

Topic _____

Date _____

INFORMATION AND COMMUNICATION TECHNOLOGY

Topic _____

Date _____

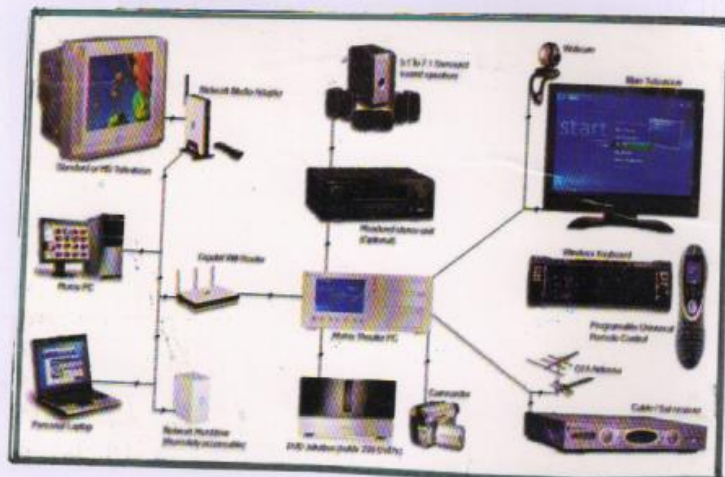
INDEX

S.No	TOPIC	SHEET NO.	TEACH. SIGN
1	Introduction of Information Technology.	1	
2	Meaning of Information and Communication Tech.	3	
3.	Definition of Information Technologies	5	
•	Importance of Information Technology	6	
•	Useful for the students	7	
•	Useful for the Teachers	7	
•	Useful for the Counsellors	8	
	Useful for the education administrator & Planners	8	
	Useful for the educational Researchers	9	
4	Basic concepts of an	10	

Topic _____

Date _____

Operating System		
• Definition and Meaning	10	
• Basic Features	10	
• Functions of an Operating System	11	
5. Input Devices	12	
• Key board	12	
• Mouse	13	
• Scanner	14	
6. Output Devices	15	
• Monitor	15	
• Printer	16	
• Sound card and speakers	17	
7. Microsoft Windows	18	
• MS-WORD	19	
• Working with MS-WORD	20	
• MS-EXCEL	21	
• Basic Terminology	22	
• MS-POWERPOINT	23	
• Working with MS-POWERPOINT	23	
8. Internet	25	
• Internet Access	26	
• Multimedia	26	
• E-mail	27	
• MS-ACCESS	28	
• MS-PAINT	29	
9. CONCLUSION	30	



INTRODUCTION OF INFORMATION TECHNOLOGY

Today we are living in such a knowledge based society, and knowledge based global world where knowledge is a great power, economy and strength of an individual and the asset of a nation. It is also true that there is tremendous explosion in its quality as well as its growth. We are in need of new technologies to have access and proper use of this fast growing knowledge. Moreover a mere acquisition of knowledge is not enough. We must have a complete access and mastery over the knowledge getting process. It can only happen with the assistance of the science of information and communication technology.

Information technology is the application of computers and telecommunications equipment to store, retrieve, transmit and manipulate data.



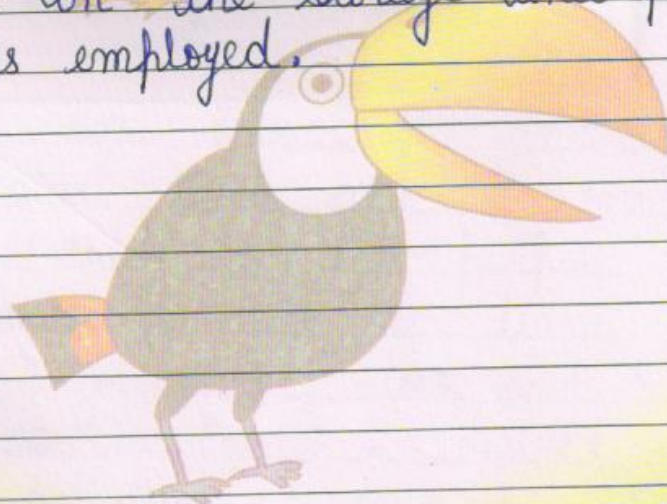
Topic _____

Date _____

2

The term is commonly used as a synonym for computers and computer networks, but it also encompasses other information distribution technologies such as television and telephones. Several industries are associated with information technology, including computer hardware, software, electronics, internet and computer services.

