

**COMPUTER APPLICATION FOR
ECONOMIC ANALYSIS**

ECO4 B06

**CORE COURSE
of**

**BA ECONOMICS
IV Semester**

**CUCBCSS
(2014 Admission)**



**UNIVERSITY OF CALICUT
SCHOOL OF DISTANCE EDUCATION
Calicut University P.O. Malappuram, Kerala, India 673 635**

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UNIVERSITY OF CALICUT
SCHOOL OF DISTANCE EDUCATION

STUDY MATERIAL

BA - ECONOMICS IV Semester
CUCBCSS
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COMPUTER APPLICATION FOR ECONOMIC ANALYSIS
ECO4 B06

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Module I

Introduction to Computers and Peripherals.

Objectives of the module

1. To develop basic understanding of various basic components and concepts related with computer.
2. To develop capacity to apply the uses of computers in various filed of social science studies.

Module 1: Introduction to Computers and Peripherals (20 % weightage)

Computer – meaning, types, features and limitations – Basic components of computer – Input and output devices – Primary memory and secondary storage – Computer software – types – malicious softwares – protecting computer – Operating systems – functions and types.

QUESTIONS AND ANSWERS

ESSAY TYPE QUESTIONS (12 Marks each)

1. What is a computer? What are different types of computers? Point out the advantages and disadvantages of computers?

Meaning and Definition

A **computer** is a device that accepts information (in the form of digitalized data) and manipulates it for some result based on a program or sequence of instructions on how the data is to be processed. The term computer is derived from the word compute. Computer is electronic device that manipulates data. It is a general purpose device that can be programmed to carry out a finite set of arithmetic and logical operations. Computer takes input from the user in form of data and instructions. Once it obtains the data it waits for the user's instructions to go ahead and start processing the data. On receiving the instructions from the user, the computer processes the data and generates some output and display the user.

Types of computers

There are different types of computers in terms of their shape, size and speed to process data.

Computers based upon their sizes are listed below.

- 1) **Personal computer (PC):** Personal computers are small but powerful computers primarily used in an office or home without the need to be connected to a larger computer. PCs evolved after the development of the micro processor in 1970s, when some computers were built from components or kits. In the early 1980s the first low cost, fully assembled

units were mass marketed. The typical configuration consists of a video display, key board, mouse, logic unit and memory, storage device, and a modem.

2) Personal Digital Assistant (PDA)

PDA light weight, hand held computer designed for use as Personal organizer with communication capabilities. **PDA** is a term for any small mobile hand-held device that provides computing and information storage and retrieval capabilities for **personal** or business use. It is commonly used for keeping schedules, calendars and address book. A typical PDA has no key board. Instead it relies on recognition of handwritten input on the surface of liquid crystal display screen, through the use of special hardware and PEN – BASE COMPUTER software,

3) Laptop Computer

Laptops computers are also known as notebooks, which are integrated with display screen, key board, trackball, processor and memory. Entire machinery of laptop computer is rechargeable battery oriented.

4) Tablet PC

Tablet PC is a kind of micro computer, which is Micro soft's venture into the world of natural interfaces. Tablet PC uses new data transfer techniques such as handwriting recognition, voice command and fingerprint authentication. Instead of mouse the user uses finger tip or pen on the touch screen to write or to move to other options. The processing power and software base have now developed to the level that a standard computer can smoothly absorb written words. With its electromagnetic pen, touch screen and software that recognize letters written on a screen, the Tablet PC hopes to be the notepad of the 21 st century. The pen can act as like a mouse when moving over a Tablet PC. When the pen touches the screen, it acts like a pen and the user can write directly on the screen.

5) Main Frame Computers

Main frame computers are the large size computers which occupy a large air conditioned roomful space and main memory size up to 128 megabyte; these computers were used in sixties and seventies. Since all its peripherals are mounted in large cabinet type frames, these computers are also known as main frame computers. Such computers system can be used by 128 users simultaneously in time sharing mode and employing mini computers as a front end processor. All the first to third generation computers which work with the speed of 5 to 100 million instructions per second fall under this group.

6) Super Computer

A supercomputer is a computer that performs at highest operational rate. A supercomputer is typically used for scientific and engineering applications that must handle very large databases. By definition super computer means a computer having main memory of 256 megabytes working on vector architecture with 64 bit words and performance peak time in range of 500 M flops. Super computers today largely own their fantastic speed of processing to the development of three very important concepts in computer architecture: pipe lining, vector

processing and parallel processing. They process data at speeds exceeding 40 crore to 60 crore operations per second.

7) Hybrid Computer

Hybrid computers are computers that exhibit features of analog computers and digital computers. The digital component normally serves as the controller and provides logical operations, while the analog component normally serves as a solver of differential equations. An analog computer operates on mathematical variables in the form of physical quantities that are continuously varying like temperature and voltages. Analog computers are used in industrial and scientific applications. The HRS-100 was a prominent example in the 1970s.

Advantages or Features of Computer

Computer performs the following tasks

- a) **Input:** Sending the data and command to the computer is known as input. Computers receive all these information.
- b) **Processing:** Work done by the computer with the help of processing hardware and software to produce results is known as processing.
- c) **Output:** The result displayed by the computer is known as output.
- d) **Storage:** They store the data. A place to save result inside or outside the computer is known as storage.
- e) **Speed:** Computer processes information very fast.
- f) **Accuracy:** Computer gives accurate results.
- g) **Automatic:** As stated earlier, the computer is quite capable of functioning automatically, once the process has been initiated. It does not require a prompt from an operator at each stage of the process.
- h) **Scientific Approach:** The entire approach to solving problems is highly scientific, objective and sequentially carried out.

Limitations of Computers

- a) **Computer cannot think and understand things itself:** The concept of artificial intelligence shows that the computer can think. But still this concept is dependent on set of instructions provided by the human beings. It doesn't have much intelligence or I.Q. and judgment.
- b) **Programmed by human:** Though computer is programmed to work efficiently, fast and accurately but it is programmed by human beings to do so. Without a program, computer is nothing. A program is a set of instructions. Computer only follows these instructions. If the instructions are not accurate the working of computer will not accurate.

- c) **Computer cannot take Care itself:** A Computer cannot care itself like a human. A computer is dependent still to human beings for this purpose.
- d) **Retrieval of memory is linear not random:** A computer can retrieve data very fast but this technique is linear. A human being's mind does not follow this rule. A human mind can think randomly which a computer machine cannot.
- e) **Heavily dependent on human beings:** Computer needs instructions in the form well designed programs from human beings to perform tasks. It does what we tell it to do. It cannot generate information on its own and act on its own judgment.
- f) **Computer cannot distinguish between correct and wrong data:** It cannot verify wrong information. If we feed computer with wrong data it will give us wrong information.
- g) **Computer cannot correct wrong instructions:** If we give computer with wrong instruction, it will not be able to do anything to correct it. It will only stop functioning. Then the computer will depend on us to correct your mistakes.

2. Analyse different types of operating systems? What are the functions?

Operating system (OS)

An operating system (OS) is system software that manages computer hardware and software resources and provides common services for computer programs. The operating system is a component of the system software in a computer system. Application programs usually require an operating system to function. Operating system is a set of software that manages the hardware resources of a computer and acts a platform for running other application software. Some examples are MS Windows, Linux etc.

Windows is a series of operating systems software and graphical user interfaces produced by Microsoft Corporation.

Linux is a free Unix-Type operating system originally created by Linus Torvalds with the assistance of developers around the world.

Operating system can be classified as follows:

- **Single user, single tasking,** As the name implies, this operating system is designed to manage the computer so that one user can effectively do one thing at a time. The Palm O.S hand held computers is a good example of this category.
- **Single – user, multi tasking:** This is the type of operating system that most people use on their desktop and laptop computers today. Windows 98 and the Mac O.S are examples of an operating system that will let single user to have several programs operation at a time.
- **Multi-user, Multitasking:** A multi-user operating system allows many different users to take advantage of the computer's resources simultaneously. The operating system must make sure that the requirements of the various users are balanced, and that each of the programs they are using has sufficient and separate resources so that a

problem with one user does not affect the entire community of users. Unix, VMS, and mainframe operating system MVS are examples of this type.

