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Course Code: 1951221 **Roll No:** **MLRS- R19**

MARRI LAXMAN REDDY
INSTITUTE OF TECHNOLOGY AND MANAGEMENT
(AN AUTONOMOUS INSTITUTION)
(Approved by AICTE, New Delhi & Affiliated to JNTUH, Hyderabad)
Accredited by NBA and NAAC with 'A' Grade & Recognized Under Section2(f) & 12(B)of the UGC act,1956

III B.Tech I Sem Regular End Examination, January 2022

Data Communication and Computer Networks
(IT)

Time: 3 Hours. **Max. Marks: 70**

Note: 1. Question paper consists: Part-A and Part-B.
2. In Part – A, answer all questions which carries 20 marks.
3. In Part – B, answer any one question from each unit.
Each question carries 10 marks and may have a, b as sub questions.

PART- A

(10*2 Marks = 20 Marks)

1.	a)	Name the factors that affect the performance of the network.	2M	CO1	L2
	b)	What is the purpose of a repeater in a network?	2M	CO1	L1
	c)	What is Multiplexing?	2M	CO2	L2
	d)	What is Error Detection and list its types.	2M	CO2	L1
	e)	Give the occasions where the physical address is needed to map to the logical address.	2M	CO3	L3
	f)	How ICMP messages are helpful in finding a host is live or not.	2M	CO3	L4
	g)	List the responsibilities of Transport Layer.	2M	CO4	L4
	h)	Define Integrated and Differentiated services.	2M	CO4	L1
	i)	What are the components of Web?	2M	CO5	L2
	j)	List the transmission modes used by FTP.	2M	CO5	L4

PART- B

(10*5 Marks = 50 Marks)

2	a)	With a neat sketch, explain the various topologies of the network.	5M	CO1	L4
	b)	Why layered approach is used for the design of computer networks?	5M	CO1	L1
		OR			
3		Compare and contrast Circuit, Massage, Datagram and Virtual Circuit switched networks.	10M	CO1	L4
4	a)	How bits are converts into the frames? Illustrate.	5M	CO2	L4
	b)	Explain IEEE 802.3 standard for Ethernet with the help of frame format.	5M	CO2	L2
		OR			
5	a)	Discuss in detail about Point to Point Protocol in data link layer.	5M	CO2	L2
	b)	What is the purpose of CSMA CA? Explain it.	5M	CO2	L5

6	a)	What is meant by Forwarding at Network Layer? Explain various techniques to implement it.	5M	CO3	L2
	b)	Illustrate Distance Vector Routing Algorithm with an example.	5M	CO3	L2
		OR			
7	a)	What is the format of IPv6 header? Describe the significance of each field.	5M	CO3	L3
	b)	Explain Internetwork Routing and Packet Fragmentation.	5M	CO3	L2
8	a)	Illustrate the connection establishment and release in transport layer.	5M	CO4	L2
	b)	Discuss about QoS in Switched Networks.	5M	CO4	L6
		OR			
9		Define Congestion in a Network. What are the factors that lead to a congestion? Discuss the Congestion Control techniques used in TCP.	10M	CO4	L1
10	a)	What are the services provided by DNS and explain how it works.	5M	CO5	L1
	b)	Illustrate the working of network management Protocol SNMP.	5M	CO5	L2
		OR			
11	a)	How would you summarize the concepts of E-mail, its architecture and services?	5M	CO5	L2
	b)	Demonstrate the working of HTTP Protocol.	5M	CO5	L2

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