Human beings have been storage, retrieving, manipulating and communicating information. Information and technology is based on the storage and processing technologies employed.





MEANING OF INFORMATION AND COMMUNICATION TECHNOLOGY

The direct access to the source of giving first hand experience is neither always possible nor desirable. Consequently, most of our learning is based on second hand experience in the form of information received by us about the objects, places, persons, ideas or events. This information provides a base of our knowledge and understandings about them and the environment surrounding them. For this purpose the learning must be able to learn the art of getting information, store and make its use as and when desired. Such type of activities concerning information are said to be the part and parcel of the science and technology known as the information technology. However the use of such information of the art

A communication. Communication as a two way process stands for the sharing of ideas, thoughts, beliefs and information with others. The mutual sharing between the source of information and receiver of the information, thus tend to add in the increase, understanding and use of information with ultimately help in building up knowledge. In this way both information as well as communication are utmost needed in acquiring knowledge as well as getting involved in the knowledge acquiring process. Now in case we want to have efficiency and effectiveness in the activities related to information and communication better known as information and communication technology or ICT. In this way information and communication technology is that type of technology employed in the shape of tools, equipments and application support which helps in the collection, storage, retrieval, use, transmission, manipulation and dissemination of information as accurately and efficiently as possible for the purpose of enriching the knowledge.



Topic _____

Date _____

5

DEFINITION OF

INFORMATION TECHNOLOGIES

Information technology (IT) is a term that encircle the creation, storage, retrieval, exchange and use data or information.

It includes both telecommunication and computer technology to complete it in total. This technology involves the development, maintenance and use of computer systems, software and network for the processing and distribution of data and information. In modern days and age, information technology plays a big role. However if you are in the field of information technology yourself, you might not know just how information technologies touches your life - using computers & softwares, business.



Topic _____

Date _____

6

IMPORTANCE OF INFORMATION TECHNOLOGY

Information and communication technologies can play the same role in our information and communication process and their outcomes as played by other technologies in making our lives quite comfortable and purposeful. As a result they have become quite popular in our life. The modern information and communication technologies impact have brought a revolution in the field of business, industry, insurance, banking, agriculture, medicine, transport, postal and telecommunication service organisations and various other fields affecting our day to day activities.



Slide Projector



USEFUL FOR THE STUDENTS

Students may get the required opportunities and training for receiving and using information for their self improvement. It may help them satisfy their urges of curiosity, inventiveness construction etc. They get acquainted with the relevant sources of information the ways and means of extracting required information and methods of information processing etc.

USEFUL FOR THE TEACHERS

Teachers get sufficient help from ICT.

in their task of teaching. Their acquaintance with the task relevant source of information in the form of books, Journals and other reading material, audio-visual material and equipment and electronics and telecommunication media make them able to acquire necessary teaching material and techniques.

USEFUL FOR THE COUNSELLORS

The counsellors working in schools and outside the schools in the community can be greatly benefited through ICT. They can have access to the various sources of information through information technology.

USEFUL FOR THE EDUCATIONAL ADMINISTRATORS & PLANNERS



Topic _____

Date _____

9

ICT may help the educational administrators and planners in the task of exercising their professional responsibilities in an appropriate way. On the other hand, it makes them well informed regarding the development in the field of education, educational administrators and planning and on the other hand, they can have proper access to the information data.

USEFUL FOR THE EDUCATIONAL RESEARCHERS

The students of education desirous of undertake research projects in the field of education are greatly benefitted through the processes and products of ICT. They need quite diversified pinpointed and reliable information and this need can be properly fulfilled through the organised sources of information controlled through information technology.



BASIC CONCEPTS OF AN OPERATING SYSTEM

Definition And Meaning

Operating system is defined as system software is an integrated set of programs that can be used for overall control of the system. No machine runs by itself. Computer hardware or machine too requires a software. A software called operating system is required to operate any system easily and effectively. These kinds of softwares are called operating system (OS).

