**Chapter-9 (Introduction to IP Routing)**

1. What is routing?

Ans: Routing is the process of selecting best paths in a network for moving from one host to another.

2. What is static routing?

Ans: Static routing is a form of routing that occurs when a router uses a manually-configured routing entry.

3. What is Dynamic Routing?

Ans: Dynamic routing is a networking technique that provides optimal data routing. Dynamic routing enables routers to select paths according to real-time logical network layout changes.

4. MAC addresses?

Ans: MAC addresses are always local. A MAC (hardware) address will only be used on a local LAN. It will never pass a router’s interface.

5. How many places a frame can carries a packet?

Ans: frame carries a packet to only two places.

1. A frame uses MAC (hardware) addresses to send a packet on a LAN.
2. The frame will take the packet to either a host on the LAN or a router’s interface if the packet is destined for a remote network.

6. What is the difference between static and dynamic routing?

Ans:

**Static routing:**

* Provide the route manually.
* Not very helpful in large network.
* Better when there is a need to provide a specific route.

**Dynamic Routing:**

* Configuring routing protocols on routers.
* Very useful in large network.
* Calculates the best path automatically.