Networking Devices :—

Following are the different networking devices.

(1) Router
(2) Hub
(3) Switch
(4) Repeater
(5) Bridge
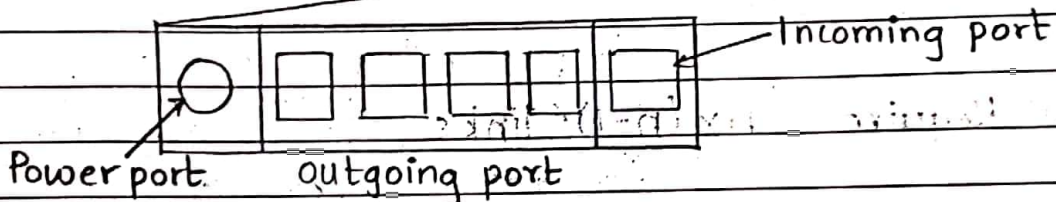(6) Gateway

Router — network (connect device to)

demands

Router :

(1) It is one of most important device used for providing a network connection to the various devices.

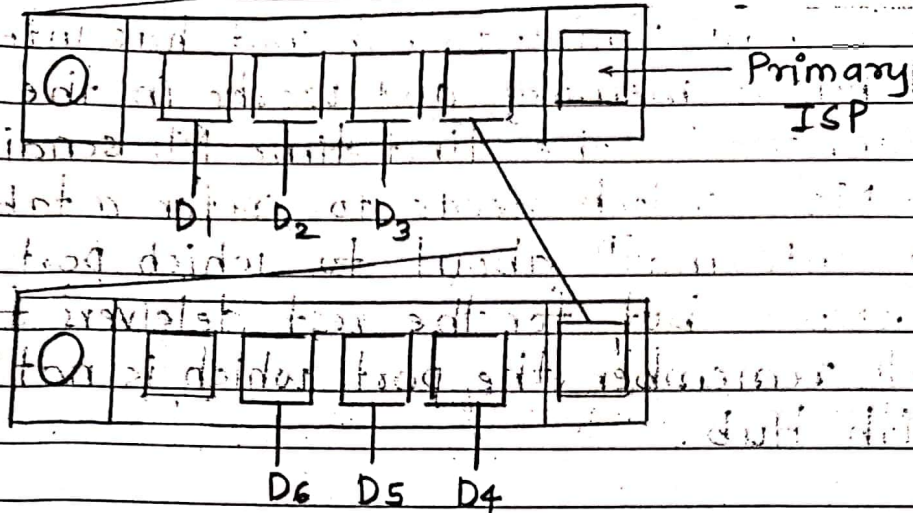(2) Router will also route the packet from source to destination.

For eg : A 4 port Router

(3)

Incoming port

Power port   outgoing port

(4) A can also think of cascading the router
(5) For eg : User having 6 devices connected to the network (wired) and router only has 4 ports, One of the outgoing port of one router is then connected to the incoming port of second router.