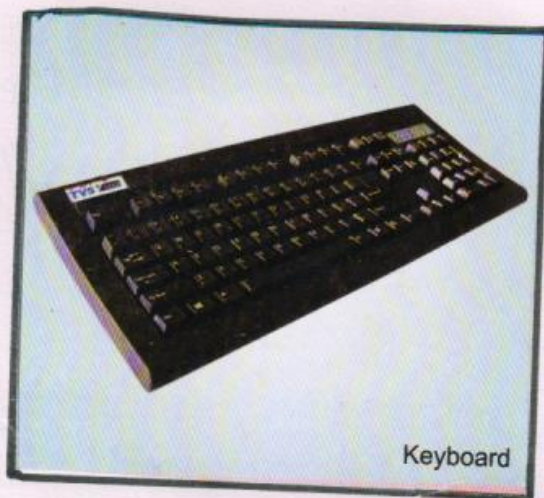
Basic Features :-

- OS provides an environment to the user to execute programs.
- It makes computer convenient to use in an effective manner.

- It manages the computer resources effectively.
- It controls and co-ordinates the use of hardware and various other programs.
- OS can be viewed as a control program, with our PC's we mostly use operating system like : UNIX, MS-DOS, MS-windows 95/99/2000 etc.

Functions of an Operating System:-

- Memory management
- Device management
- File management
- Input/output management
- Processor management
- Establishment of security
- Maintenance of system clock and data.
- To help user interact with machine.
- Loading and execution of system software
- Handling of errors.



Keyboard



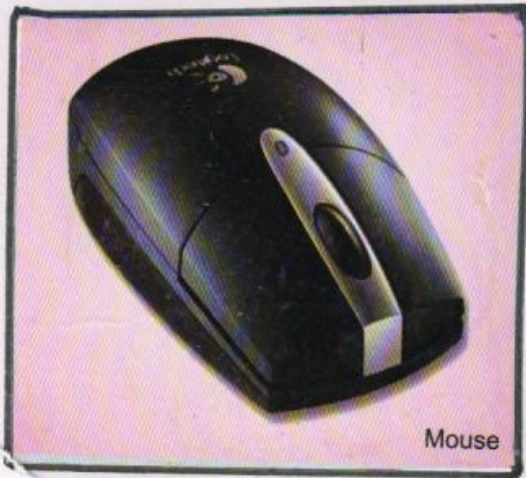
INPUT DEVICES

Input devices are those devices, or equipments that are meant for feeding data and instructions into the memory of the computer. As example of these devices, we name keyboard, mouse, scanner etc. Let us discuss few of the most common input devices.

KEYBOARD

This input device of your PC closely resembles a type writer. It has a set of keys for enabling you to enter data into the computers. It has all the 101 keys containing letters, numbers and symbols like an ordinary type writer. Besides these : It contains variety of keys like below:

1) Function Keys :- These 12 keys are found on the top left hand side of the keyboard and are named $F_1, F_2, \dots, F_{12}$. They are used to perform



Mouse



Topic _____

Date _____

13

special functions depending on the software being used

2)

A Numeric Keyboard:- It located on the right hand side of the keyboard. It looks and functions like a calculator.

Special Keys:- These are meant to perform special functions like controlling the movement of the cursor on the computer screen.

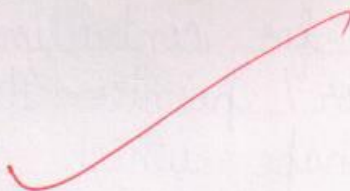
MOUSE

Mouse is an alternating device to the keyboard for controlling the movement of the cursor / pointer. Its name is derived from its shape which looks somewhat like a mouse with a tail. The mouse may have one, two or three buttons. The functions of each button is determined by the programme that uses the mouse. Clicking or moving the mouse on the flat surface causes a corresponding cursor movement. Whenever you will press one of the





Scanner



button will either mark a place or make selection from data on the screen. The quality of marking a place on the screen makes it useful for graphic programmes allowing to draw pictures by using it like a pen, pencil. Hence the operation of a computer is often nicknamed as clicking of the mouse button. There are two types of mouse, 1) mechanical mouse 2) Optical mouse,

SCANNER

Many a times you face the situations when some information is available on paper and you need it in our computer disk for further editing and incorporating it in your prepared document. The situation may be in taking a photograph of the image directly from the available source, get it scanned into a form being saved on the disk and then finally have its print through the computer printer attached to your computer. It can be



considered as an input device that can read text, picture, graphics printed on paper and translate the information/usage into a form. It can be of 2 types flat bed and hand held scanners.

OUTPUT DEVICES

Output refers to any information or result coming out of a computer. In this sense, output devices may be considered those devices which help in providing information or results to the users by getting the same from the computer. As examples of the commonly used output devices, we may cite the names of monitor, pointer, plotter and loudspeaker etc.