Functions of Operating System (OS)

1- Booting the computer

The process of starting or restarting the computer is known as booting. Operating System facilitates booting the computer. There are two types of booting. A cold boot is when you turn on a computer that has been turned off completely. A warm boot is the process of using the operating system to restart the computer.

2- Performs basic computer tasks

The operating system performs basic computer tasks, such as managing the various peripheral devices such as the mouse, keyboard and printers.

3- Provides a user interface

A user interacts with software through the user interface. The two main types of user interfaces are: command line and a graphical user interface (GUI). With a command line interface, the user interacts with the operating system by typing commands to perform specific tasks. EX. DOS (disk operating system). With a graphical user interface, the user interacts with the operating system by using a mouse to access windows, icons, and menus. An example of a graphical user interface is Windows Vista or Windows 7.

4- Handles system resources

The operating system also handles system resources such as the computer's memory and sharing of the central processing unit (CPU) time by various applications or peripheral devices.

5- Provides file management

The operating system also handles the organization and tracking of files and directories (folders) saved or retrieved from a computer disk. The file management system allows the user to perform such tasks as creating files and directories, renaming files, copying and moving files, and deleting files.

3. What are the basic components of computer?

Computer Hardware

Anything that you see and feel is known as hardware. In computer terminology there are two broad categories of hardware devices, input devices and output devices. Any device which lets you enter data or instructions is known as input device. Common examples of input devices are key board and mouse. On the other hand hardware device which displays results to you is known as output devices. Common examples of output device are monitor and printer.

1-Key board: Key board looks like the typewriter. A numeric keypad is located to the right of the key board. Numeric keys have the same placement as a 10-key calculator which allows the operator to enter numbers rapidly. It also include letters, cursor control keys like up and down arrow keys, home, end, caps lock, shift, enter etc.. keys.

2-Mouse: Mouse is a hand held device that allows you control your computer without having to the type instructions from the keyboard. By moving the pointer you can select icons, open programs, and select commands present in a program. Left button of mouse is used to carry out most tasks where as right button is used in special cases like opening shortcut menus.

3-Monitor: The monitor of a PC works like a television screen. It displays text characters and graphics in colors or in shades of grey. The monitor is also known as screen, display or a CRT (Cathode Ray Tube). Anything typed on the key board is displayed on monitor. When a program is executed, the information is displayed on the monitor.

System Unit

The system unit is the most important part of the computer system and it resembles the shape of a rectangular box. If you look at the system unit then you will find some buttons and disk drivers at the front side and sockets of different shapes and sizes at the back side. All devices, such as key board, mouse monitor, printer, and speakers all linked to the system are kept safely inside the system unit. The core units of computer system such as **Motherboard, CPU, BIOS, RAM, Hard Disk**, and power supply box are kept safely inside the system unit.

4-Motherboard

A Motherboard is the physical arrangement in a computer's basic circuitry and components. On a typical motherboard, the circuitry is imprinted or affixed to the surface of a firm planar surface and usually manufactured in a single step. Typically, the mother board contains the controllers for all standard devices such as the display screen, keyboard and disk drive. Collectively, all these chips that reside on the mother board are known as the motherboard's chipset.

5-Central Processing Unit (CPU)

The central processing unit is the brain of a computer. It looks like a small chip and placed on the motherboard. The power of CPU lies in its ability to process data rapidly and flawlessly. The speed of the CPU is measured in Megahertz (MHz). Intel, one of the biggest software companies in the world, has been manufacturing processors.

Two typical components of CPU are

- 1-The Arithmetic Logic Unit (ALU), which performs arithmetic and logical operations
- 2- The control Unit, which extracts instructions from memory and decodes and executes them, calling on the ALU when necessary.

Basic Input Output Software (BIOS)

The basic Input Output Software is built in software, which keeps track of all devices attached to the computer and provide inter-communication channel listed devices like key board, monitor, printer etc..

Memory

Every computer system has a certain type of storage capacity for running programs and storing data. Such storage capacity is known as memory. When computers refer memory or storage they refer to terms using the following forms of measurement.

- 8 bits (characters) =1 byte
- 1024 bytes= 1 kilobyte (KB)
- 1024 Kilobytes = 1 Megabytes (MB)
- 1024 Megabytes = 1 Gigabyte (GB)

Memory is divided into two categories, Primary and secondary memory. The primary memory is the one which is directly used by the CPU for executing instructions. The example of primary memory is RAM. Secondary memory is one which is used for storing and retrieving data. The example of secondary memory is hard disk.

6-Primary Memory of a Computer (RAM)

Every computer has internal storage device which is directly accessible to the CPU. Such temporary internal storage is known as Primary memory of computer and we better know such memory by the name Random Access Memory (RAM). A random-access device allows stored data to be accessed directly in any random order. The RAM comes in form of a rectangular chip which CPU uses to continuously read instructions stored into and executes them. Any data actively operated on is also stored there in RAM. The data in RAM stays there only as long as your computer is running. When you turn your computer off, RAM loses its data. When you turn your computer on again, the operating system and other files are once again loaded into RAM. So RAM is volatile memory.

7-Secondary Memory of a Computer (Hard Disk)

Any internal or external storage device used by the user for storing data and programs is known as secondary memory of the computer. The secondary memory differs from primary memory in that it is not directly accessible by the CPU. Also, secondary memory devices do not lose the data when computer is powered down; thus it is nonvolatile memory. In modern computers, hard disks are usually used as secondary storage. The hard disk is a device which stores all programs and data in the computer. Hence, the hard disk is referred to as the memory bank of a computer. The hard disk is placed inside the system unit and connected to the Motherboard for functioning.

Difference between Primary Memory and Secondary Memory

Primary Memory	Secondary Memory
Primary memory is main memory.	Secondary memory is external or additional memory.
RAM is Primary memory device	Hard disk is secondary storage device
Directly accessed by CPU	Not directly accessed by CPU.
Volatile memory, loses data when computer is turned off	Nonvolatile memory does not lose data.

Primary memory is temporary	Secondary memory is permanent.
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SHORT ESSAY TYPE QUESTIONS (5 Marks Each)

1. Compare Primary memory and secondary storage?
See Essay question number 3
2. What are the basic limitations of a computer?
See Essay question number 1
3. What is malicious software? How it affect the functioning of the system?

Malicious Software or Malware

Malicious software or malware is designed to gain access to a computer to do certain tasks beyond computer's own knowledge. Malwares are used for user data theft, launching attacks against other computers or networks. Creating and releasing malware is illegal in most of the countries.

Common malware are given below.

1-Adware: Adware is type of malware that generates advertisements such as pop-up windows or links on web pages that are not part of a page's code. Adware may add links to one's favorites and desktop. It will often change the home page and search engine to the sites that earn income from various advertisers.

2-Virus: A computer virus is a computer program that can copy itself and infect a computer without the permission or knowledge of the user. A virus can only spread form one computer to another, when a file is copied from infected computer to uninfected computer through network or removable medium such as CD or USB drives.

Impacts of Viruses

Virus can slow down your computer.

Virus might corrupt your system files.

Virus might make some programs faulty or corrupt.

Virus might damage your boot sector creating problems when you boot into the windows.

Virus might steal important information from your computer and send to some other person.

3-Spyware: Spyware is software that aids in gathering information about a person or organization without their knowledge and that may send such information to another entity without the consumer's consent, or that asserts control over a computer without the consumer's knowledge. Spyware is mostly used for the purposes such as; tracking and storing internet users' movements on the web; serving up pop-up ads to internet users. Whenever spyware is used for malicious purposes, its presence is typically hidden from the user and can be difficult to detect. While the term *spyware* suggests software that monitors a user's computing, the functions of spyware can extend beyond simple monitoring. Spyware can

collect almost any type of data, including personal information like Internet surfing habits, user logins, and bank or credit account information. Spyware can also interfere with user control of a computer by installing additional software or redirecting Web browsers. Some spyware can change computer settings, which can result in slow Internet connection speeds, un-authorized changes in browser settings, or changes to software settings.

