

Code No.: EC701PC

R20

H.T.No.

8 R

**CMR ENGINEERING COLLEGE: : HYDERABAD
UGC AUTONOMOUS**

**IV-B.TECH-I-Semester End Examinations (Supply) - April- 2024
DATA COMMUNICATIONS AND NETWORKS
(ECE)**

[Time: 3 Hours]

[Max. Marks: 70]

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) What are the network criteria? [2M]
- b) Define network? Give examples of computer networks. [2M]
- c) Explain the services provided by the Link Layer. [2M]
- d) What are the different types of errors? [2M]
- e) What is the 32-bit binary equivalent of the IP address 223.1.3.27? [2M]
- f) Explain the routing control plane. [2M]
- g) Explain the need of UDP protocol. [2M]
- h) List out the Transport layer protocols. [2M]
- i) Explain the File Transfer Protocol (FTP). [2M]
- j) What is the use of DNS? [2M]

PART-B

(50 Marks)

2. Explain the TCP/IP protocol Suite layers and protocols in each layers. [10M]
- OR**
3. Compare TCP/IP protocol suite with OSI model. [10M]
4. Explain the HDLC protocol. [10M]
- OR**
5. Explain the ALOHA protocol. [10M]
6. Illustrate the transitioning from IPv4 to IPv6. [10M]
- OR**
7. Compare and contrast the IPv4 and the IPv6 header fields. [10M]
8. Discuss the transport layer service primitives. What do you understand by 3 way hand shake Technique? Also discuss the TCP connection management. [10M]
- OR**
- 9.a) Compare UDP and TCP protocol. [5M]
- b) What is the basic principle of reliable data transfer? [5M]
10. How does SMTP mark the end of a message body? How about HTTP? [10M]
- OR**
11. Illustrate the basic operation of SMTP. [10M]
