

Data Communication & Computer Networks

Assignment Questions (Unit:1)

SUBMISSION DATE :15-09-2025

1. Explain the concept of a computer network. What are the key components required to set up a network?
2. Discuss at least five real-life applications of computer networks in different domains.
3. Differentiate between **LAN, MAN, and WAN** with suitable examples.
4. Compare the **OSI Reference Model** and the **TCP/IP Model** with examples.
5. Explain the **seven layers of the OSI Model** along with their functions.
6. Describe the **layers of the TCP/IP Model** and explain how it maps to the OSI Model.
7. With the help of diagrams, explain **Bus, Ring, Star, Mesh, Tree, and Hybrid Topologies**.
8. Differentiate between **Peer-to-Peer** and **Client-Server** networks. Provide advantages and disadvantages of each.
9. Explain **Internet, Intranet, and Extranet** with real-world examples.
10. Suppose you are asked to design a small **office network** for 20 employees. Which network type, topology, and model will you choose and why?