

Code: 20CS3503, 20IT3503

**III B.Tech - I Semester - Supplementary Examinations
APRIL 2024****COMPUTER NETWORKS
(Common for CSE & IT)**

Duration: 3 hours

Max. Marks: 70

Note: 1. This paper contains questions from 5 units of Syllabus. Each unit carries 14 marks and have an internal choice of Questions.
2. All parts of Question must be answered in one place.

UNIT – I

1.	a)	Explain the architecture of TCP/IP reference model with its protocols.	7 M
	b)	Explain about various Transmission media in physical layer with a neat sketch.	7 M

OR

2.	a)	Explain and solve CRC division using Polynomials.	7 M
	b)	Explain Address Resolution Protocol with an example.	7 M

UNIT – II

3.	a)	Illustrate how Packet Switching is used as a connectionless service with an example showing the forwarding/routing tables at each and every router.	7 M
	b)	Compare and contrast the IPv4 and the IPv6 header fields. Do they have any fields in common?	7 M

OR			
4.	a)	What is the purpose of Address mapping? Write the differences between NAT and DHCP.	7 M
	b)	Explain about various metrics in network performance.	7 M
<u>UNIT-III</u>			
5.	a)	Explain the Link State Routing algorithm with an example?	7 M
	b)	Describe two major differences between the RIP and OSPF.	7 M
OR			
6.	a)	Describe the problems and solutions associated with Distance Vector Routing.	7 M
	b)	Demonstrate Dijkstra's shortest path algorithm. Also show working algorithm with the help of an example.	7 M
<u>UNIT – IV</u>			
7.	a)	Discuss the congestion control policies used in TCP.	7 M
	b)	List the differences between TCP and UDP.	7 M
OR			
8.	a)	Explain Sliding Window Protocols in detail.	7 M
	b)	Explain the various fields in TCP Header.	7 M
<u>UNIT – V</u>			
9.	a)	Discuss FTP and HTTP.	7 M
	b)	Explain about the architecture of e-mail system.	7 M
OR			

10.	a)	What is DNS? What are the services provided by DNS and explain how it works?	7 M
	b)	Explain in detail about TELNET client – server model?	7 M