CMR ENGINEERING COLLEGE: : HYDERABAD
UGC AUTONOMOUS
III–B.TECH–I–Semester End Examinations (Regular) - December- 2024
DATA COMMUNICATIONS AND NETWORKS
(ECE)

[Time: 3 Hours]   [Max. Marks: 60]

Note: This question paper contains two parts A and B.

Part A is compulsory which carries 10 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.

PART-A   (10 Marks)

1. a) What are the protocol standards?   [1M]
   b) Expand WiFi.   [1M]
   c) What is the difference between bit rate and bit interval?   [1M]
   d) What is MAC protocol?   [1M]
   e) Explain virtual circuit network.   [1M]
   f) Explain the need of DNS.   [1M]
   g) Define demultiplexing.   [1M]
   h) How can we measure the performance of TCP.   [1M]
   i) What is the need of FTP?   [1M]
   j) What is Simple Mail Transfer Protocol?   [1M]

PART-B   (50 Marks)

2. Briefly explain the different types of network topologies. Write each of its advantages and disadvantages.   [10M]

OR

3. Explain TCP/IP model with suitable diagram.   [10M]

4. Explain various types of errors, Redundancies and Forward Error Correction versus Retransmission.   [10M]

OR

5. Explain briefly about Cyclic Redundancy Check with an example.   [10M]

6. Describe in detail the operation of Virtual-Circuit Approach: Connection-Oriented Service.   [10M]

OR

7. Explain about IPv6? Discuss in detail the various aspects of IPV6.   [10M]

8. Define UDP. Discuss the operations of UDP. Identify when can an application make use of UDP?   [10M]

OR

9. Explain Go-Back-N-ARQ.   [10M]

10. What is File Transfer Protocol and explain its importance.   [10M]

OR

11. How does a DNS work? Explain DNS records.   [10M]

****