

Only for 2021
to 2023 AD
admitted
Students

TRIBHUVAN UNIVERSITY
FACULTY OF MANAGEMENT
Office of the Dean
December 2025

Full Marks: 60
Pass Marks: 30
Time: 3 Hrs.

BIM / Fourth Semester / IT 240: Business Data Communication and Networking

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

Group "A"

Brief Answer Questions:

[10 × 1 = 10]

1. List any two function of presentation layer.
2. Define HTTP.
3. Mention any one limitation of frequency division multiplexing.
4. List out any two error detection mechanism.
5. Define broadcast.
6. List any two MAC protocol.
7. What is VPN?
8. What are the key challenges in designing and managing a WAN?
9. What is the role of ISP?
10. List any one differences between client and server.

Group "B"

Short Answer Questions: (Attempt any FIVE Questions)

[5 × 3 = 15]

11. "Wireless communication has advantages over wired communication". Justify this statement with an example.
12. Explain the Working Mechanism of Email.
13. Explain any three services of Transport layer.
14. Explain virtual circuit approach of switching.
15. List any three differences between DSL and FTTH.
16. Mention any three advantage of dynamic routing over static routing.

Group "C"

Long Answer Questions: (Attempt any THREE Questions)

[3 × 5 = 15]

17. The message sequence is 111001101 and generator polynomial $G(X) = x^4 + x + 1$. Calculate the transmitted frame.
18. Describe how data could be transmitted using Amplitude Modulation, Phase Modulation, and Frequency modulation?
19. Explain any five types of LAN components.



20. Describe the trend of Bring Your Own Device (BYOD) in network environments. Discuss the benefits and challenges of implementing BYOD policies in organizations.

Group "D"

Comprehensive Answer / Case / Situation Analysis Questions: **$2 \times 10 = 20$**

21. Suppose an ISP owns the block of addresses of the form 222.19.10.0 and it wants to create six subnets from this block, with each block having the same number of IP addresses. Calculate subnetmask, range, netid, broadcast id and prefixes (of form a.b.c.d/x) for the six subnets.

22. The health care laboratory is the newly opened state of the art laboratory which has hired you as a network administrator. As a Network administrator, your job is implementing the computer networks. Explain the factors you will consider to make the network efficient and cost effective with example.

