

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY-GURUJADA VIZINAGARAM
III B. Tech II Semester Regular/Supplementary Examinations November -2025

COMPUTER NETWORKS

(OPEN ELECTIVE-II)

Time: 3 hours

Max. Marks: 70

Answer any **FIVE** Questions **ONE** Question from **Each unit**
 All Questions Carry Equal Marks

		<u>UNIT-I</u>	
1.	a)	Explain TCP/IP Reference model in detail.	[7M]
	b)	With neat sketch illustrate Fiber optic cables.	[7M]
		(OR)	
2.	a)	Explain Network Topologies.	[7M]
	b)	Illustrate Microwave transmission with neat diagram.	[7M]
		<u>UNIT-II</u>	
3.	a)	Apply the standard Cyclic Redundancy Check (CRC) method to compute the CRC code for the data frame 1101011111 using the generator polynomial $G(x) = x^4 + x + 1$. Show the actual bit string transmitted, including the CRC checksum.	[7M]
	b)	With neat sketch explain the Stop and wait protocol.	[7M]
		(OR)	
4.	a)	Describe the Elementary Data Link Layer protocols.	[7M]
	b)	Explain HDLC configuration and transfer modes.	[7M]
		<u>UNIT-III</u>	
5.	a)	What is CSMA? Explain CSMA/CD and CSMA/CA .	[7M]
	b)	Explain Fastest Ethernet with suitable diagram.	[7M]
		(OR)	
6.	a)	Explain FDMA and CDMA.	[7M]
	b)	Illustrate 10 Gigabit Ethernet with suitable diagram.	[7M]
		<u>UNIT-IV</u>	
7.	a)	Illustrate Store and forward Packet switching.	[7M]
	b)	Explain Load Shedding Congestion Control technique.	[7M]
		(OR)	
8.	a)	Compare and Contrast Virtual Circuit and Datagram Networks.	[7M]
	b)	Explain IPv4 Header Format with neat diagram.	[7M]
		<u>UNIT-V</u>	
9.	a)	Explain TCP Connection establishment and termination.	[7M]
	b)	Describe the UDP Services and Applications.	[7M]
		(OR)	
10.	a)	Explain E-mail Architecture.	[7M]
	b)	Illustrate HTTP and SNMP protocols.	[7M]