How we can safeguard a computer from malicious software?

Protecting computer from malicious software

With so many computer viruses in existence, protecting your computer's security should be one of your top priorities. Having a good anti-virus program can be the difference between the life and death of your computer. Aside from just stopping viruses, most anti-virus programs have other features, such as firewalls, that will ensure the well-rounded safety and security of your valued computer.

Antivirus software is a computer program that detects, prevents, and takes action to disarm or remove malicious software programs such as viruses and worms.

Firewall: Network firewalls prevent unknown programs and internet processes from accessing the system protected. They may protect against infection from outside the protected computer or LAN and limit the activity of any malicious software by blocking incoming or outgoing requests.

Protection from Viruses

The greatest and most obvious advantage to installing anti-virus software on your computer is that it will prevent you from getting viruses such as trojans, malware and spyware. Viruses range in severity from the harmless to the downright system crippling. Not only can a virus destroy all of the valued data on your computer, it can make the computer utterly worthless by infecting and destroying processes vital to your computer's performance.

Protecting Personal Information

Hackers and viruses go hand in hand. A good anti-virus program will protect you while you surf the Internet, preventing hackers from gaining access to personal things such as credit card information and bank account access. The firewall feature included with most anti-virus software will block any unauthorized incoming connections to your network or computer, preventing hackers from digging their hooks into your life and your computer.

Cost Savings

Though some anti-virus programs are quite pricey, there are some very good options for those wanting something relatively cheap or even free. Many free anti-virus programs are available that will protect your system just as well as a subscription-based anti-virus program. Even if you choose to go with a program you have to pay for, the cost of the program and subscription to their service will almost certainly extend the life of your computer, meaning you'll have to

purchase new computers less frequently than those who choose not to use anti-virus software.

Convenience

Though you may find it inconvenient to have to run virus scans and worry about the security of your computer, you'd have more to worry about without proper anti-virus protection. A computer left open for viruses and hackers will often start to show premature signs of wear and a significant slowdown will be noticeable, making normal computing tasks take much longer and causing much more hassle. Let's assume your system does get infected with a virus. Without protection you'd be at the mercy of the virus and you'd have to waste time trying to find it, delete it and restore any damage it has caused and it will still probably be there, even after deletion. Yet with proper real-time anti-virus software working you will simply get a notification that a virus has been detected and be asked if you would like to delete it. These notifications usually come as soon as the virus is detected, leaving it without enough time to do its damage.

SHORT ANSWER TYPE QUESTIONS (2 Marks Each)

1. Define a computer.

A computer is an electronic device which is capable of receiving information (data) in a particular form and of performing a sequence of operations in accordance with a predetermined but variable set of procedural instructions (program) to produce a result in the form of information or signals.

2. What are various inputs devices of a computer?

In computing, an input device is a peripheral (piece of computer hardware equipment) used to provide data and control signals to an information processing system such as a computer or information appliance. Following are few of the important input devices which are used in a computer:

- Keyboard
- Mouse
- Joy Stick
- Light pen
- Track Ball
- Scanner
- Graphic Tablet
- Microphone
- Magnetic Ink Card Reader(MICR)
- Optical Character Reader(OCR)
- Bar Code Reader
- Optical Mark Reader(OMR)

3. Distinguish between hardware and software?

Computer hardware is any physical device used in or with your machine, whereas software is a collection of code installed onto your computer's hard drive.

Hardware

- Physical parts of the computer are called hardware.
- You can touch, see and feel hardware.
- Hardware is constructed using physical materials or components.
- Computer is hardware, which operates under the control of software.
- If hardware is damaged, it is replaced with new one.
- Hardware is not affected by computer viruses.
- Hardware cannot be transferred from one place to another electronically through network.
- User cannot make new duplicate copies of the hardware.

Software

- A set of instructions given to the computer is called software.
- You cannot touch and feel software.
- Software is developed by writing instructions in programming language.
- The operations of computer are controlled through software.
- If software is damaged or corrupted, its backup copy can be reinstalled.
- Software is affected by computer viruses.
- Software can be transferred from one place to another electronically through network.
- User can make many new duplicate copies of t

4. What is a personal computer?

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5. Define a PDA?

PDA (personal digital assistant) is a term for any small mobile hand-held device that provides computing and information storage and retrieval capabilities for **personal** or business use, often for keeping schedule calendars and address book information handy. The term handheld is a synonym. PDA light weight, hand held computer designed for use as Personal organizer with communication capabilities

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A supercomputer is a computer that performs at highest operational rate. A supercomputer is typically used for scientific and engineering applications that must handle very large databases. By definition super computer means a computer having main memory of 256 megabytes working on vector architecture with 64 bit words and performance peak time in range of 500 M flops. Super computers today largely own their fantastic speed of processing to the development of three very important concepts in computer architecture: pipe lining, vector processing and parallel processing. They process data at speeds exceeding 40 crore to 60 crore operations per second.

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Hybrid Computer

Hybrid computers are computers that exhibit features of analog computers and digital computers. The digital component normally serves as the controller and provides logical operations, while the analog component normally serves as a solver of differential equations. An analog computer operates on mathematical variables in the form of physical quantities that are continuously varying like temperature and voltages. Analog computers are used in industrial and scientific applications. The HRS-100 was a prominent example in the 1970s.

8. Define an operating system?

An *operating system (OS)* is *system* software that manages computer hardware and software resources and provides common services for computer programs. The *operating system* is a component of the *system* software in a computer *system*. Application programs usually require an *operating system* to function

9. What is open source software?

Open source software is software whose source code is available for modification or enhancement by anyone. "Source code" is the part of software that most computer users don't ever see; it's the code computer programmers can manipulate to change how a piece of software—a "program" or "application"—works. It's also called free software

10. What is RAM?

RAM is an acronym for *random access memory*, a type of computer memory that can be accessed randomly; that is, any byte of memory can be accessed without touching the preceding bytes. *RAM* is the most common type of memory found in computers and other devices, such as printers.

Every computer has internal storage device which is directly accessible to the CPU. Such temporary internal storage is known as Primary memory of computer and we better know such memory by the name Random Access Memory (RAM). A random-access device allows stored data to be accessed directly in any random order.

11. What is virus?

A computer **virus** is a program or piece of code that is loaded onto your computer without your knowledge and runs against your wishes. **Viruses** can also replicate themselves. All computer **viruses** are man-made. A simple **virus** that can make a copy of it over and over again is relatively easy to produce.

12. What are the impacts of viruses on a computer?

Following are the problems that a virus can create?

- Virus can slow down your computer.
- Virus might corrupt your system files.
- Virus might make some programs faulty or corrupt.
- Virus might damage your boot sector creating problems when you boot into the windows.
- Virus might steal important information from your computer and send to some other person.

13. What are utilities?

Utilities otherwise known as Utility Software is highly specialized software which is targeted to handle a single or a very small number of tasks. Utility software generally does a complex task such as configuring a computer, performing tests in hard disk drives, connecting to internet etc..

14. What is system software? Give examples.

Systems software includes the programs that are dedicated to managing the computer itself, such as the operating system, file management utilities, and disk operating system (or DOS). The operating system manages the **computer hardware** resources in addition to applications and data.

The operating system (OS) is the best-known example of system software. The OS manages all the other programs in a computer. The system software is the interface between the hardware and user applications. System software and application programs are the two main types of computer software. Unlike system software, an application program (often just called an application or app) performs a particular function for the user

Other examples of system software and what each does:

The BIOS (basic input/output system) including hard disk, video adapter, keyboard, mouse, and printer.