MONITOR

It is also known as visual display unit (VDU). The outcoming information as results are displayed in a visual form on the



Injet Printer



Laser Printer

screen of the visual display unit of your PC. Since here output from the computer is communicated to the user through the display on the screen, the visual display unit i.e., monitor is also shortly named as display screen or screen. However, the term monitor in true sense, refers to the entire display unit whereas display screen may mean just the screen. As a visual display unit device monitors allow viewers to have information about the result of processing unit of the computers.

PRINTER

A monitor as referred above can only help the user to view the information or result after being processed in the CPU of the computer. For example if you have composed a letter with the help of the keyboard and word processor the results will be displayed on the screen. You can now further edit and modify it as you desire. It can also be saved in the concerned files with the help of memory devices of the computer for future use. The printers are available in a





Topic _____

Date _____

17

number of types, varieties and styles, their choices using in your computer lab, mostly depends on the speed of printing, quality of their output, the present price range and economy in terms of their use. However now a days three types of printers are most popular with the pc's. These are named as dot-matrix printer, Inkjet printers and the laser printers.

SOUND CARD AND SPEAKERS

Sound cards and speakers represent those output devices that may help the user to get output from computers in the shape of sound. These devices are quite common to the pc's you use now-a-days. Sound cards, usually helps.

In the output of sound through speakers connected to the motherboard of the computer whenever instructed by software programmes.

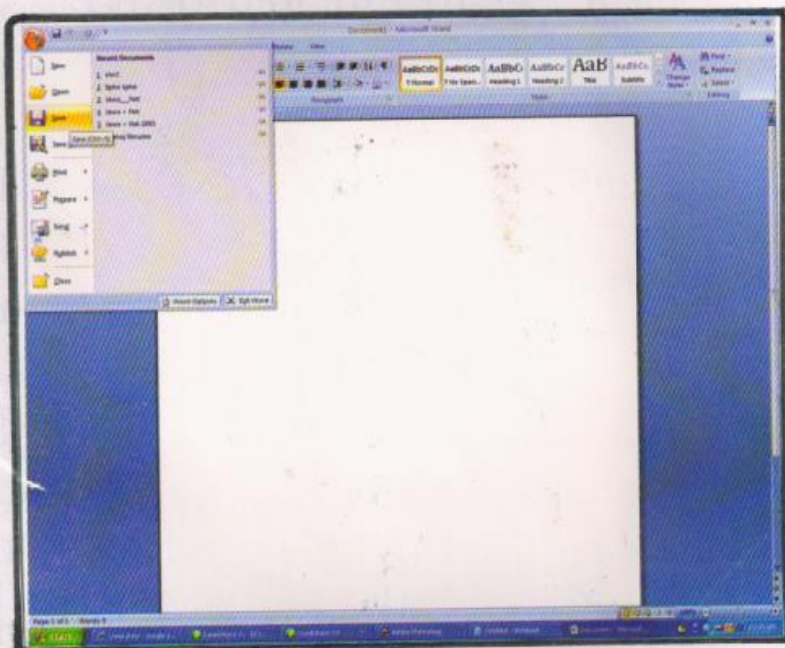
• In manipulating sound stored on a disk.



MICROSOFT WINDOWS

Microsoft windows as a sense of graphical interface operating systems developed, marketed and sold by microsoft. It introduced an operating environment name windows on November 20, 1985 as a graphical operating system shell for MS-DOS in response to the growing interest in GUI. Microsoft windows come to dominate the world's personal computer market with over market share overtaking Mac, OS which was introduced in 1984.

