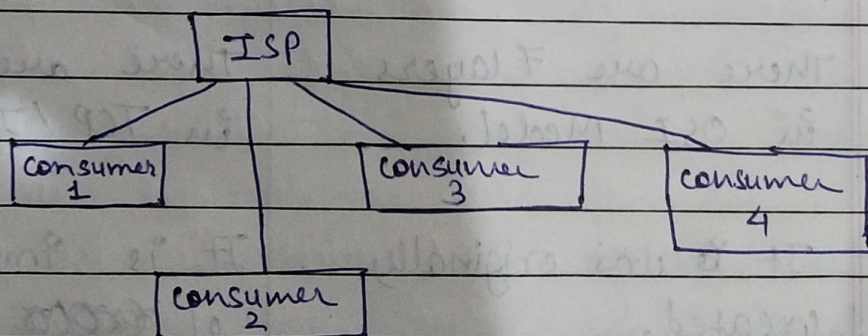(3) (i) <u>Mesh Topology</u> :-

- The most significant example of mesh topology is regional telephone office.
- We find mesh topology as best solution for telephone office, as in mesh topology each node is connected by every nodes in network with dedicated link.
- It is most robust topology.
- In this topology fault identification is easy.
- Mesh topology has fast data transfer

(ii) <u>Star Topology</u> :-

- The best example for star topology is the local Internet service providers.
- As all the consumers are not not connected directly to one another.
- They are connected with the central Internet service provider known as hub.

(iii) Ring Topology :-

- Ring Topology was used in Train / Railway systems./ Railway Transport.
- In this system, the information is sent through device - to - device until it reaches the destination.
- At each device, a token is created and the process is followed through.
- Same way in Railway, when a train passes through all other stations in bet between of Starting & end station, it passes on the ring / token.
- Ring Topology is still active in some parts of our country in railway system.

(2) Difference Between OSI model & TCP/IP model. :-

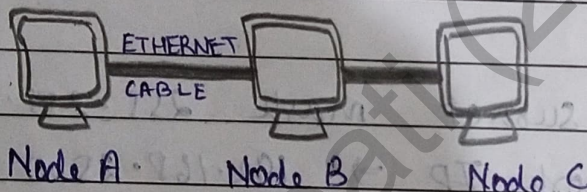| OSI Model	TCP/IP Model
There are 7 layers in OSI Model.	There are 4 layers in TCP / IP model
It was originally created.	It is implementation of OSI model
OSI model has separate session &	Session layer and presentation layer is

presentation layer.	~~tomi~~ combined into Application layer.
— the layers of TCP/IP model are relatively independent	OSI model specifies which functions belong to each of its layers.

- TCP/IP Model is used for implementation because it is more simplified implementation of OSI Model.

(1)

Node A   Node B   Node C

let physical ~~addr~~ address of Node A = 20
                                    Node B = 30
                                    Node C = 40

\# Physical Address :-

→ Here, 3 nodes are connected in bus topology. Node A with physical address 20 needs to send packet to Node C with physical address 40.

→ At this layer it contains nothing but the data to be sent and the physical address of sender and receiver.

Logical Address :-

- As there are 3 nodes connected in bus. topology. We will need to give them IP address.
- IP address is nothing but a kind of address which enables the network to identify the node in whole network

For example :- let IP for

     Node A ⇒ 192.168.25.1

     Node B ⇒ 192.168.25.2

     Node C ⇒ 192.168.25.3

By applying subnet mask 255.255.255.0, be get network IP ⇒ 192.168.25.0.

* Port address :-

Port address is necessary as the computers now are multitasking. They need to know the specific port address for specific process. Eg:- let us consider that at Node C, there are 3 instances running, for our process to get successfully completed. ∞ (packet transfer from node A to C we need to get port address. so that the process will get completed.

⇒ This is how the packet is transmitted from Node A to Node C.