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.
