8.) List RIP shortcomings and their corresponding fixes.
Two shortcomings associated with the RIP protocol are low convergence and instability. Procedures to Remedy RIP instability include triggered update, split horizons, and poison verse.

9.) What is the basis of classification for the four types of links defined by OSPF?
Types of links
1. Point-to-point
2. Transcient
3. Stub
4. Virtual

10.) Why do OSPF messages propagate faster than RIP messages?
OSPF is a link-state routing protocol, while RIP is a distance-vector routing protocol. In OSPF, routers exchange detailed information about the state of their links and neighboring routers, including link cost and network topology.

11.) What is the purpose of BGP?
Border Gateway Protocol (BGP) is an interdomain routing protocol using path vector routing. It first appeared in 1989 and has gone through four versions. It facilitate routing between different autonomous system (AS) on the internet.

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1) What is the difference between a direct and an indirect delivery?
The difference of direct and indirect delivery is that direct delivery final destination of the packet is a host connection to the same physical network as the deliver, while indirect Delivery destination host is not on the same network as the deliverer, the packet is delivered directly.

2) List three forwarding techniques discussed in this chapter and give a brief description of each.

1) Next-Hop Method
2) Route Method
3) Network-Specific Method

3.) Contrast two different routing tables discussed in this chapter.

Static Routing table are manually created by administrators and must be manually updated when changes occur. They are suitable for small networks or experimental setups but are inefficient for large dynamic networks like the internet.

Dynamic Routing tables are updated automatically by protocols like RIP, OSPF, or BGP. They adapt to changes in the network, such as router shutdowns or link failures, ensuring efficient packet delivery in large networks like the internet

4.) What is the purpose of RIP?
Routing Information Protocol (RIP), treat all networks as equal

5.) What are the function of a RIP message?
RIP message follow the distance victor algorithm, where routers share routing information based on the distance (number of hops) to reach a network.

6.) Why is the expiration timer value 6 times that of the periodic timer value?
The period in this case is much longer compared to distance vector routing. As a matter of fact, there is no actual need for this of LSP dissemination.

7.) How does the hop count limit alleviate RIP's problems?
The hop count limit in RIP helps alleviate problems such as routing loops and excessive network traffic. This limit ensures that routes with excessively long hop counts.