- The boot program.
- An assembler
- processor
- A device driver

MODULE II

WORD PROCESSING

Objectives of the module

1. To introduce Microsoft PowerPoint 2007
2. To explain how to work with design templates.
3. To illustrate how to add transition / animation effects.
4. To explain how to insert images, videos and graphs

Terms and concepts discussed:

- **Microsoft PowerPoint:** Microsoft PowerPoint is a program, which helps the user to prepare a presentation in simple and easy process. It offers various features that help the users to make the presentation more attractive and useful. In Microsoft PowerPoint presentation we can include the text, graphics and animations, sound movie clips etc.. Microsoft PowerPoint consists of menus, working area, scroll bar, notes pane, status bar, and navigation pane. We can also use short cut key tips in the PowerPoint window. We can set the configuration of PowerPoint presentation by setting the options in the options in the office button of the PowerPoint window.
- **Slide Sorter View:** Slide sorter view is present on the left side of PowerPoint Presentation. It helps to preview the slides in thumbnails so that we can place the slides in right order by cutting and pasting them.
- **Themes:** Themes refer to the background style of a power point presentation; they give a consistent look to the presentation. We can apply a theme to a single slide or to the entire presentation. As best practice, we may apply a theme to entire presentation to ensure that the elements of a presentation have a uniform look. Microsoft Power Point provides us with various options to apply different colour themes.
- **Transition Effects:** Transition is a way to add variety and style to your presentation. A slide transition is the visual motions as one slide switches to another. Microsoft Office PowerPoint has many different slide transition options to enhance slide show. We can control the speed of each transition slide, and we can also add sounds.
- **Animation:** Microsoft Office PowerPoint provides us with animation features to give motion to the Microsoft Office PowerPoint Presentation. By adding the animation in the PowerPoint Presentation, the objects in the presentation become animated in the slide show. Animation gives more emphasis to our presentation.
- **Slide Show:** Slide show helps us to view contents in the presentation. To begin slide show click on *slide show*, then, in *start slide show* group click on *from beginning*.

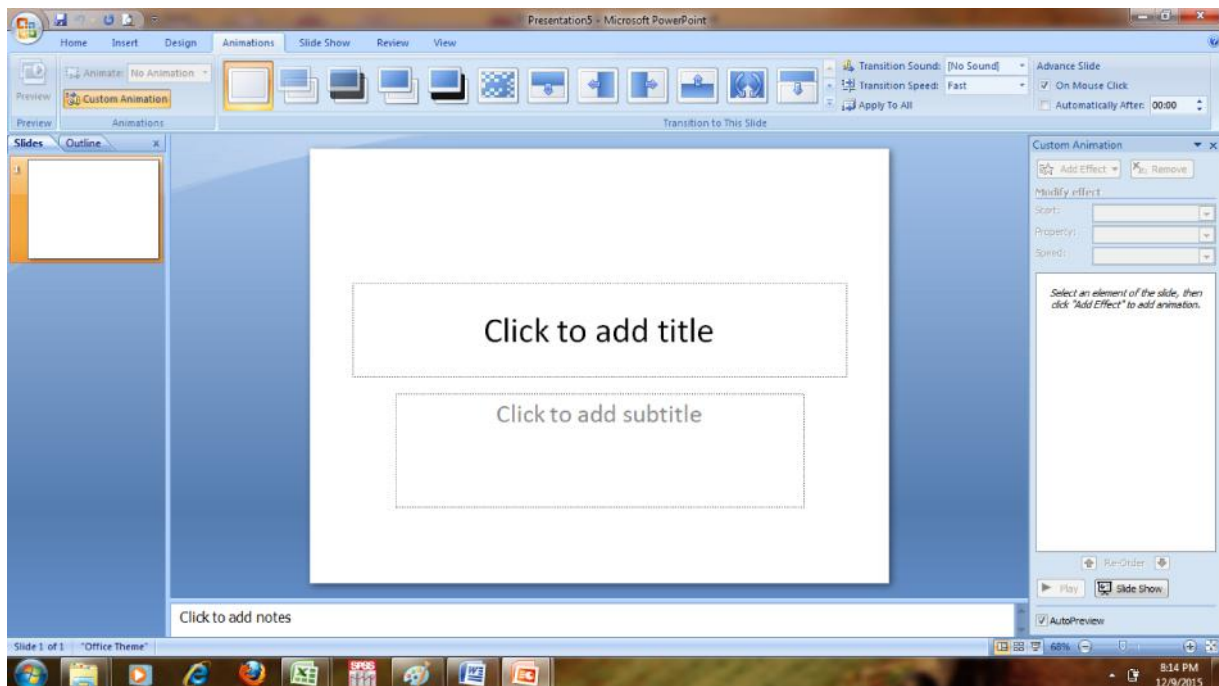
QUESTION BANK

ESSAY QUESTIONS (12 MARKS)

1. Explain briefly the various steps to create PowerPoint slides.

Introduction to PowerPoint

Microsoft PowerPoint is a program, which helps the user to prepare a presentation in simple and easy process. It offers various features that help the users to make the presentation more attractive and useful. In Microsoft PowerPoint presentation we can include the text, graphics and animations, sound movie clips etc. Microsoft PowerPoint consists of menus, working area, scroll bar, notes pane, status bar, and navigation pane. We can also use short cut key tips in the PowerPoint window. We can set the configuration of PowerPoint presentation by setting the options in the options in the office button of the PowerPoint window. The steps to create a PowerPoint presentation are outlined below. Each step is discussed in detail later.



Steps to Create Power Point Presentation

1-Opening and Saving a Blank Presentation

First we need to open a blank Microsoft PowerPoint presentation using start menu or using office button in an already opened presentation. After opening the presentation, save the file in the desired folder, with a suitable name

2-Adding Title and Subtitle of the Presentation

The blank presentation opens with a title slide. Click on the title place holder in the first row where *click to add title* is written and type the title, which is usually the topic of presentation. Click on the sub title place holder in the first row where *click to add subtitle* is written and type the subtitle of the presentation. In the subtitle placeholder usually we give presenter's name and designation.

3-Selecting a theme or Design

We have to select a theme or design which will be the background style of our power point presentation. For this we need to click on *design* tab and select a theme from *themes* group. We can format the selected theme or template by changing colour combination, text font, and background colour. Once the theme is finalized, this will be the background style of all slides.

4-Adding New Slides with Suitable Layout

For the subsequent contents of presentation, we need to select suitable layout for new slide. Contents can be texts, graphs, tables and Images. As per the content we can choose suitable layout for a new slide. This can be done by clicking *home* tab and *New slide* in *Slides* group and selecting suitable layout from available options.

5-Adding Content to the subsequent slides

Once new slide is inserted with a desired layout; we can add contents to the slide by clicking in the place holder or text box. This can be texts, graphs, tables and Images. We can also add audio and video to make presentation more attractive. We can format texts by selecting desired text font, colour, style, and font size. Continue adding slides by clicking *home* tab and *New slide* in *Slides* group and selecting appropriate layout. Add contents to each slide.

6-Adding Transition Effects to each slide

We can add transition to the each slide. Transition helps to make the appearance of new slide more stylish. A slide transition is the visual motion as one slide switches to another. To apply transition click the *animation* tab and select desired transition from the *Transition to This slide* group. We can control the transition speed by selecting fast, medium, or slow in transition speed button.

7-Adding Animation to each Object

We can also add animations to objects in the slides. Animation helps to make objects in a slide appear in a particular style. An object can be animated by clicking the *animation* tab and selecting desired animation from the options given in *Animate* button under *animations* Group. We can add animation to all text at once or to each paragraph separately.

8-Editing Slides using Slide sorter view.

We can view all slides created in *slide sorter view*. In the slide sorter view we can view the slides in thumbnails so that we can move a slide by cutting and pasting. This helps to place slides in

right order. We can also delete a slide, create a duplicate slide, and hide a slide in computer screen.

9-Previewing the Presentation through slide show

Once we have completed adding all contents of a presentation to the slides, designing the slides, and applying transition and animation and ordering the slides in *slide sorter view*, we can have a preview of the presentation through a slide show. This will help us to make sure that all objects in the slides are appearing clear and readable format in the presentation. If any error is there in any content of presentation, we can get it corrected. Further, changes and improvements can be made to make presentation perfect one.