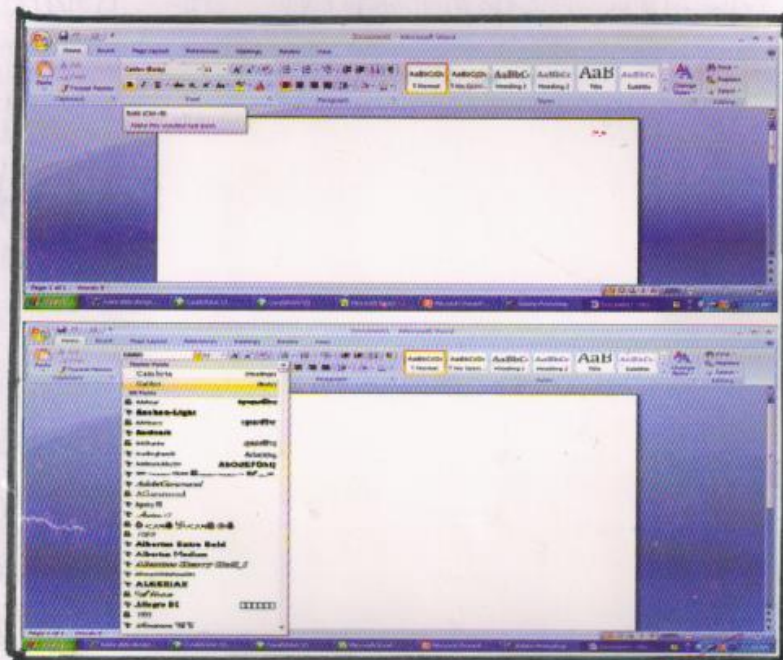
As in october 2013, the most recent versions, windows for personal computers, mobile devices, server computers are respectively windows 8.1, window phone 8, windows server 2012 R2. The term windows phone 8, windows server collecting described only or all of several generations of microsoft OS products. The history dates back to September 1981. When base Bishop designed the first model of an



electronic device and project interface manager was started. It was in November 1983, that it was named windows. Windows 1.0 is not a complete OS but extends MS-DOS. The shell of wind 1.0 is a program, known as M.S.DOS in centre components include calculator, calendar, clock, control panel, Notepad and it does not allow overlapping windows. Windows 2.0 was released in December 1987 which was more popular and feature. It introduced sophisticated keyboard shortcuts and extended memory. Windows 3.0 released in 1990 improved the design and applications could run protected mode.

MS-WORD

MS-Word is a utility software by the Microsoft Corporation, USA. It includes in a software package known as MS-Office. It falls in a category of



word processing software- Apart from the other well-known softwares are word star, word perfect, venture etc. These softwares including MS-word are used for creating documents consist of pages with texts and graphics we generally for:-

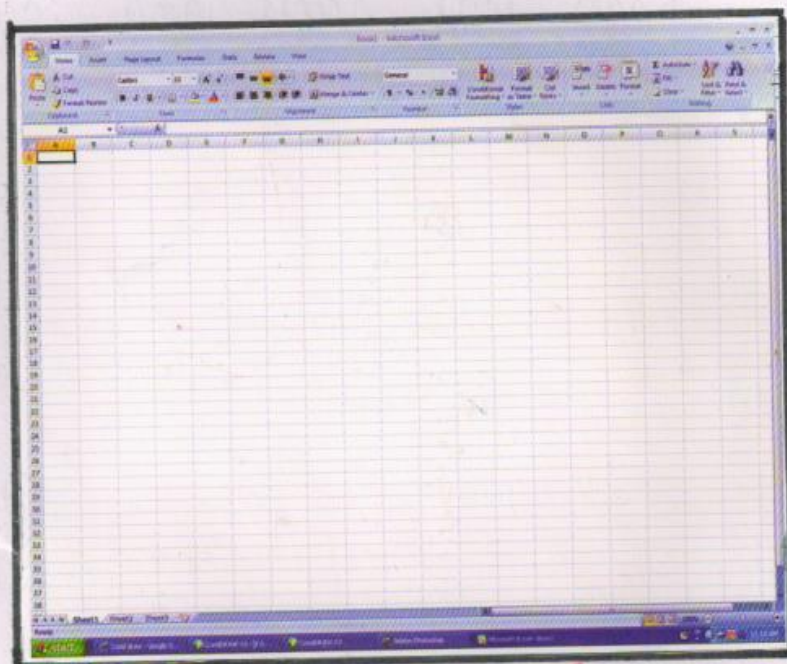
- Writing letters and sending messages on the e-mail.

- Creating texts documents in a siph way for preparation of projects and research work.

- In doing assignments and homework saving the created documents and making use of others saved documents.

WORKING WITH MS-WORD

The personal computers / laptops used by you are loaded with MS-Word for starting, you have to a blank document the various components of document window of the MS-Word program may help us in





Topic _____

Date _____

21

carrying out a number of useful functions or the creation and application of the written documents loaded with text and graphics.

MS-EXCEL

It represents a software program developed by Microsoft corporation, USA in the form of an electronic spreadsheet. Spreadsheet as the name suggests is a chart containing rows and columns, with data spread all over the page. A spreadsheet software programs help us to manage numbers in the same way as the word processing programs helps us in managing words.

