Code No: R1931052 **R19** **SET - 1**

III B. Tech I Semester Regular Examinations, February-2022

COMPUTER NETWORKS

(Computer Science and Engineering)

Time: 3 hours Max. Marks: 75

Answer any **FIVE** Questions **ONE** Question from **Each unit**

All Questions Carry Equal Marks

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UNIT-I

1.	a)	Discuss functionalities of different layers of OSI reference model.	[8M]
	b)	Classify networks by scale and explain each with figures.	[7M]
		(OR)	
2.	a)	Explain circuit switching, message switching and packet switching.	[8M]
	b)	Explain why layered architecture is used for networks.	[7M]
		UNIT-II	
3.	a)	Illustrate Frequency Division Multiplexing and Time Division Multiplexing.	[8M]
	b)	A sender sends series of frames to the same destination using 5-bit sequence number. If the sequence number starts with 0, what is the sequence number after sending 100 frames?	[7M]
		(OR)	
4.	a)	Explain flow control mechanism in data link layer.	[8M]
	b)	Explain CSMA/CD mechanism.	[7M]
		UNIT-III	
5.	a)	Explain standard Ethernet.	[8M]
	b)	Explain IEEE 802.11 wireless LAN.	[7M]
		(OR)	
6.	a)	Explain the role of redundancy in error detection.	[8M]
	b)	Distinguish between Wi-Fi and Wi-MAX.	[7M]
		UNIT-IV	
7.	a)	What is the major problem of IPV4 protocol? What are the solutions?	[8M]
	b)	Perform CIDR aggregation on the following IP addresses: 128.56.24.0/24, 128.56.25.0/24, 128.56.26.0/24 and 128.56.27.0/24	[7M]
		(OR)	
8.	a)	Compare Distance Vector Routing and Link State Routing.	[8M]
	b)	Compare connection oriented and connection less services provided by the network layer.	[7M]

UNIT-V

9. a) Draw and explain TCP header. [8M]
   b) Explain congestion control in TCP. [7M]

(OR)

10. a) Explain how domain name is converted to IP address. [8M]
    b) Explain the purpose of FTP and BOOTP protocols. [7M]

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