10-Saving the Final Presentation

After previewing the presentation and making necessary changes, press *esc* key to return to the window. Now to save the changes in the presentation go to the MS Office Icon and select save.

2. Explain the various Toolbars in Microsoft PowerPoint

Microsoft PowerPoint Toolbars

1-Office Button

This button is present on the left-most upper corner of the Microsoft PowerPoint. When we click on the button a dropdown menu appears it has many options like new, open, save, and print.

2- Quick Access Toolbar

This toolbar exists adjacent to the office button. It helps to easily access some of most commonly used commands like new, open, save undo and redo. We can add more options to this toolbar by customizing it. Clicking customizing quick access toolbar displays a drop-down list containing many options, each of these can be added to the toolbar by selecting it and can be removed by deselecting it.

3- Title Bar

Title bar is present on the top of the PowerPoint and it displays the name of the PowerPoint presentation and the program name that is Microsoft PowerPoint.

4- Minimize, Maximize and Close Buttons

All these buttons are present on the right most upper corner of the window. These are used to Minimize, Maximize and Close the Microsoft PowerPoint.

5- Menu Bar

Menu Bar consists of a list of commands or options from which we can choose only one at a time. In office 2007, menus are also known as **Tabs**. There are seven Menus or Tabs arranged horizontally and each represents an active area like Home, Insert, design, Animation, slide show, Review, and View. Active area under each tab is known as Ribbon. Each tab has several groups; under each group we have different buttons that perform a specific task.

6- Scroll Bars

The grey bars present at the right side of Microsoft PowerPoint on the window frame that allow the user move up and down to change the slides are known as scroll bars. There is only vertical scroll bar.

7-Slide Sorter View

Slide sorter view is present on the left side of PowerPoint Presentation. It helps to preview the slides in thumbnails so that we can place the slides in right order by cutting and pasting them.

8- Status Bar

Status Bar exists below the power point presentation. Its main job is to display the information about the current state of the window. It displays the slide number, name of theme, zoom size etc..

3. Explain various methods to create a new presentation.

a. Creating a New Presentation with start button

When we create a presentation, the presentation opens with a blank, new presentation. We can get more advanced layout and designs by starting the PowerPoint presentation with a template.

To create a new presentation, follow these steps.

1-Click the **start** button, the **start menu** opens

2-move the mouse pointer and place over the **all programs** option

3-A list of programs appears. Click the **Microsoft office** folder icon. Various programmes under the Microsoft office appear.

4-Click the **Microsoft Office PowerPoint 2007** option

b. Creating a Presentation using Blank Presentation option

1-In the **Microsoft Office PowerPoint** window click the **office** button.

2- Click the **New** option from the drop-down menu. A new presentation dialog box appears.

3- Now Click the **Blank Presentation** option.

4- Then click on create button. Now a new Blank Presentation slide opens.

c. Creating a Presentation with Design Template

Templates are already created presentation on different topics. Here instead of starting from beginning, we can use these templates and make necessary changes to them.

1- In Microsoft Office PowerPoint window, click the **office button**.

2-A drop down menu appears. Click the **New** option. A **new presentation** dialog appears

3- Click the **Installed themes** under Templates.

4-select a template and click **create**.

d. Creating a Presentation with Auto content wizard

In this option presentations are already created with design and contents. Here we have to replace the contents.

1- In Microsoft Office PowerPoint window, click the **office button**.

2-A drop down menu appears. Click the **New** option. A **new presentation** dialog appears

3- Click the **Installed templates** under Templates.

4-select a template and click **create**.

SHORT ESSAY (PARAGRAPH) TYPE QUESTIONS (5 MARKS)

1. What is a Power Point? What are its uses?

Microsoft PowerPoint is a program, which helps the user to prepare a presentation in simple and easy process. It offers various features that help the users to make the presentation more attractive and useful. In Microsoft PowerPoint presentation we can include the text, graphics and animations, sound movie clips etc..

Uses of Power Point

1. E-Brochures

Companies are creating Visual PPT based brochures online with complete product details, costs and availability etc...

2. Uses in Academics

Academicians use PowerPoint to create presentations on various topics to present in seminars and conferences. Online tutorials are also created using PowerPoint.

3-Individual and Institutional profiles

Individual and Institutional profiles can be created in the form of presentations using PowerPoint. Various information and images can be included in the presentation.

4-Online Photo Album:

Photo album can be created using PowerPoint. Each slide will include a picture and it's descriptions.

5-Customer Education

PowerPoint can be used to educate customers in do's and don'ts of various services like banking, insurance, health, traffic, travel etc.. The presentation wills instruction to the customers.

6-Presentations on Corporate Policies

The policies of companies related to quality, HR and operation can be highlighted through Presentations.

2-What you mean by Theme? How will set a theme for a Presentation?

Themes

Themes refer to the background style of a power point presentation; they give a consistent look to the presentation. We can apply a theme to a single slide or to the entire presentation. As best practice, we may apply a theme to entire presentation to ensure that the elements of a presentation have a uniform look. Microsoft Power Point provides us with various options to apply different color themes.

We can use the following steps to add a theme.

1-In a new Microsoft Power Point Presentation, click the *design* tab.

2-in the *themes* group, click a theme option, that we want to add in our presentation. Now the selected theme is applied to all slides.

3-Now we can change the colour combination of theme. Click the down arrow button of the colors button.

4-A list of built in colors appears, we can select the desired color from the list.



5- We can also change the font theme for the presentation. For this click the font button in *themes* group, a Fonts drop down list appears. Click the font theme which we require for our presentation.

6-We can also change the background colour of a theme. For this, click on background styles in *background* group. A background styles drop down list appears. Click the background styles which we want to use for our presentation.

3-How the slides can be added and deleted in the presentation?

Adding blank slides and selecting lay out for a slide

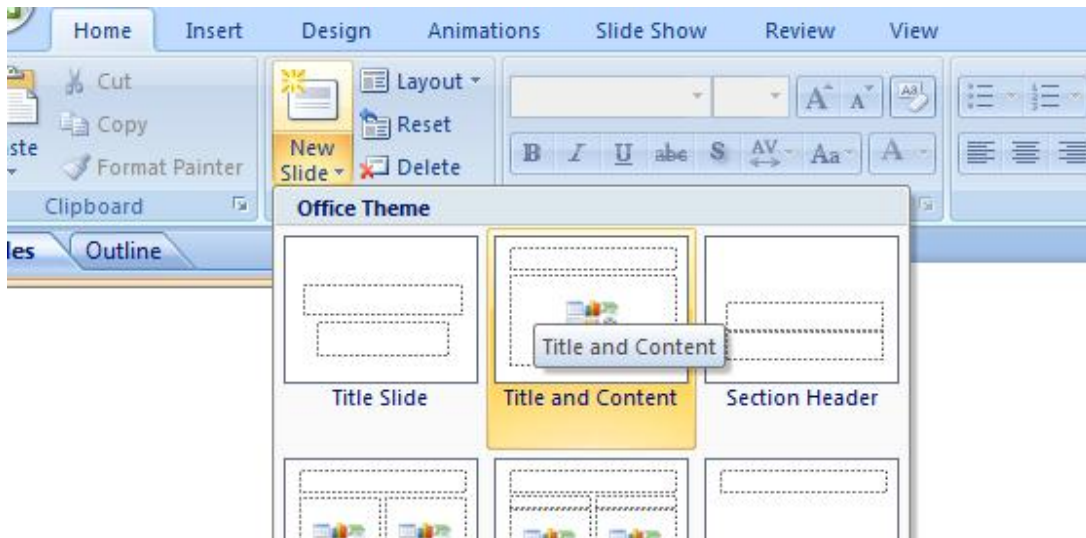
After opening the presentation, the next step is to insert slide in our presentation. Microsoft Office PowerPoint makes this task easier for us, by making one click to insert a new slide. We can also select a layout for our new slide and then insert the new slide with the selected lay out.

