

CMR ENGINEERING COLLEGE: : HYDERABAD

UGC AUTONOMOUS

III-B.TECH-II-Semester End Examinations (Regular) - June- 2025

COMPUTER NETWORKS

(CSM)

[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 and may have a, b, c as sub questions.

PART-A**(10 Marks)**

1. a) Explain the characteristics of twisted pair cable. [1M]
- b) List the difference between logical, physical and port address. [1M]
- c) What is CRC Checker? [1M]
- d) Compare and contrast error detection codes and error correction codes. [1M]
- e) What is internetworking? [1M]
- f) Define Flooding. [1M]
- g) What is the difference between network layer and the transport layer? [1M]
- h) What is UDP? [1M]
- i) Write short notes on FTP. [1M]
- j) Explain the functions of SMTP. [1M]

PART-B**(50 Marks)**

2. Compare and contrast OSI model and TCP/IP model reference model. [10M]
- OR**
3. Estimate your idea on how guided media differ from unguided media? Briefly explain any three methods used for data communication using guided media and two methods used for data communication using unguided media. [10M]

4. Calculate CRC, if the message is $x^7 + x^5 + 1$ and the generator polynomial is $x^3 + 1$. [10M]

OR

5. How performance is improved in CSMA/CD protocol compared to CSMA protocol? Explain. [10M]

6. Discuss about i) leaky bucket algorithm with neat diagram. [10M]
ii) Token bucket algorithm with neat diagram.

OR

7. Find the class of each IP address. Give suitable explanation. [10M]
(i) 227.12.14.87
(ii) 193.14.56.22
(iii) 14.23.120.8
(iv) 252.5.15.111
(v) 134.11.78.56

8. Illustrate the connection establishment and release in transport layer. [10M]

OR

9. Show the different approaches in Packet Switching. Explain them in detail. [10M]

10. Write briefly about World wide web. [10M]

OR

11. Discuss the features of HTTP and also discuss how HTTP works. [10M]