→ Primary ISP

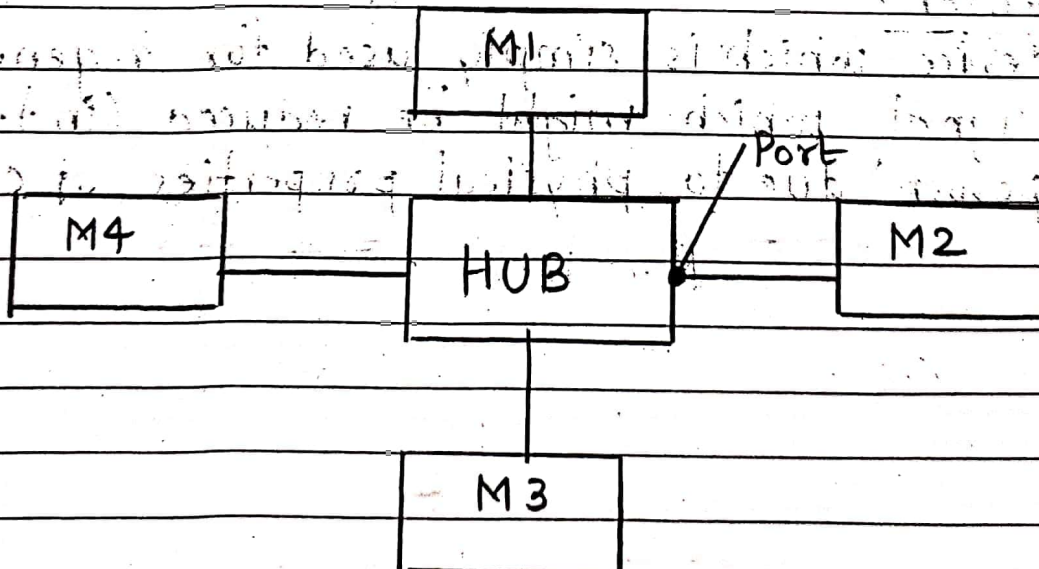D_1 D_2 D_3

D_6 D_5 D_4

(2) Hub :

(1) It is a centrally located device responsible to connect all the devices in the network to each other.

(2) There are 2 types of Hubs:
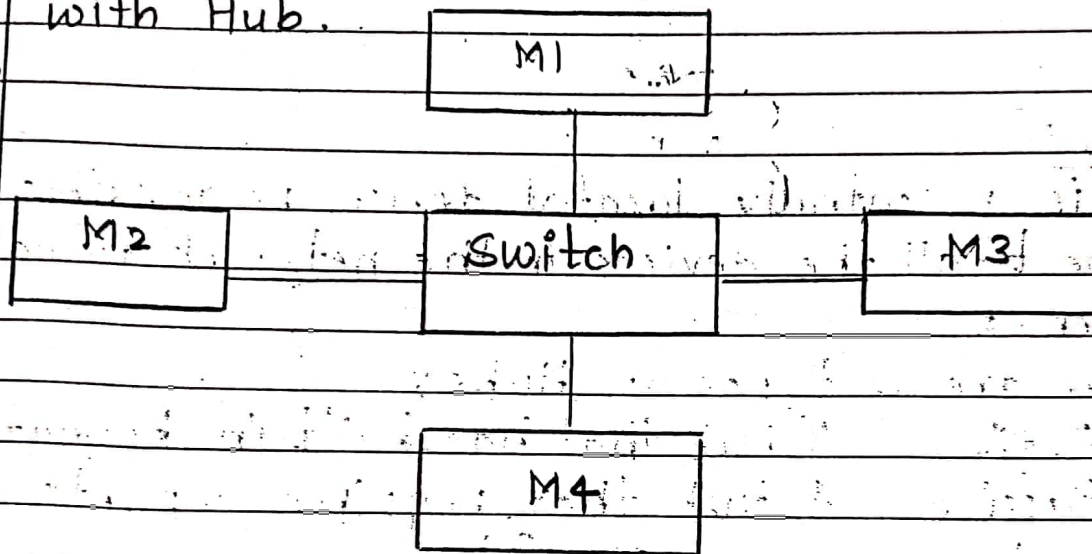(a) Active – A Hub that has built in Repeater.
(b) Passive – A Hub that requires separte repeater
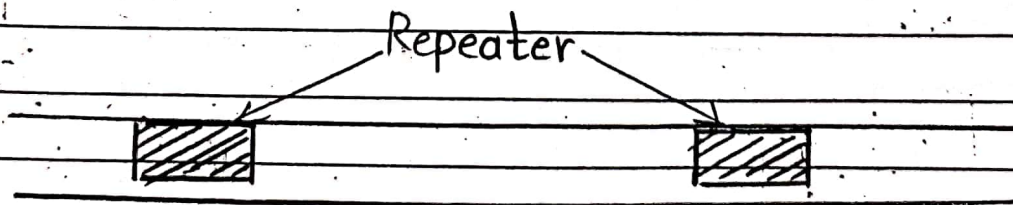

M1

Port

M4   HUB   M2

M3

(3) Switch :

