

Tribhuvan University
Institute of Science and Technology
2078

Bachelor Level / fourth-semester / Science Full marks: 60 **Computer Science and Information Technology(CSC258)** Pass marks: 24
(Computer Networks) Time: 3 hours Candidates are required to give their answers in their own words as far as practicable.
The figures in the margin indicate full marks.

Section A

Attempt all the questions:(2*10=20)

1. What is transmission media? How do guided media differ from unguided media? Explain different types of guided media in detail.(1+2+7)

2. What is flow control? Explain Stop-and-Wait ARQ with suitable examples. How is it different from Go-Back-N ARQ?

(2+5+3) 3. Explain link state routing with example.(10)

Section B

Attempt any Eight questions.(8*5=40)

4. Explain client/ server network. How is it different from peer to peer network? (3+2)

5. What is CSMA / CD ? Why is there no need for CSMA/CD on a full-duplex Ethernet LAN?(2.5+2.5)

6. Write a subnet ID and broadcast address of each subnet if you divide a class B network 150.10.0.0-150.10.255.255) in 4 different subnets. What is the new subnet mask?

7. Explain the structure of IPv6 addresses. Compare IPv6 address with IPv4 address.(3+2)

8. What is a virtual circuit network? Explain ATM as a virtual circuit wide area network.(2+3)

9. What is a routing table? Differentiate static routing table with dynamic routing table.(2+3)

10. What is open-loop congestion control? Compare it with closed-loop congestion control.(2+3)

11. What are the different approaches for multimedia streaming? Explain.(5)

12. Write short note on(any two)(2*2.5)

a. Backbone network

b. ISDN

c. ALOHA