CS601 — Data Communication

Assignment No. 1 — Fall 2026 | Sample Solution

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Question 1 — Network Topology

1. Finance department — Star Topology.
Every computer is connected by its own dedicated cable to one central device, and that device forwards data only to the intended recipient. That is exactly the star topology.

2. Lab department — Mesh Topology (Full Mesh).
Every server has a dedicated, direct cable to every other server, so the system keeps working even if one link fails. That is the mesh topology.

3. Number of cables for 8 servers (full mesh).
Cables = n(n − 1) / 2 = 8 × 7 / 2 = 28 cables.

Question 2 — PDU Names in the TCP/IP Suite

TCP/IP Layer	PDU (Column C)
Transport Layer	Segment
Network Layer	Packet
Data Link Layer	Frame

Note: Bits is the PDU at the Physical Layer (the lowest layer), which is why it does not appear in the table above

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