Course Name : O Level(B3-Ist sem.)   Subject : ITT&NB
Topic : IP Address & About ISP   Date   : 18-05-20

Introduction to IP Address

IP stands for **Internet protocol**. It is a unique identifier that is assigned to a computer on the Internet. Each computer on the Internet has unique IP Address. The 32 bit IP address is divided into five sub-classes.
It is a numerical address with four numbers separated with dots. The value of each number is between 0 and 255. These numbers are called octets.
Example of IP Address is 192.168.3.180.

Types of IP Address
There are two types of IP Address:
1. **Static IP Address 2. Dynamic IP Address**

   Static IP Address is a permanent number assigned to a computer by an Internet service provider (**ISP**). A server has static IP Address that does not change.

   Dynamic IP address is an automatically configured IP address, It is temporary IP Address.

Classes of IP Address
There are five classes of IP Address:'

- Class A
- Class B
- Class C
- Class D
- Class E

Each of these classes has a valid range of IP addresses. **Classes D and E are reserved for multicast and experimental purposes respectively.** IPv4 address is divided into two parts:

- **Network ID**
- **Host ID**

   The class of IP address is used to determine the bits used for network ID and host ID and the number of total networks and hosts possible in that particular class. Each ISP or network administrator assigns IP address to each device that is connected to its network.

Definition, Role, Function Of Internet Service Provider(ISP)

- ISP is a company or organization that provides services to us for accessing, using, or participating in the Internet.
- **In short Internet Service Provider** is a company or entity that organizes the internet connection services and other related services.

- Internet service providers may be organized in various forms, such as commercial, non-profit, or otherwise privately owned.

Accessing the Internet

For access the Internet, we simply call the ISP through the ISP's modem and the computer will take care of the details necessary to connect to the Internet. It also includes the cost of the connection.

Most telephone companies like BSNL,MTNL, Bharti Airtel, Tata Communications, Reliance Communications, etc.) are Internet service providers. They provide services such as connection to the Internet, domain name registration, and hosting.

ISP has a network both domestically and internationally so that the customer or the user of the connection provided by the ISP to connect to the global Internet network.

Here in the form of network transmission medium that can stream data can be either wired (modem, leased line, and broadband), radio, etc.

Choice of ISP relations

Typically, ISPs implement a monthly fee to the customer. This relationship is usually divided into two categories:

- Modem ("dial-up")
- Broadband.

Dial-up connection is now widely offered for free or at a low price and requires the use of ordinary telephone wires. Relationships can be broadband ISDN, non-cable, cable modem, DSL, satellite.

Broadband compared modem has a much faster speed and always "on", but more expensive.

The role of ISP in internet access among others are as follows:

- As a medium that provides services to connect to the internet.
- Connect customers to the nearest Internet gateway.
- Provides a modem for dial-up.
- Connecting an information service to a user of the World Wide Web (www).
- Allows a user to use the services of electronic mail (e-mail).
- Allows user voice conversations via the internet.
- Gave place to the homepage.
- ISP do protection from the spread of the virus by applying antivirus systems for his customers.

ISP function

As a company that offers services for Internet-related services. To access, we simply call ISP through a computer and modem.
Then, ISP will take care of all that is needed to connect to the internet.
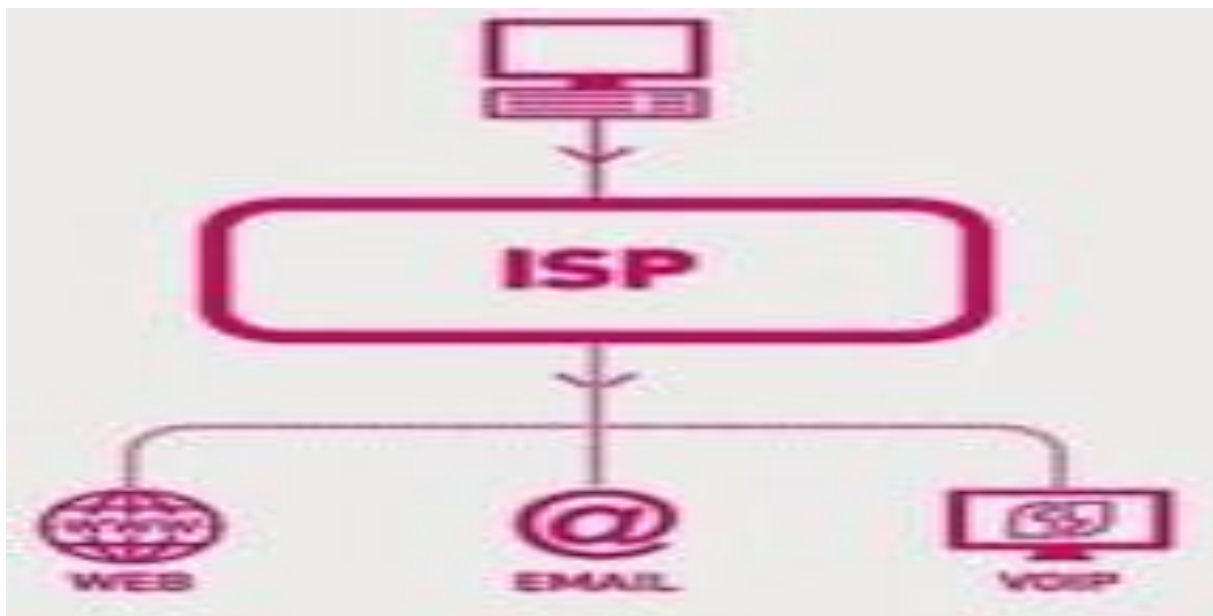
Exercise:

1. **Define the role of Internet Service Provider (ISP).**
2. **Write short notes on IP Address.**