

Tribhuvan University
Institute of Science and Technology
2080
☆

Bachelor Level / Third Year /Fifth Semester/Science
Computer Science and Information Technology (CSC.301)
(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.
The figures in the margin indicate full marks.

Group A

Long Answer Questions:

Attempt any TWO questions.

(2×10=20)

1. Explain link state routing algorithm with an appropriate example.
2. A bit stream 1011011 is transmitted using the standard CRC method. The generator polynomial is $x^3 + x^2 + 1$. What is the actual bit string transmitted?
3. Explain the functionalities of individual layers of OSI.

Group B

Short Answer Questions:

Attempt any EIGHT questions.

(8×5=40)

4. Define network topology. Explain ring topology and list its merits and demerits.
5. Differentiate between IPv4 and IPv6. Why IPv6 is required?
6. What is DNS message? Explain the role of DNS in computer network.
7. List the causes of congestion in computer network. Highlight on the approaches to control congestion.
8. Explain any one error correction technique with an example of your own.
9. Explain about Asynchronous Transfer Mode.
10. What is multimedia networking? Explain the application of multimedia networking.
11. What is slotted Aloha? How is it different from pure Aloha?
12. Write short notes on (**Any Two**)
 - a. ISP
 - b. Layered Architecture
 - c. Virtual circuit

(2×2.5=5)