



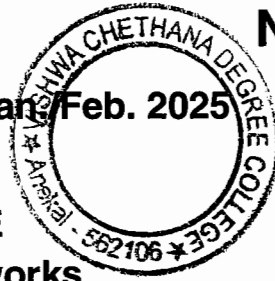
**NP – 409**

**III Semester B.C.A. Examination, Jan/Feb. 2025**

**(NEP) (F+R)**

**COMPUTER SCIENCE**

**CA-C12T : Computer Networks**



Time : 2½ Hours

Max. Marks : 60

***Instruction : Answer all Sections.***

**SECTION – A**

I. Answer **any four** questions. **Each** question carries **2** marks. **(4×2=8)**

- 1) Define data communication.
- 2) What is congestion control ?
- 3) What is piggy backing ?
- 4) Differentiate between FDMA and TDMA.
- 5) Define telnet and ftp.
- 6) Mention any two services provided by the Transport Layer.

**SECTION – B**

II. Answer **any four** of the following. **Each** question carries **5** marks. **(4×5=20)**

- 7) Explain the TCP/IP protocol suite with a diagram.
- 8) Describe error detection and correction techniques.
- 9) Write a short note on CSMA/CD and its significance.
- 10) Explain the difference between static and dynamic routing.
- 11) Compare TCP and UDP, highlighting their features and use cases.
- 12) Discuss the Quality of Service (QoS) techniques in computer networks.

**P.T.O.**



## SECTION – C

III. Answer **any four** of the following. **Each** question carries **8** marks. **(4×8=32)**

- 13) Discuss the various types of transmission media.
  - 14) Explain the structure and working of the HDLC protocol in the Data Link Layer.
  - 15) What is packet switching ? Discuss its advantages and working.
  - 16) Write in detail about IPv6 addressing and its improvements over IPv4.
  - 17) Describe the OSI model with a detailed explanation of its layers and functionalities.
  - 18) Describe the process of TCP congestion control and flow control with suitable diagrams.
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