Tribhuvan University
Faculty of Humanities & Social Sciences
OFFICE OF THE DEAN
2024

Bachelor in Computer Applications
Course Title: Computer Networking
Code No: CACS 303
Semester: V

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

Candidates are required to answer the questions in their own words as far as possible.

Group B

Attempt any SIX questions.   [6×5 = 30]

2. Why layered architecture is required in Computer Network?   [5]

3. What is switching? Explain different switching technology.   [1+4]

4. Define point to point protocol. Explain the PPP frame formats.   [1+4]

5. Suppose you are given an IP address 193.169.0.0, perform subnetting and divide the given network in 5 subnets. What is the new subnet mask? Calculate broadcast, network address, range of IP address that can be assigned to the host in each subnet.

6. Explain the working mechanism of Digital Signature algorithm with suitable diagram.

7. Explain the various congestion control approaches.

8. Write short notes on :   [2.5+2.5]

   a) FDDI

   b) IPSEC

Group C

Attempt any TWO questions.   [2×10 = 20]

9. Define flow control and explain the Go-Back-N ARQ protocol with an appropriate example. How does it differ from the Stop-and-Wait ARQ protocol?   [1+5+4]

10. Explain how slotted Aloha improves over pure Aloha. What do you mean by multiple access protocol? Explain channelization protocol in detail.   [3+2+5]

11. Explain the importance of routing algorithm. Explain Distance Vector Routing algorithm with example and compare it with link state routing.   [3+7]