(1) It is very similar to hub but has intelligence i.e. it has a memory and works in the following manner. for the first time M1 sending data to M3, switch needs to refer a table which has informat^n about to which port M3 is connected but, for the rest deleivers to M3 it will remember the port which is not the case with Hub.

```
                    ┌──────────────┐
                    │      M1      │
                    └──────────────┘
                           │
┌──────────┐     ┌──────────────────┐     ┌──────────┐
│    M2    │─────│     Switch       │─────│    M3    │
└──────────┘     └──────────────────┘     └──────────┘
                           │
                    ┌──────────────┐
                    │      M4      │
                    └──────────────┘
```
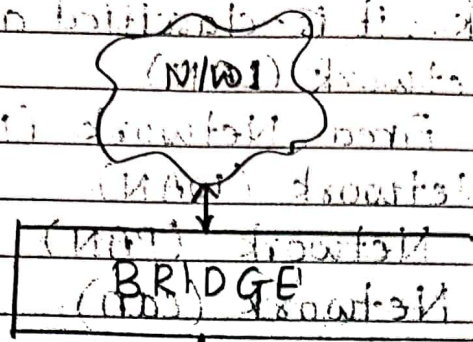
(4) Repeater :

(1) A device which is simply used for regenerating the signal which might be reduced (in terms of power) due to physical properties of cable.
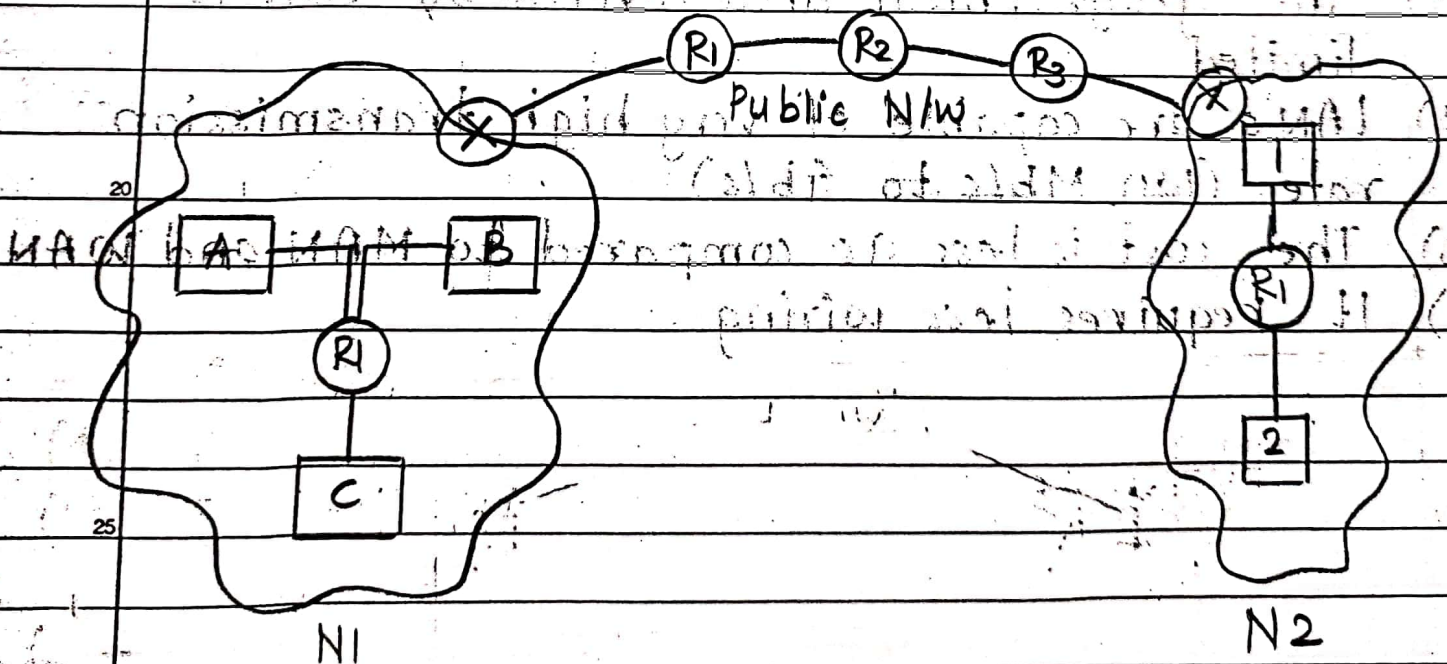
Repeater

(5) Bridge:

A device that connects two or more networks together

(6) Gateway:

A device that connects private network to public network also known as BGR (Border Gateway Router) or Default Gateway