PRN:		Course Code:	UCS203

First Year **B. Tech** End Semester Examination Summer 2024

Data Communication and Computer Networks

Day and Date: Friday, 31/05/2024 Max Marks: **100**

Time: 10.30am to 1.30pm Duration: **03** hrs

Instructions: All questions are compulsory.

			Marks	Bloom's Level	CO
Q.1		**Attempt the following**			
	a)	What is network topology? Explain any four	08	L1	CO1
	b)	What is multiplexing? Explain its types	08	L1	CO1
		OR			
	b)	What is Data Communication? Explain its Components	08	L1	CO1
Q.2		**Attempt the following**			
	a)	What are Computer Networks? Explain Types of Networks	08	L4	CO1
	b)	List and explain layers of OSI reference model	08	L1	CO1
		OR			
	b)	What is Wireless Transmission? Explain classification of Wireless Transmission	08	L1	CO1
Q.3		**Attempt any two from the following**			
	a)	Explain Physical Layer? Functions of Physical Layer	08	L2	CO2
	b)	Utilize error correction technique for any example	08	L3	CO2
	c)	**Solve the following:** Station A needs to send a message consisting of 9 Packets to Station B using a Sliding Window (Window Size 3) and Go- Back- N error control strategy. All packets are ready and immediately available for transmission. If every 5th packet that A transmits gets lost (but no ACKs from B ever get lost) then what is the number of packets that A will transmit from sending the message to B?	08	L3	CO2
Q.4		**Attempt any two from the following**			
	a)	What is MAC layer and explain its functions	08	L1	CO3
	b)	Explain ALOHA and its types in detail	08	L2	CO3
	c)	Explain CSMA/CD in detail	08	L2	CO3
Q.5		**Attempt any Two of the following**			
	a)	Explain network layer and its functions	09	L2	CO4
	b)	List and explain types of routing in detail	09	L4	CO4
	c)	Explain network addressing with classful addressing	09	L2	CO4
Q.6		**Attempt any Two of the following**			
	a)	Differentiate TCP and UDP	09	L2	CO4
	b)	Explain in brief Presentation and Session Layer	09	L2	CO4
	c)	Explain DNS in detail	09	L2	CO4

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