R18

ANURAG Engineering College
(An Autonomous Institution)
III B. Tech I Semester Regular/Supplementary Examinations, Dec–2023/Jan-2024
COMPUTER NETWORKS
(COMPUTER SCIENCE AND ENGINEERING)

Time: 3 Hours   Max.Marks:75

Section – A (Short Answer type questions)   (25 Marks)
Answer All Questions

		Course Outcome	B.T Level	Marks
1.	Define terms, i) Protocols ii) Service	CO1	L1	2M
2.	What is data communication? List the components of a communication system	CO1	L2	3M
3.	How does single bit error differs from Burst bit error?	CO2	L1	2M
4.	Define CSMA/CD	CO2	L2	3M
5.	List the devices that are used to connect the LAN	CO3	L1	2M
6.	Discuss about fast Ethernet	CO3	L2	3M
7.	What are the design issues of the network layer	CO4	L1	2M
8.	What is sub-netting? Give examples	CO4	L2	3M
9.	Recall third scenario in E-Mail	CO5	L1	2M
10.	Why HTTP is called stateless protocol? Justify	CO5	L2	3M

Section B (Essay Questions)1
Answer all questions, each question carries equal marks.   (5 x 10M = 50M)

			Course Outcome	B.T Level	Marks
11.	A)	Discuss the ISO – OSI Reference Model in Detail	CO1	L2	10M
		OR			
	B)	Explain the types of Guided media with its application, performance and its frequency spectrum with neat diagram	CO1	L3	10M
12.	A)	Explain in detail about Error Detection and Error Correction.	CO2	L2	10M
		OR			
	B)	Explain in Data Link level flow control in detail with example.	CO2	L3	10M
13.	A)	Explain the function and the issues of WLAN in detail.	CO3	L2	10M
		OR			
	B)	How a bridge does comes to learn on which port the various hosts reside? Explain with an Example.	CO3	L3	10M
14.	A)	Explain in detail about TCP congestion avoidance algorithm in detail	CO4	L2	10M
		OR			
	B)	Calculate the bandwidth-delay product for the following networks: i) T1 (1.5 Mbps), ii) Ethernet (10 Mbps), iii) T3 (45 Mbps), and iv) STS-3 (155 Mbps). Assume an RTT of 100 msec. Recall that a TCP header has 16 bits reserved for Window Size. What are its implications in light of your calculations?	CO4	L3	10M
15.	A)	Explain in detail about email, SMTP and POP3 Protocol	CO5	L2	10M
		OR			
	B)	Explain the role of a DNS on a Computer Network	CO5	L3	10M