

Code No.: R22CS58201PC

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**CMR ENGINEERING COLLEGE: : HYDERABAD**  
**UGC AUTONOMOUS**  
**I–M.TECH–II–Semester End Examinations (Supply) – February-2026**  
**ADVANCED COMPUTER NETWORKS**  
**(CSE)**

[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) Distinguish between Hubs and Switches. [1M]
- b) Elaborate Router Structures. [1M]
- c) Discuss about Cellular Networks. [1M]
- d) Distinguish between Intra and Inter domain routing. [1M]
- e) Explain about IPv4 and IPv6. [1M]
- f) Create IPv6 header. [1M]
- g) Determine the Services of Application layer. [1M]
- h) Analyze the Header of UDP. [1M]
- i) Identify Network Monitoring Tools. [1M]
- j) Justify the need of Socket Programming. [1M]

**PART-B**

**(50 Marks)**

2. Elaborate ISO/OSI model. [10M]
- OR**
3. Determine the need of Multiple Access Protocols. [10M]
4. Interpret the process of Congestion control in Network Layer. [10M]
- OR**
5. a) Design Least Cost path Routing algorithm with an example. [5M]
- b) Discuss about Mobile IP. [5M]
6. a) Classify the IPv4 addressing with a neat diagram. [5M]
- b) Justify the need of Transition for IPv4 to IPv6. [5M]
- OR**
7. Categorize Inter Domain Multicast Protocols. [10M]
8. a) Develop the process of Routing packets through a LAN and WAN. [5M]
- b) Outline the Principles of Network Applications. [5M]
- OR**
9. Summarize Client Server and Peer to Peer application Communication. [10M]
10. a) Illustrate the working of FTP in application layer. [5M]
- b) How can you make use of Electronic Mail in the Internet? [5M]
- OR**
11. a) Discuss about P2P file Sharing. [5M]
- b) Determine the usage of Domain Name Systems. [5M]

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