The first ever designed electronic spreadsheet programs as LOTUS. It quickly enters data electronically, edit required do the desired mathematical calculations represent data in the form of graphs and charts.



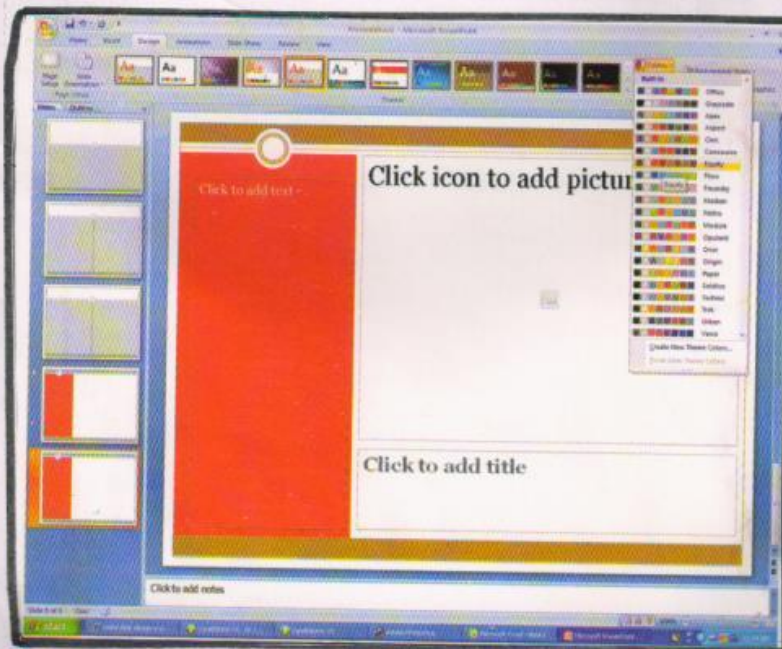
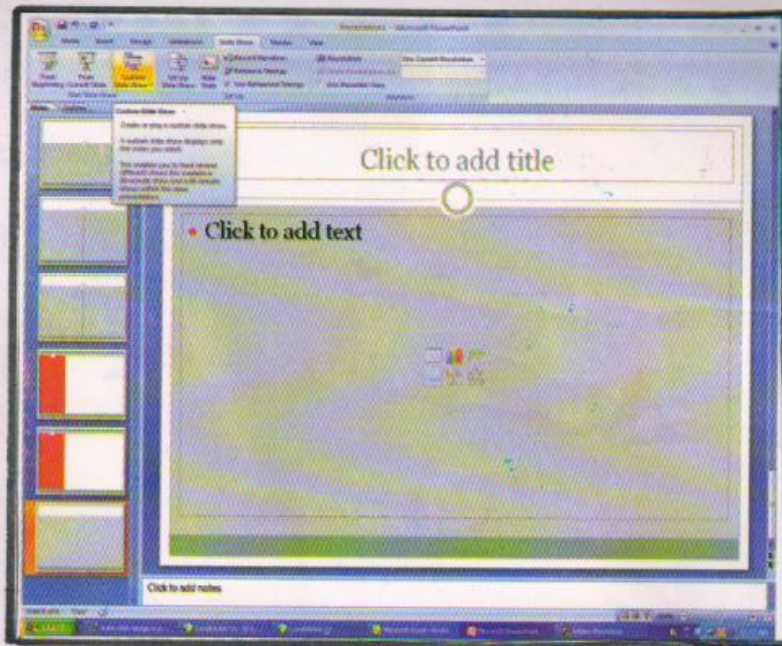
BASIC TERMINOLOGY

Worksheets : These are the basic structures and represents a combination of horizontal rows and columns. It has a fixed number of rows (65536) and columns (256). Each row devoted by a column by a letter.

Cell Pointer : It is the highlighted boundary a cell that denotes the cell is active. with the help of the click of mouse we can make only one cell active at one point for making the deserved.

Range of Cell : A group of cells, forming a rectangular area in shape is called range.

Formula Bar : Any text or formula it is being entered is displayed on the formula bar.

