) Identify the steps involved in the connection establishment and release in transport layer? [5+5]	CO4	L2 L3
OR			
18	a) Describe in brief about TCP segment Header. b) What is the main purpose of UDP protocol? Explain about its header. [5+5]	CO4	L2 L2
19	a) What is electronic mail? Describe in brief about sending and receiving e-mail. b) What is DNS? What are the services provided by DNS and explain how it works. [5+5]	CO5	L2 L2
OR			
20	a) Define HTTP? Describe in detail about HTTP request methods. b) Write short notes on: i) SMTP ii) IMAP [5+5]	CO5	L2 L2