Course Code: 1950405 | MLRS- R19

MARRI LAXMAN REDDY
INSTITUTE OF TECHNOLOGY AND MANAGEMENT
(AN AUTONOMOUS INSTITUTION)
(Approved by AICTE, New Delhi & Affiliated to JNTUH, Hyderabad)
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III B.Tech I Sem Supply End Examination, July 2022

Data Communication and Networks

(ECE)

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)	UNIT-I What are the advantages of a multipoint connection over a point-to-point connection?	2M	CO1	BL
	b)	UNIT-I For n devices in a network, what is the number of cable links required for mesh, bus topology?	2M	CO1	BL
	c)	UNIT-II List out the three methods of controlled access in MAC sub layer.	2M	CO2	BL
	d)	UNIT-II Explain flow control.	2M	CO2	BL
	e)	UNIT-III Change the following IPv4 addresses from dotted decimal notation to binary notation. I. 111.56.45.78 II. 221.34.7.82	2M	CO3	BL
	f)	UNIT-III Discuss the design issues of network layer.	2M	CO3	BL
	g)	UNIT-IV List out open loop congestion control policies.	2M	CO4	BL
	h)	UNIT-IV Define socket addresses.	2M	CO4	BL
	i)	UNIT-V Why do we need POP3 for electronic mail?	2M	CO5	BL
	j)	UNIT-V Write short note on SMTP.	2M	CO5	BL

PART- B

(10*5 Marks = 50 Marks)

2	a)	UNIT-I Explain the fundamental characteristics and components of data communication system.	5M	CO1	BL
	b)	UNIT-I Explain types of addresses used in networks.	5M	CO1	BL
		OR			
3		UNIT-I Explain TCP/IP protocol suite.	10M	CO1	BL
4	a)	UNIT-II Define framing and explain its need in data link layer.	5M	CO2	BL
	b)	UNIT-II Assume that in a stop- and – wait ARQ system, the bandwidth of the line is 1MBPS and 1 bit takes 20ms to make a round trip. What is the bandwidth delay product?	5M	CO2	BL

		OR			
5		UNIT-II Compare and contrast Go- Back-N ARQ protocol with selective repeat protocol.	10M	CO2	BL
6	a)	UNIT-III Discuss the significance of each field in IP v4 datagram format.	5M	CO3	BL
	b)	UNIT-III Compare link state with distance vector algorithm.	5M	CO3	BL
		OR			
7		UNIT-III Illustrate Routing Information Protocol (RIP) with a suitable diagram.	10M	CO3	BL
8	a)	UNIT-IV Explain UDP user datagram format.	5M	CO4	BL
	b)	UNIT-IV List some of the uses of UDP protocol.	5M	CO4	BL
		OR			
9		UNIT-IV Illustrate TCP connections, TCP releases with a diagram.	10M	CO4	BL
10	a)	UNIT-V Explain FTP commands and replies.	5M	CO5	BL
	b)	UNIT-V Explain the persistent and non-persistent connection of HTTP.	5M	CO5	BL
		OR			
11		UNIT-V Describe in detail the services offered by DNS and explain the DNS message format.	10M	CO5	BL

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