Bus topology

1. IEEE 802.3 Ethernet
2. IEEE 802.4 token BUS.
3. Transmission by one node can be received by other that is broadcast.
4. Transmission is done only one packet at a time.
5. Reliable & simple to implement.

RING topology

1. IEEE 802.5 token ring is based on topology.
2. Point to point rings.
3. Multiple packets possible at a time.
4. Broadcast possible.

* Data link layer: Devices like switch or bridge are used
1. Framing
2. Physical addressing (MAC addressing)
3. Flow control & error control
4. LLC (Logical Link control)
5. Access control MAC (Media Access control)

Header

* Network Layer: Router is based on network layer.

1. Source node to destination node delivery of packet or IP datagram
2. Logical addressing: IPV4 & IPV6
3. Routing

Routing: BGP - Border Gateway Protocol [Inter routing Protocol]
Distance Vector Algo.
RIP - Routing Info. Protocol.
Link State Algo. (OSPF) Open shortest Path first.