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B.E. SEMESTER-V (Information Technology) EXAMINATION APRIL 2025

Subject Name : Data Communication & Networking   Subject Code: IT505-N
Date: 17/04/2025(Thursday)   Time: 12.30 pm to 03.30 pm   Total marks: 70

Instructions:
1. Answer each section in separate Answer sheet.
2. All questions are compulsory.
3. Indicate clearly, the options you attempt along with its respective question number.
4. Use the last page of main supplementary for rough work.

Section-I

Q.1 (A)	Explain Transmission impairments.	(5)
(B)	Draw and explain the Client Server Architecture.	(5)
(C)	Explain Digital to analog transmission.	(5)

OR

(C)	Draw & Discuss the OSI reference model.	(5)

Q.2 (A)	What is a switching technique? Explain Circuit switching technique in detail.	(5)
(B)	Explain briefly ISDN Services.	(5)

OR

Q.2 (A)	Explain Design Issues in Data Link layer.	(5)
(B)	Explain Packet switching technique in detail	(5)

Q.3 (A)	Compare Pure ALOHA with Slotted ALOHA.	(5)
(B)	List out the Sliding Window protocols and Explain any one in detail.	(5)

OR

Q.3 (A)	Write a short note on DQDB (Distributed Queue Dual Bus).	(5)
(B)	Explain the working principle of CSMA.	(5)

Section-II

Q.4 (A)	Explain Distance Vector routing algorithm.	(5)
(B)	Discuss Congestion Control with its Principles.	(5)
(C)	What are the services of transport layer protocols?	(5)

OR

(C)	Explain Broadcast routing.	(5)

Q.5 (A)	Define QOS and its improvement at the transport layer	(5)
(B)	Explain Token Ring and FDDI	(5)

OR

Q.5 (A)	Explain Connection Oriented and Connectionless networks.	(5)
(B)	Explain IPV6 Datagram with its packet format.	(5)

Q.6 (A)	Differentiate UDP and TCP.	(5)
(B)	Explain DHCP protocol.	(5)

OR

Q.6 (A)	Explain Link State Routing algorithm.	(5)
(B)	Explain Electronic Mail.	(5)