PVP 20

Code: 20AM3503, 20DS3503

III B.Tech - I Semester - Regular Examinations - NOVEMBER 2024

COMPUTER NETWORKS

(Common for AIML, DS)

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.

BL – Blooms Level CO – Course Outcome

			BL	CO	Max. Marks
UNIT-I					
1	a)	Generalize LAN, WAN and MAN.	L2	CO1	7 M
	b)	Write a short note on unguided media used for data transmission.	L2	CO1	7 M
OR					
2		Explain briefly TCP/IP reference model with a neat diagram and differentiate between OSI and TCP/IP reference models in detail.	L2	CO1	14 M
UNIT-II					
3	a)	With the aid of suitable examples, describe the framing techniques used in data link layer.	L2	CO1	7 M
	b)	Differentiate pure aloha and slotted aloha with examples.	L3	CO2	7 M
OR					

4	a)	State High-level Data Link Control (HDLC) protocol in detail.	L2	CO1	7 M
	b)	Illustrate the working procedure of CSMA/CD protocol with an example.	L3	CO2	7 M
		UNIT-III			
5		As ISP is given a block of addresses beginning with 190.100.0.0/16. The ISP needs to distribute these addresses to 3 groups of customers as follows. i) Group 1 has 64 customers each needs 256 addresses ii) Group 2 has 128 customers each needs 128 addresses iii) Group 3 has 128 customers each needs 64 addresses Sketch the sub-block network and give the slash notation for each sub-block network. Specify the broadcast and network address of each sub-block network and also compute the remaining IP addresses after these allocations?	L3	CO3	14 M
		OR			
6	a)	Explain the working procedure of DHCP and also discuss its header format.	L2	CO2	7 M
	b)	Illustrate link-state routing algorithm with an example.	L3	CO3	7 M
		UNIT-IV			
7	a)	Explain TCP connection management with a diagram.	L4	CO4	7 M

	b)	Brief on the approaches used to provide Quality of Service (QoS) in transport layer.	L2	CO1	7 M
OR					
8	a)	Compare and contrast Go-Back-N and Selective-repeat protocols in transport layer.	L4	CO4	7 M
	b)	Summarize the services and applications of UDP protocol in transport layer.	L2	CO1	7 M
UNIT-V					
9	a)	Summarize how SMTP transfers message from one host to another host with suitable illustration.	L2	CO1	7 M
	b)	Explain various HTTP request operations.	L2	CO1	7 M
OR					
10	a)	Write your understanding of File Transfer Protocol.	L2	CO1	7 M
	b)	Explain the functionalities performed by DNS and also discuss the same with an example.	L2	CO1	7 M