1-In the Microsoft Power Point Presentation window, click the **home tab**.

2-In the **slides** group, click upper part of the new slide button to add a new slide.

3-To select a layout for the **new slide**, click the down-arrow button for the new slide button. An office theme dropdown list appears.

4-Click the desired theme for the new slide, for instance we have selected the title and content layout for the new slide. A new slide appears with the selected theme.



Deleting / duplicating a slide

- To delete a slide right click on the slide sorter view and then click on delete the slide
- To duplicate the slide right click on the slide sorter view and then click on duplicate the slide

4-Explain the steps to insert a chart in PowerPoint Presentation?

Inserting Charts

Charts can be either directly inserted in a presentation or can be moved from other files like word or excel. **Steps to insert charts** are as follows.

1-In the Microsoft Power Point Presentation, click the *insert* tab.

2-In the *illustrations* group, click chart button. Insert chart dialog box appears.

3-In the Insert chart dialog box, click on the chart category. A list of charts available under the selected category appears in the right side of dialog box

4-Click the desired chart

5-Click ok button. Now the selected chart appears in the Slide. The chart displays some values automatically generated by MS Excel. If we need to change the data, we can do it by changing it in Excel sheet.

5-Explain the steps to insert a Movie in PowerPoint Presentation?

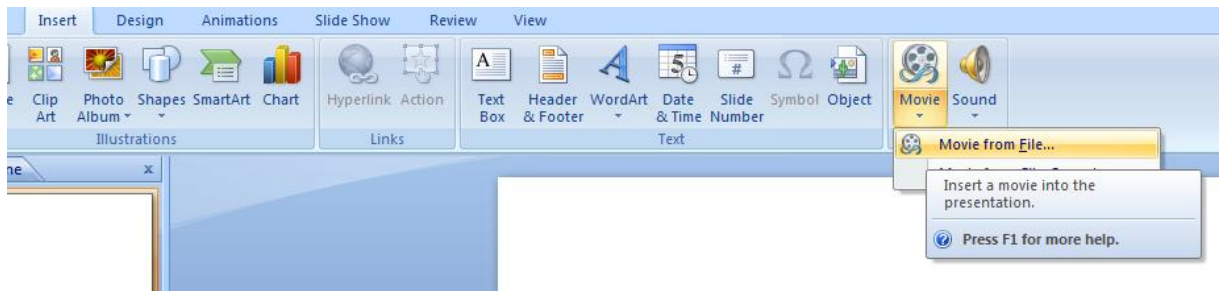
Inserting a Movie

1-In the Microsoft Power Point Presentation, select the slide where you want to add the movie

2-Click the *insert* tab

3-In the *media clips* group, click on the down arrow button of the movie button

4-After clicking the movie option, a drop-down list appears. Click the movie from file option



5-An insert Movie dialog box opens. Use the navigation pane and click on the location where movie file is located

6-Click the file you want to insert. The name of the selected file appears in the text box beside the file name option.

7- Click the ok button

8-A Microsoft Office PowerPoint dialog box appears. Now Microsoft Office PowerPoint asks you how you want the movie to start in the slide show. Click automatically button to start automatically when the slide comes in presentation. Or click when clicked to avoid automatic start. In this case movie starts when we click on it.

9-After clicking anyone of two options the movie file appears on the slide. When we show our presentation in slide show view, the movie starts running automatically. (If automatically is clicked, other we have to click on movie to start it.)

6-Explain the steps to insert a audio file in PowerPoint Presentation?

Inserting an Audio

1-In the Microsoft Power Point Presentation, select the slide where you want to add the Audio

2-Click the *insert* tab

3-In the *media clips* group, click on the down arrow button of the sound button

4-After clicking the sound option, a drop-down list appears. Click the sound from file option

5-An insert sound dialog box opens. Use the navigation pane and click on the location where sound file is located

6-Click the file you want to insert. The name of the selected file appears in the text box beside the file name option.

7- Click the ok button

8-A Microsoft Office PowerPoint dialog box appears. Now Microsoft Office PowerPoint asks you how you want the sound to start in the slide show. Click automatically button to start automatically when the slide comes in presentation. Or click when clicked to avoid automatic start. In this case Audio starts when we click on it.

9-After clicking anyone of two options the Audio appears on the slide. When we put our presentation in slide show view the audio starts running automatically. (If automatically is clicked, otherwise we have to click on movie to start it.)

7-Explain how will you add Transition Effects to Slides

Adding Transition Effects to Slides

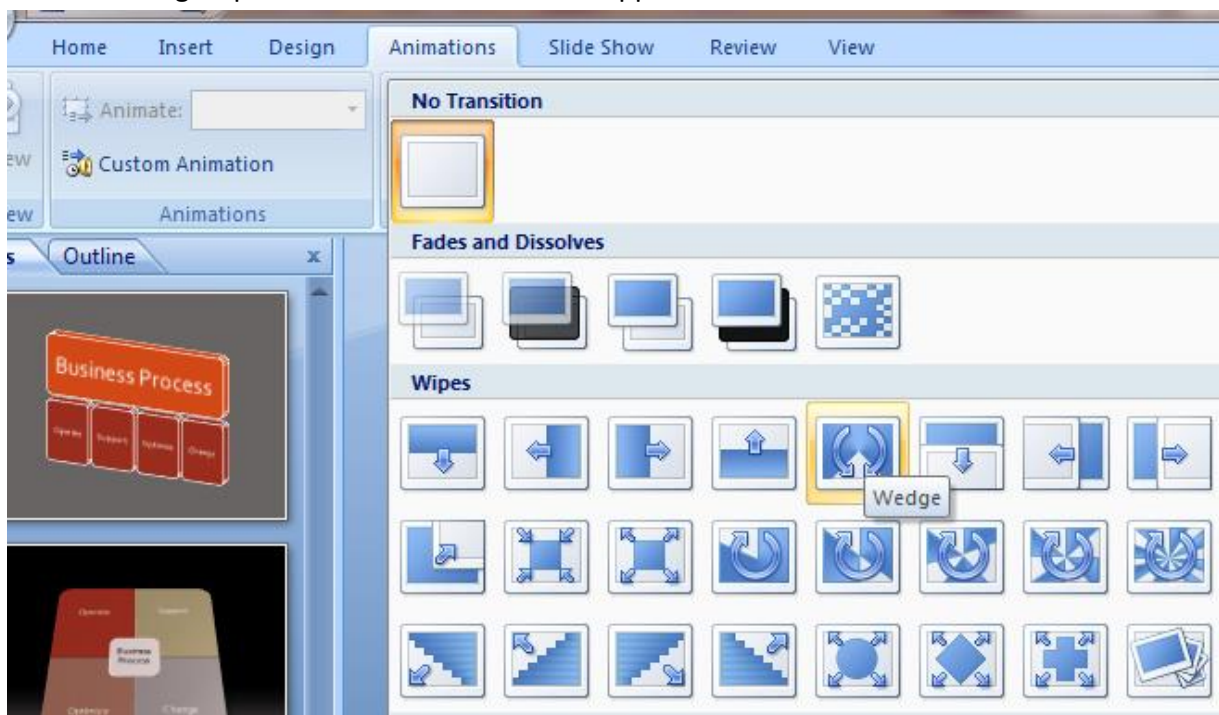
Transition is a way to add variety and style to your presentation. A slide transition is the visual motions as one slide switches to another. Microsoft Office PowerPoint has many different slide transition options to enhance slide show. We can control the speed of each transition slide, and we can also add sounds. Steps to add transition are as follows

1-In the Microsoft Office PowerPoint Presentation, select the slide where you want to add the transition effect.

2-Click the *animation* tab

3-In the transition to this *slide* group, click the more group.

4-A drop down list appears with various options of transition effects. Click the desired transition effect for your slide. Now the transition is applied to the slide. A star mark appears beside the slide in *slides* group to indicate the transition is applied.



