BAL BHARATI PUBLIC SCHOOL, PITAMPURA, DELHI – 110034

SUBJECT: COMPUTER SCIENCE

CLASS IX

CHAPTER 1 - INTRODUCTION TO THE INTERNET(Session 2)

Guidelines:

 Dear students

 Read the notes carefully.

 Please watch the links related to the topic and thereafter do the questions in your **computer notebook**.

Introduction:

You have already studied the history of the Internet, how it works and the advantages of using the Internet. Now let's move ahead with the topic.

Subtopics

- ACCESSING THE INTERNET
- TYPES OF INTERNET CONNECTIONS

ACCESSING THE INTERNET

Before you access the Internet, you need to have an Internet connection. You can subscribe for an Internet connection from an **ISP (Internet Service provider)**

There are a number of factors that should be considered while choosing an Internet connection. Few of them are as follows:

1. **BANDWIDTH AND SPEED**
Your internet connection varies depending on the purpose for which you want to use the Internet.
For example: If you want to use the Internet to check your E-mails and surf the web, probably a DSL would work. On the other hand, if you wish to play online games or upload/download some content, a speedy connection would be required.

2. **INTERNET SERVICE PROVIDER**
The ISP (INTERNET SERVICE PROVIDER)** you choose should be reliable and should be able to provide immediate help if you face connection related problems. You should choose an ISP that provides a wide variety of web services in your area.

For example: MTNL, Airtel, Reliance etc

**ISP (internet service provider) refers to the company that provides Internet connections to the users.

3. COST EFFECTIVENESS

You should choose an Internet connection in such a way that it is cost-efficient for the desired purpose.

For example: If you need an Internet connection for a large enterprise, you should choose leased line for dedicated Internet services. However for a small organization, leased lines would be really expensive.

CHECKPOINT
(Please attempt these questions in your Computer Notebook)

Q1 The speed with which you connect to the Internet is measured in terms of the following units:

- **Kbps(Kb/s)**
- **Mbps(Mb/s)**
- **Gbps(Gb/s)**

Q2 Name the ISP you have chosen for the Internet connection in your home. What was your criteria for choosing that ISP?
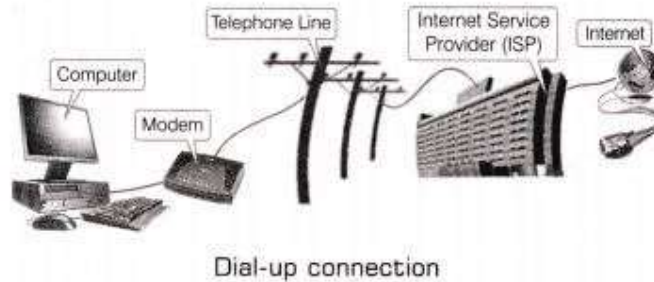
TYPES OF INTERNET CONNECTIONS

There are mainly three ways of connecting to the Internet, which are as follows:

1.Dial-upConnection

- It is a temporary connection, set-up between your computer and ISP server.
- Dial-up connection uses the telephone line and modem to connect to the Internet.
- The modem connects the computer through the standard phone lines, which serves as the data transfer medium.
- When a user initiates a dial-up connection, he/she needs to enter the password and specify a username. Then the modem dials the phone number of an Internet Service Provider.

- The **ISP** then establishes the connection, which usually takes about 10 seconds and is accompanied by several beeping and buzzing sounds.

Dial-up connection

2.Broadband Connection

- The term broadband commonly refers to high speed Internet access that is always ON and faster than the traditional dial-up access.
- Speed of broadband connection is measured in Mbps (Megabits per second).
- Broadband access allows users to connect to the Internet at greater speed than a standard 256 Kbps (Kilobits per second) modem or dial-up access.
- Broadband includes several high-speed transmission technologies, which are as follows:

    Digital Subscriber Line (DSL)
    Cable Modem
    Broadband over Power Line (BPL)

Some related terms:-

- A **modem** changes the digital data into analog data and vice-versa at source computer in a format that can be carried by telephone lines. **Modem stands for Modulator and Demodulator.**
- **Bandwidth** is the amount of data that a circuit or a signal can carry.
- TCP/IP stands for **TRANSMISSION CONTROL PROTOCOL**(we came across this term in the previous session also) is the standard for communicating between computers over the Internet.
- Some popular ISPs of India are:
    - Data Communication Ltd.
    - Mahanagar Telephone Nigam Ltd. (MTNL)
    - Airtel
    - Reliance

3. Wireless Connection

- Wireless broadband connects a home or business to the Internet using a radio link between the customer's location and the service provider's location.

- Unlike DSL and cable, wireless broadband requires neither a modem nor cables.

- The distance between the devices connected to each other through a wireless Internet connection does not affect the rate of data transfer between them.

- Wireless Fidelity (**WI-Fi**) and Worldwide Interoperability for Microwave Access **(WiMAX) are types of Wireless connections.**

A COMPARISON OF TYPES OF CONNECTIONS

CONNECTION	ADVANTAGES	DISADVANTAGES
DIAL-UP	(a) Easily available. (b) Available at low cost. (c) Can be used through fixed or cellular phone.	(a) Slower than broadband. (b) Needs expensive set-up. (c) Phone remains busy.
BROADBAND	(a) Telephone can be used with Internet connection. (b) Faster than a dial-up connection. .	(a) Expensive than dial-up. (b) Not available in all areas.

	(a) No phone line required.	(a) Vulnerable
WIRELESS	(b) Easy and inexpensive to set-up.	(b) Not much secured.
	(c) No limitation of location.	(c) Limited security mechanisms.

ASSIGNMENT

(Please attempt these questions in your Computer Notebook)

<u>Q1</u> Expand the following terms:

1. ISP
2. WI-FI
3. WI-MAX
4. TCP
5. DSL
6. BPL
7. MODEM

Q2 What are the advantages and disadvantages of using a Wireless connection?

Q3 Find out the difference between Intranet and Internet.

[Hint :- https://www.youtube.com/watch?v=Q4sPJgaf3sM]

****