CMR ENGINEERING COLLEGE: : HYDERABAD UGC AUTONOMOUS IV-B.TECH-I-Semester End Examinations (Supply) - April- 2025

R20

DATA COMMUNICATIONS AND NETWORKS

(ECE)

[Time: 3 Hours]

Note: This question paper contains two parts A and B. Part A is compulsory which carries 20 marks. Answer all questions in Part A. Part B consists of 5 Units. Answer any one full question from each unit. Each question carries 10 marks and may have a, b, c as sub questions.

	PART-A	(20 Marks)	
1. a) b) c) d) e) f) g) h)	Mention the standard organizations for data communications. List out the various components in a network. State the different types of frames in HDLC. Define Noisy less and Noisy channel. Recall Queuing in network layer. Give brief note on network service models. What is congestion and how it occurs? Show the UDP segment structure.	[[[[[[[[[2M] 2M] 2M] 2M] 2M] 2M] 2M] 2M]
i) j)	What is the need of FTP? Explain DNS records.	[2M] [2M]
	PART-B	(50 Marks)	
2.	Explain the TCP/IP architecture. Show the comparison with the OSI model with the schematic diagram.	e help of []	10M]
3.	OR Write a short note on different levels of addressing mechanism employed in Internet	x. [1	10M]
4.	Explain Cyclic Redundancy Check with an example.	[]	10M]
5.a. b.	Discuss about error control protocol with diagram. Explain about services provided by the link layer.	[[5M] 5M]
6.a. b.	Discuss IP addressing procedure and its advantages. Compare IPV4 and IPV6.	[5M] 5M]
7.	OR Illustrate in detail about the concept of forwarding and addressing in the Internet.	[]	10M]
8.a. b.	List the transport layer's quality of service parameters and explain them. How would you summarize TCP congestion control?	[[5M] [5M]
9.	What is multiplexing? Explain in detail about various types of multiplexing.	[]	10M]

10.a. What is the use of DNS? Explain how it works? [5M] b. Explain the network application architectures. [5M] OR

11.a.	Describe the various parts of e-mail address and show the process of sending and receiving	[5M]
	e-mails.	
b.	Write a short note on FTP.	[5M]

[5M]

Code No.: EC701PC

[Max. Marks: 70]

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