5-See the presentation in slide show to check the transition effect

6-We can control the transition speed by selecting fast, medium, or slow in transition speed button.

8-Explain how Animation is added in slides

Adding Animation in slides

Microsoft Office PowerPoint provides us with animation features to give motion to the Microsoft Office PowerPoint Presentation. By adding the animation in the PowerPoint Presentation, the

objects in the presentation become animated in the slide show. Animation gives more emphasis to our presentation. The steps to add animations to the objects in a slide are as follows.

1-In the Microsoft Office PowerPoint Presentation, click on object inside the slide where you want add the animation.

2-Click the *animation* tab

3-In the *animations* group click the down arrow button, beside the animate option.

4-A drop down menu appears. Click the desired animation option, for example if we have selected fade, then we have two options. We can add animation to all text at once or to each paragraph separately. In second case each paragraph will be shown with animation by a click on down arrow.

5-The selected animation is applied to the slide. See your presentation in the slide show view and watch the animation effect.



SHORT ANSWER TYPE QUESTIONS (MARKS 2)

1-What are the advantages of PowerPoint Presentation.

Advantages of PowerPoint Presentation

- 1- PowerPoint helps to organize and structure our presentation.
- 2- It helps to create a professional and consistent format.
- 3- It provides an illustrative background for the content of your presentation.
- 4- Animation and transition effects give the presentation greater visual impact.

2-What you mean by PowerPoint template

PowerPoint template is already created pattern or blue print of a presentation. Templates can contain layouts, theme effects, theme fonts, theme colours, background styles, and even content.

These templates can be accessed by clicking Office button > New > Installed templates. You can create your own custom templates and store them, reuse them, and share them with others.

3- What you mean by slide sorter view

Slide sorter view is present on the left side of PowerPoint Presentation. It helps to preview the slides in thumbnails. We can use this to add, delete, duplicate, cut and paste the slides. This will help us to place the slides in right order.

4- Explain how will you duplicate a slide

To duplicate the slide right click on the slide sorter view and then click on duplicate the slide

5- Explain how you will delete a slide

To delete a slide right click on the slide sorter view and then click on delete the slide

6- Explain how you will insert text through place holder

The steps to insert text through place holder

1- In the Microsoft Power Point Presentation, click the *home* tab

2- Click the upper part of the new slide button. The slide appears with placeholders.

3- Click the placeholder and start writing the text.

7- Explain how you will format the text in slides

Formatting the text

We can format the text in presentation to make our text more readable and more attractive by changing text font, font colour, size, and style.

1- In the Microsoft Power Point Presentation select the text you want to format.

2- Click the *home* tab

3- In the *font* Group click the dialog box launcher

4- A font dialog box appears

5- There we can select desired text font, colour, style, and font size.

8- Explain the steps to insert a picture

Inserting a Picture

1- In the Microsoft Power Point Presentation, click the *insert* tab

2- In the *Illustrations* group, click the picture button

3- An Insert Picture dialog box appears, from the navigation window, click the location where images are located.

4- After selecting the location, pictures appear in the dialog box. Click the picture you want to insert

5- Click the insert button to insert the picture. The selected picture appears on the slide.

6- Click outside of the picture to complete the image work.

9- What you mean by transition effect. A slide transition is the visual motion appearing as one slide switches to another. Microsoft Office PowerPoint has many different slide transitions option to enhance slide show. We can control the speed of each transition slide, and we can also add sounds.

10- Explain how the slide show can be started?

To start the slides show click on *slide show* tab and then click on *from beginning* under *start slide show*. Now the slide show starts from the first slide itself.

MODULE III

DATA ANALYSIS

Objectives of the module

- 1.To explain the basics of Excel.
- 2.To familiarize the steps to insert and format charts in Excel.
- 3.To describe various data manipulation methods.
4. To explain the estimation of descriptive statistics, correlation and regression in excel.
- 5.To give a brief account of applications of excel in economic and business analysis.

Terms and concepts discussed:

- **Spreadsheet:** is a simple worksheet consisting of rows and columns in which any data can be entered. Spread sheets are used for doing various tasks, such as performing mathematical and statistical calculations, creating graphs and charts and creating economic and financial reports.
- **Excel environment:** Excel is the world's most widely used spread sheet program. Excel is so popular because of its flexibility, efficiency and easiness in performing numerical calculations and creating tables, charts and graphs. The look of Excel 2007 is very different from any of the previous versions. The menu bar and tool user interface has been removed and replaced with a new tab and ribbon interface.
- **Cell and cell Address:** A spread sheet consists of cells and columns. A cell refers to the intersection of a row and column. We enter data into cell. Cell address indicates the location of each cell. A cell address is a combination of column letter and the row number. Ex: A1 is the address of the cell that is formed at the intersection of column A and row 1. Remember cell address always starts with column letter. 3B and 10A are invalid cell address.
- **Formulas:** In an excel spreadsheet; you can carry out any calculations by using a formula. Formulas are self defined instructions for performing calculations. We can insert any formula in a cell to do a mathematical or analytical operation on the cell data and get the desired output.
- **Functions:** In Excel calculations also can be done using various functions. Formulas built-in into a spreadsheet are called functions. Functions are predefined formulas that come with excel to perform various mathematical and statistical calculations. Example: AVERAGE, COVAR, CORREL are the functions for calculating average, covariance and correlation respectively.

- **Charts and Graphs:** Data also can be presented in the form of charts or graphs. A chart is visual representation of numeric values. Charts are often used to compare the data or to show the relationship between the given quantities. There are various types of charts such as line charts, column charts, pie charts etc.. The important thing is to select a chart type that is suitable to the given data.
- **Data Analysis ToolPak:** Data analysis toolPak is included in excel as an add-in options and it can be used to estimate summary or descriptive statistics, correlation, and regression. This is the easiest method for estimation. Here we need not type the function name separately. We have to specify the input range and output range only. Calculation will be done automatically. Firstly we have to plug in the data analysis toolpak from excel add in options. Once it is plugged in we can easily estimate all descriptive statistics together. We can also do the correlation and regression analysis.
- **Linear and non-linear Trend Lines:** Trend Lines are simple forecasting tools. Time series forecasting refers to predicting the future values based on the past values which is measured regularly over time. Excel helps to estimate identify trends in economic variables like GDP, Public Expenditure etc. Excel provides the options to estimate Linear trend line and Non-Linear trend lines like quadratic, cubic and exponential.

QUESTION BANK ESSAY QUESTIONS (12 MARKS)

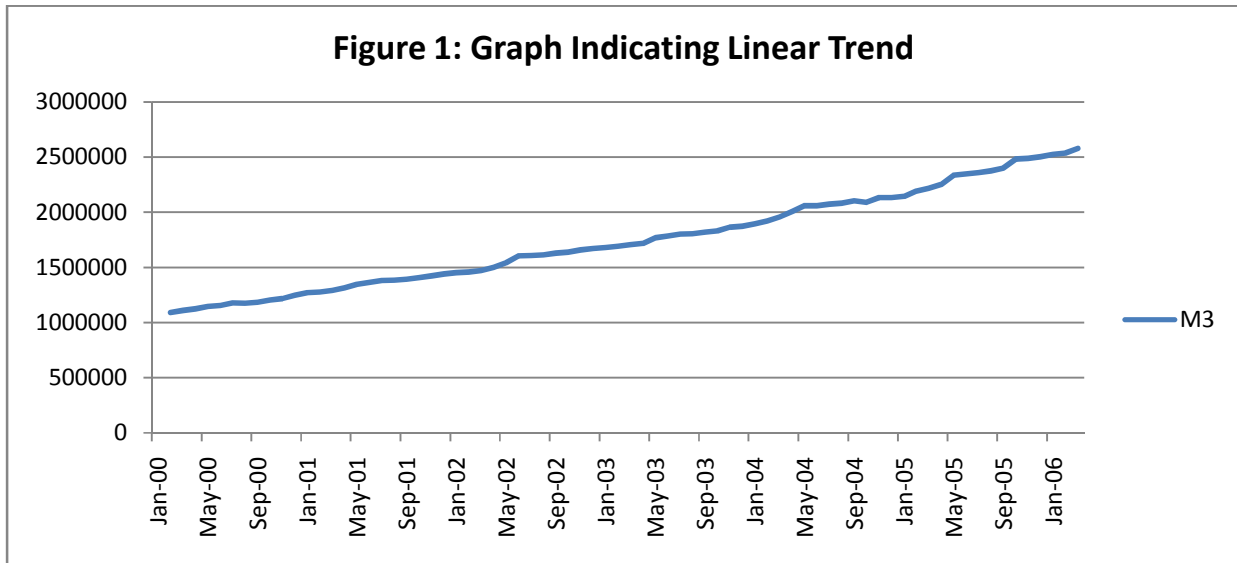
1. Explain How MS Excel is used to estimate trend Lines.

