

PART – B

- 5 a. Explain the following :
- Bus back bone
 - Star back bone
 - Connecting remote LANs. (06 Marks)
- b. What is a transparent bridge? Discuss the criteria to have a transparent bridge with relevant diagrams. (10 Marks)
- c. Create a system of three LANs with four bridges. The bridges (B1 to B4) connect the LANs as follows :
- B1 connects LAN1 and LAN 2
 - B2 connects LAN1 and LAN 3
 - B3 connects LAN2 and LAN3
 - B4 connects LAN1, LAN2 and LAN3 choose B1 as the root bridge. Show the network, graph, spanning tree and blocking ports after applying spanning tree procedure. (04 Marks)
- 6 a. Discuss the datagram format of IPv4. (07 Marks)
- b. Explain the transition strategies to move from IPv4 to IPv6. (06 Marks)
- c. An ISP is granted a block of addresses starting with 150.80.0.0/16. The ISP needs to distribute these addresses to 3 groups of customers as follows :
- The 1st group has 200 customers ; each needs 128 addresses
 - The 2nd group has 400 customers ; each needs 16 addresses
 - The 3rd group has 2000 customers ; each needs 04 addresses.
- Design the sub blocks and find out how many addresses are still available after these allocations. (07 Marks)
- 7 a. Explain the types of routing table. Discuss the common fields in a routing table with its format. (06 Marks)
- b. With relevant diagrams explain the concept of link state routing and 4 sets of actions to build a routing table. (14 Marks)
- 8 a. Explain the mechanism of client/server paradigm to achieve process-to-process communication. (08 Marks)
- b. Discuss the name-address resolution. (07 Marks)
- c. Discuss the data transfer of TCP connection. (05 Marks)
