

# Pre-board Examination - 2024

**Subject: IT 240: Business Data Communication and Network FM: 60**

**Semester: BIM 4th Semester Time: 3 hrs**

**Group A**

**Brief Answer Question: [1\*10=10]**

**Attempt all the Questions.**

* + 1. List the components of data communication.
    2. What is DSL?
    3. What are the three factors to be considered while improving WAN performance?
    4. Define instant messaging.
    5. Define synchronous communication.
    6. Write the protocols used in network layer.
    7. What is backbone?
    8. What is VLAN.?
    9. What is cost management?
    10. What is IoT?

**Group B**

**Short Answer Question:**

**Attempt any five questions [5\*3=15]**

11.Explain how VPN works with suitable diagram.

12. What is the difference between switched backbone and routed backbone.

13. Explain how internet works?

14. Explain the working mechanism of Checksum.

15.Encode 10110011 using Machester and NRZ-L

16. What are the criteria’s for choosing architectures?

**Group C**

**Long Answer Questions: [3\*5=15]**

1. Describe the design to construct both wired and wireless Ethernet networks.
2. Explain the building block network design process with diagram.
3. The network address given to ABC organization is 180.3.0.0 and it is divided among 8 different department. Find NID, BID and Usable Range in each department. Also calculate host per subnet and block size.

**Group D**

**Comprehensive Questions [2X10=20]**

**Attempt all questions.**

1. Explain OSI Model and explain each layer with its function.
2. How do you choose the communication medium? Elaborate on the criteria involved. How is network performance designed?