

Tribhuvan University
Institute of Science and Technology
2081
☆

Bachelor Level / Second Year/ Forth Semester/ Science
Computer Science and Information Technology (CSC 258)
(Computer Networks)
(OLD COURSE)

Full Marks: 60
Pass Marks: 24
Time: 3 hours.

Candidates are required to give their answers in their own words as far as practicable.
All figures in the margin indicate full marks.

Section A

Long Answer Questions.

Attempt any **TWO** questions.

[2 × 10 = 20]

1. List Ethernet standards and explain any two of them. [2+8]
2. Explain about link state routing with an example. What are its advantages and disadvantages? [6+4]
3. Highlight on the functions and services transport layer. Explain socket programming. [6+4]

Section B

Short Answer Questions.

Attempt any **EIGHT** questions.

[8 × 5 = 40]

4. Explain the importance of backbone network with an example. [5]
5. What are the major functions of data link layer? Explain. [5]
6. Explain packet switching. What are its advantages and disadvantages? [5]
7. Differentiate between IPv4 and IPv6. [5]
8. Compare and contrast between TCP and UDP. [5]
9. Why do you think SDN is an efficient approach for network management? Explain. [5]
10. Explain the working mechanism of SMTP. [5]
11. Explain Bellman Ford path computation algorithm. [5]
12. Write short notes on: [2×2.5=5]
 - a) Congestion control
 - b) Firewall