



R22 Regulation

Subject code: 4E3EE

TKR COLLEGE OF ENGINEERING AND TECHNOLOGY

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

B.Tech III Semester Supplementary Examinations, July 2024

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

Maximum Marks: 60

Date:31.07.2024 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 level
All the following questions carry equal marks (10X1M=10 Marks)			
1.a)	What are the disadvantages of Layering Protocols?	CO1	L2
b)	Compare Circuit Switching and Packet Switching with a Diagram?	CO1	L2
c)	What is bit stuffing?	CO2	L2
d)	What are Wireless LANs?	CO2	L2
e)	Differentiate connection-oriented service with connectionless service?	CO3	L3
f)	Explain different IP address format?	CO3	L2
g)	List any two design issues at the Transport Layer?	CO4	L2
h)	Draw the TCP segment Header?	CO4	L2
i)	Write about POP3?	CO5	L2
j)	What are MIME headers?	CO5	L2
Part-B			
Answer All the following questions. (5X10M=50Marks)			
2	a. Discuss the principles of OSI Reference Model? [5]	CO1	L2
	b. Compare any two guided transmission media in terms of bandwidth, delay, cost, and ease of installation and maintenance? [5]	CO1	L3
OR			
3	a. Differentiate between different Network Topologies? [5]	CO1	L2
	b. With a neat diagram explains ATM Protocol Architecture? [5]	CO1	L2
4	a. Examine any two Error Correcting Codes with examples? [5]	CO2	L3
	b. Compare Pure ALOHA with Slotted ALOHA. [5]	CO2	L2
OR			
5	a. Explain Data Link Layer in HDLC? [5]	CO2	L2
	b. Discuss the architecture of classic Ethernet. [5]	CO2	L2
6	a. Compare datagram and virtual-circuit networks. [5]	CO3	L2
	b. Explain ARP protocol. [5]	CO3	L2

	OR												
7	<p>a. A router has the following (CIDR) entries in its routing table: [5]</p> <table border="1" style="margin-left: 40px;"> <tr> <td>Address/mask</td> <td>Next hop</td> </tr> <tr> <td>135.46.56.0/22</td> <td>Interface 0</td> </tr> <tr> <td>135.46.60.0/22</td> <td>Interface 1</td> </tr> <tr> <td>192.53.40.0/23</td> <td>Router 1</td> </tr> <tr> <td>Default</td> <td>Router 2</td> </tr> </table> <p>For each of the following IP addresses, what does the router do if a packet with that address arrives? (a) 135.46.63.10 (b) 135.46.57.14 (c) 135.46.52.2 (d) 192.53.40.7 (e) 192.53.56.7</p> <p>b. With a neat diagram explains Network Layer in the Internet? [5]</p>	Address/mask	Next hop	135.46.56.0/22	Interface 0	135.46.60.0/22	Interface 1	192.53.40.0/23	Router 1	Default	Router 2	CO3	L4
Address/mask	Next hop												
135.46.56.0/22	Interface 0												
135.46.60.0/22	Interface 1												
192.53.40.0/23	Router 1												
Default	Router 2												
		CO3	L2										
8	<p>a. Explain the primitives for a simple transport service. [5]</p> <p>b. Explain the Congestion prevention policies at Transport Layer. [5]</p>	CO4	L2										
	OR												
9	<p>a. Describe the elements of a transport protocol. [5]</p> <p>b. With a neat diagram explains UDP Header format. [5]</p>	CO4	L2										
		CO4	L2										
10	<p>a. How DNS handles naming in the Internet? [5]</p> <p>b. Explain SMTP. [5]</p>	CO5	L2										
		CO5	L2										
	OR												
11	<p>a. Write a note on WWW and HTTP? [5]</p> <p>b. Explain SNMP. [5]</p>	CO5	L2										
		CO5	L2										