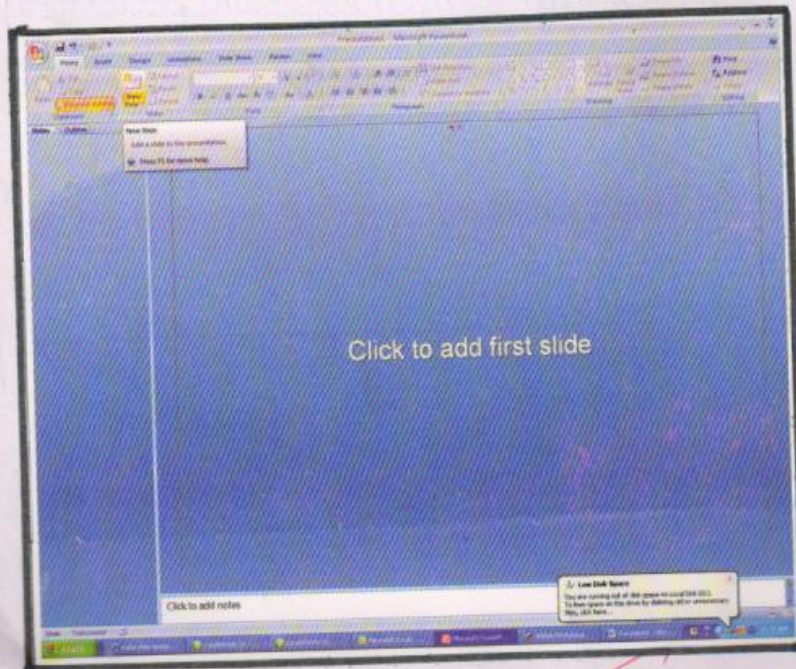
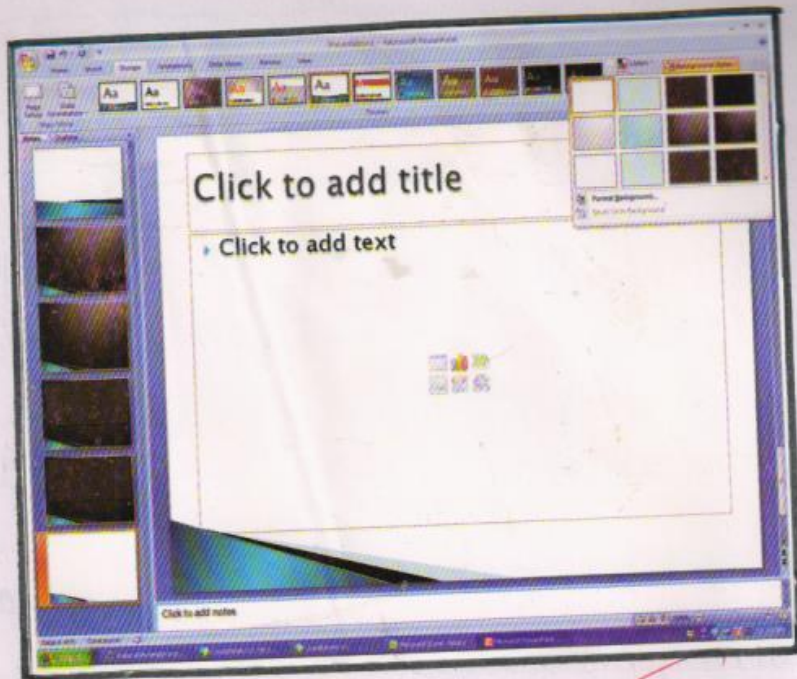


MS - POWERPOINT

MS-Powerpoint is a presentation software Program developed by microsoft Corporation. An effective presentation software tool helps users to create on screen discription demonstrations and summarize of information the needed synthesis of texts, graphics presentations, MS powerpoint allow us to show one or more slides in a needed sequence. A slide means an electronic page containing same meaningful information transmitted in visual as well as audio mode to the concerned audience.

WORKING WITH MS-POWERPOINT

The first screen of powerpoint will offer different options like Autocent., Design template, Blank presentation for creating presentation.



Autocratic Wizard :- The beginner can be useful helpful in the task of creating down slides. We can get various suggestions and help regarding designs, layouts and contents of his presentation.

Design Template :- We get pre-designed formats and colour schemes to be applied in your presentation. Here we won't get any suggestions.

Blank Presentation :- One can use this option in case we wish to create a presentation of our own design, layout and content of our choice.





