PVP 20

Code: 20CS3503, 20IT3503

III B.Tech - I Semester – Supplementary Examinations - JUNE 2023

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.

			Max. Marks
		UNIT-I	
1	a)	Explain in detail about techniques for Framing.	7 M
	b)	Compare OSI and TCP/IP reference model.	7 M
		OR	
2	a)	What is CSMA? Bring out the differences between 1-persistent, non-persistent and p-persistent CSMA.	7 M
	b)	What is the checksum frame transmitted if the message is 1101011011 and the generator polynomial is X^4+X+1 using CRC?	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)	Demonstrate special IPv4 addresses used in internet .	7 M
		OR	
4	a)	Explain briefly about IPv6 packet format and extension headers.	7 M

	b)	How IP address is generated dynamically? Discuss DHCP protocol with neat sketch.	7 M
		UNIT-III	
5	a)	Design algorithm using Disjktras algorithm to list all nodes on the cheapest path to a given destination.	7 M
	b)	Explain the Optimality Principle with suitable example.	7 M
		OR	
6	a)	Explain Link state routing algorithm with a suitable example.	7 M
	b)	Define BGP Protocol. Describe its routing functionality in detail.	7 M
		UNIT-IV	
7	a)	Explain about Connection Establishment and Connection Termination using Three-Way Handshaking in TCP?	7 M
	b)	What are the Quality of Service parameters in congestion control? Discuss.	7 M
		OR	
8	a)	Discriminate the working Selective Retransmission Protocol from other ARQ protocols.	7 M
	b)	Explain the Slow Start or Timer Management mechanism in TCP/IP.	7 M

UNIT-V			
9	a)	What judgment would you make about DNS & SSH in application layer?	7 M
	b)	Summarize about Request and Response message formats in HTTP along with an example for each.	7 M
OR			
10	a)	What is Electronic mail? Describe in brief about Sending and Receiving e-mail.	7 M
	b)	Explain the working principle of FTP in detail with neat diagram?	7 M