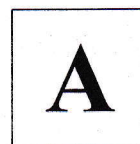


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## MCA DEGREE THIRD SEMESTER EXAMINATION, JANUARY 2022

## 20-382-0301 DATA COMMUNICATION AND NETWORKS

(Regular)

Time : 3 Hours

Maximum Marks:50

(Answer ANY FIVE questions)

Each question carries EQUAL Marks

No	QUESTIONS	MARKS	CO	BL	PI
1.	What is the difference between TCP/IP model and OSI model? Explain the network support layers and transport layer in the OSI model.	10	CO2	L2	2.6.2
2.	Explain the strategy used by data link layer for avoiding collision while accessing the channel.	10	CO4	L2	2.5.2
3.	A university with network identifier 220.100.200.0 has 4 departments. Each department is a sub network of university network. (a) What are the subnetwork identifiers of each subnetwork? (b) How many numbers of hosts can be configured in each subnetwork? Find the subnetwork and network masks.	10	CO6	L3	1.7.1
4.	Draw and explain the state transition diagram for three-way handshaking connection establishment and half close connection termination in TCP.	10	CO2	L2	2.6.2
5.	Kiran wants to send a mail to Geetha. Kiran is staying India and Geetha is staying in New York. Both are connected to different mail servers. I. Which are the different types of agents involved in this process II. Explain the protocol used in the transfer of mail.	10	CO7	L3	2.6.2
6.	What will be the 7-bit Hamming code if the data to be send is 1011? In the transmission process the data got corrupted and changed to 1111. How it can be identified and corrected using the same hamming code technique?	10	CO3	L3	1.7.1
7.	Explain how physical address can be obtained by using ARP protocol?	10	CO7	L2	1.6.1

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