

Tribhuvan University
Institute of Science and Technology
2075

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.

Group A

Long Answer Questions:

Attempt all questions. (2x10=20)

1. Define transmission media. Discuss different guided and unguided transmission in detail.

OR

Define routing. Discuss distance-vector routing algorithm with examples.

2. Discuss error detection and correction scenarios. Explain cyclic redundancy check (CRC) error detection technique with example.

Group B

Short answer Questions:

Attempt any eight questions. (5x8=40)

3. What is packet switching? Discuss store-and-forward transmission of packet switching.

4. Why do we need DNS? Discuss different fields in the DNS message.

5. What is connectionless transport? Differentiate TCP with UDP.

6. How can we use the token-bucket algorithm to control congestion? Discuss.

7. What is IP? Discuss different classes of IPv4 addresses.

8. What is a virtual circuit network? How is it different from a datagram network?

9. Discuss channel partitioning protocol. What is TDMA?

10. What are the applications of multimedia networking? Discuss audio streaming

11. Write short notes on:

a. IPv6

b. Network management