Topic _____

Date _____

25

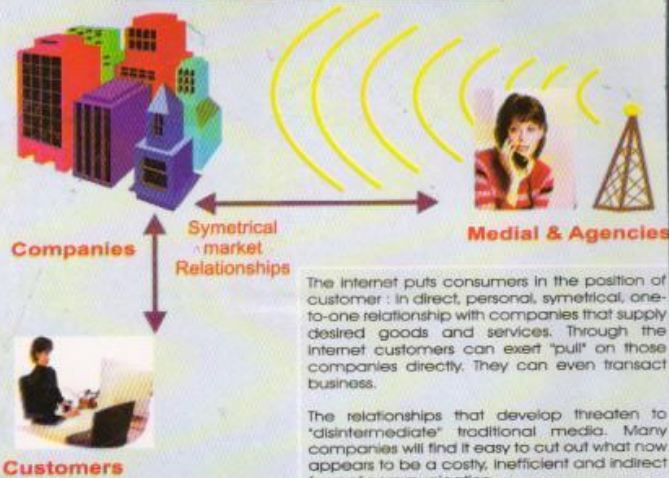
INTERNET

Internet is the short name for Internet system. However, as we know have pointed out earlier, internet is known as the largest WAN in the world existing today. It may be defined as the world's largest inter-network system that may provide the fastest easiest and cheapest means countless users to get and provides information as well as communicate among themselves on a basis.

Internet may be considered as a name for a fast world wide system consisting of people, information of computers, capable of communicating and the data among the indefinite number of use a time all over the world internet requires types of computer programs - server and clients are programs that provide resources. It is made to work on the way the client programmes can walk to server program.



What the Internet Does



The Internet puts consumers in the position of customer : In direct, personal, symetrical, one-to-one relationship with companies that supply desired goods and services. Through the Internet customers can exert "pull" on those companies directly. They can even transact business.

The relationships that develop threaten to "disintermediate" traditional media. Many companies will find it easy to cut out what now appears to be a costly, inefficient and indirect form of communication.

Topic _____

Date _____

26

INTERNET ACCESS

At this stage you may be larger to connect your PC to the internet for benefits from it. So many valuable applications like E-mail, WWW, file transfer etc. You may do it, simply by establishing a dialing up connection to the Internet for this purpose you have to make arrangements for the following:-

Telephone connections

Modem (internal or external) Computer
An account with some internet access provider establishment like BSNL
Application software i.e. client programme

MULTIMEDIA

The word multimedia is composed of two separate word. Multimedia which in turn stands for channel in carrying out the traffic of communication.



E-MAIL

Through a conventional mode of mail, you and your letters and documents through offices but it does take a lot of time and this problem has now been solved by electronic mail services provided by the Internet. Electronic mail stands for an internet tool. Services used for recharging information and documents between among the people no matter sitting anywhere. In e-mail the messages are sent the specified address of the OS my recipients in same way as you can send a message. The difference in use in the mode of delivery. Email has made to interact quickly and easily with millions of people around the globe, anytime of the day and night for the cost of local phone call. E-mail, the persons involved must know each others address which are known as Email addresses.

MS-ACCESS

MS-ACCESS is a computer software Application program provided by the Microsoft Corporation of USA that allows users to store, organize and manipulate information including both text and numerical data. It is thus a Data Base Management System including primarily employed in storing and or organizing necessary information / data help us in its proper retrieval through keyword searches later on when required. So, unlike MS-Word which can be compared to an electronic typewriter, or MS-Excel, which can be compared to an electronic calculator, MS-Access has no electronic counter part. As it best it can be compared to a file cabinet that may be used to store important information in a way that makes it easy to locate later. It helps in the organization of data alphabetically or numerically by any desired field.



Topic _____

Date _____

MS - PAINT

MS - Paint is a basic graphics / painting utility that is included in Microsoft versions.

- MS-Paint can be used to draw, colour and edit pictures, including imported pictures from a digital camera.

- It can save creations in standard formats such as Jpg and bmp.

- More recent version of paint allow up to three colours to be picked at a time using the primary colours with left mouse click.

- The secondary colour with right mouse click.

- The tertiary colour with the control key on the keyboard and any mouse click.



- Features included in paint are pencil brush and airbrush tool.

CONCLUSION

Globalization is powered in part by tremendous and rapid ICT advances, and young people are often among the first to take advantages of the new developments in this area. Youth are capable of using ICT in diverse and normal ways, as a result of which traditional forms of socialization are increasingly being challenged and overtaken. Many of the perceptions, experiences and interactions that young people have are virtual, transmitted through various forms of information technology youth are at the forefront of information forefront, but they face the challenge of reconciling of their daily existence with popular images present in the media.