Estimation of Linear and non-linear Trend Lines

Trend Lines are simple forecasting tools. Time series forecasting refers to predicting the future values based on the past values which is measured regularly over time. Excel helps to estimate identify trends in economic variables like GDP, Public Expenditure etc. The line plot will show the behavior of a data over the past years, and one can easily identify whether any clear trend is there in the data series. Once we identify the trend the same trend can be projected into future to forecast the values. Trend can be either increasing or decreasing. Here the observed series is a function of time. Thus, time comes as independent or explanatory variable in trend models. The pattern showing the trend may be linear or nonlinear.

Linear Trend Line

If the points of line graph showing the behavior of data in the past form roughly a straight line, then we can conclude that there is linear trend.



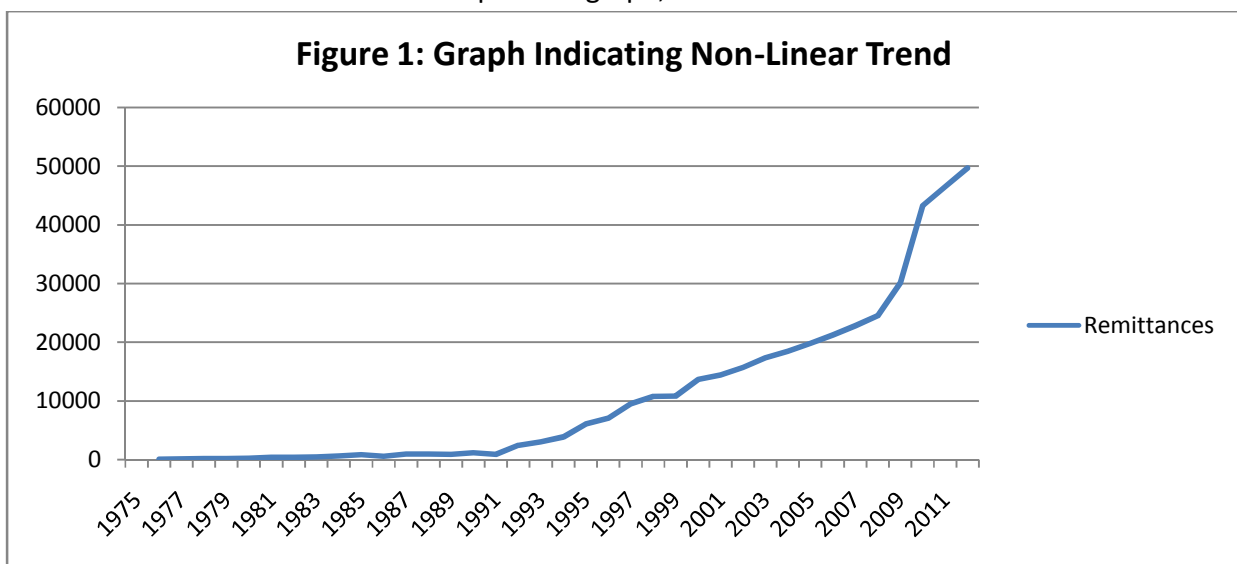
The linear trend line can be specified as

$$Y = a + bTime$$

This is a linear trend equation where we have 'Y' is dependent variable, that is the economic variable on which we estimating the trend line. Time is independent variable, which is measured as a dummy, that means it takes the value of '1' for the first year of the series and '2' for the second year and so on for remaining years till the end of the series. In case of linear trend the values of the variable changes at a constant rate.

Non-Linear Trend Line

Sometimes we have curve shaped line graph, then the trend is nonlinear.



In such cases, applicable options are Exponential trend model, Quadratic trend model and Cubic trend model. Quadratic trend model is polynomial function of order 2 and cubic trend model is polynomial function of order 3.

Exponential trend model can be specified as

$$Y = a_0 e^{a_1 \text{Time}}$$

Quadratic trend model can be specified as

$$Y = a_0 + a_1 \text{Time} + a_2 \text{Time}^2$$

Cubic trend model can be specified as

$$Y = a_0 + a_1 \text{Time} + a_2 \text{Time}^2 + a_3 \text{Time}^3$$

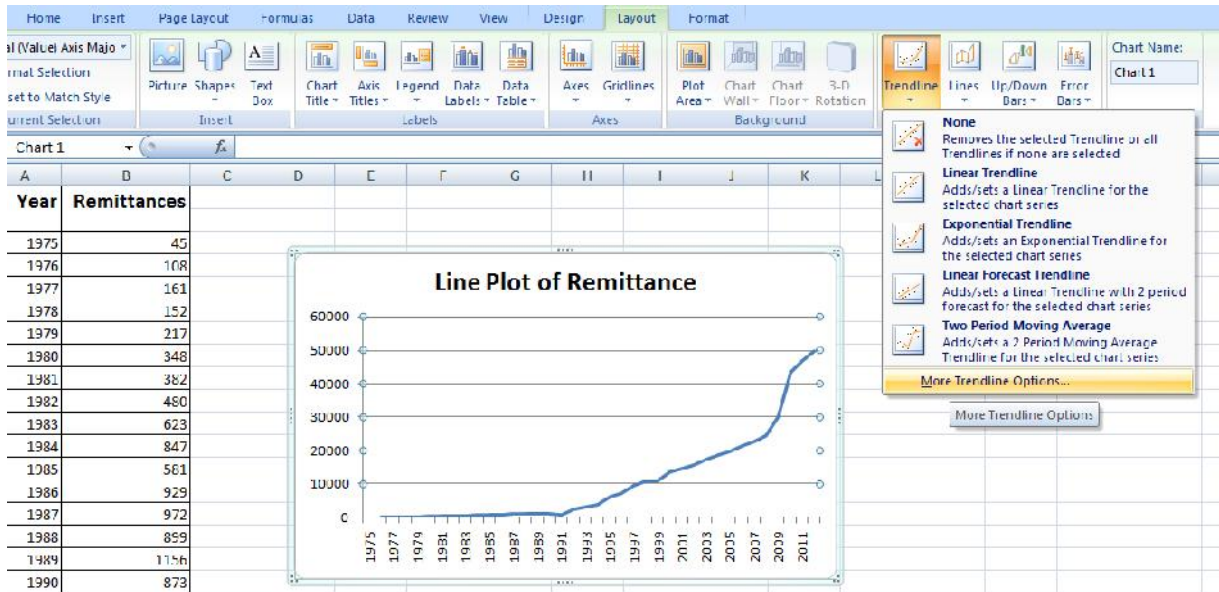
Selection Criteria

Now the basic question is which trend line we have to select among the four. Excel provides a model selection criteria, R^2 which helps us to identify the best trend line. R^2 is a measure of goodness of fit. It shows the explanatory power of a model, the proportion of changes in the dependent variable (in our case it is Economic variable) explained by the explanatory variable (in our case it is time). The value of R^2 ranges between 0 and 1. If the R^2 value is 0.7 then it is believed that 70% of changes in dependent variable (economic variable) is explained by independent variable (time). **Thus, the trend line with highest R^2 is considered as the best one. Thus usually we select the trend line which has the highest R^2 Value.**

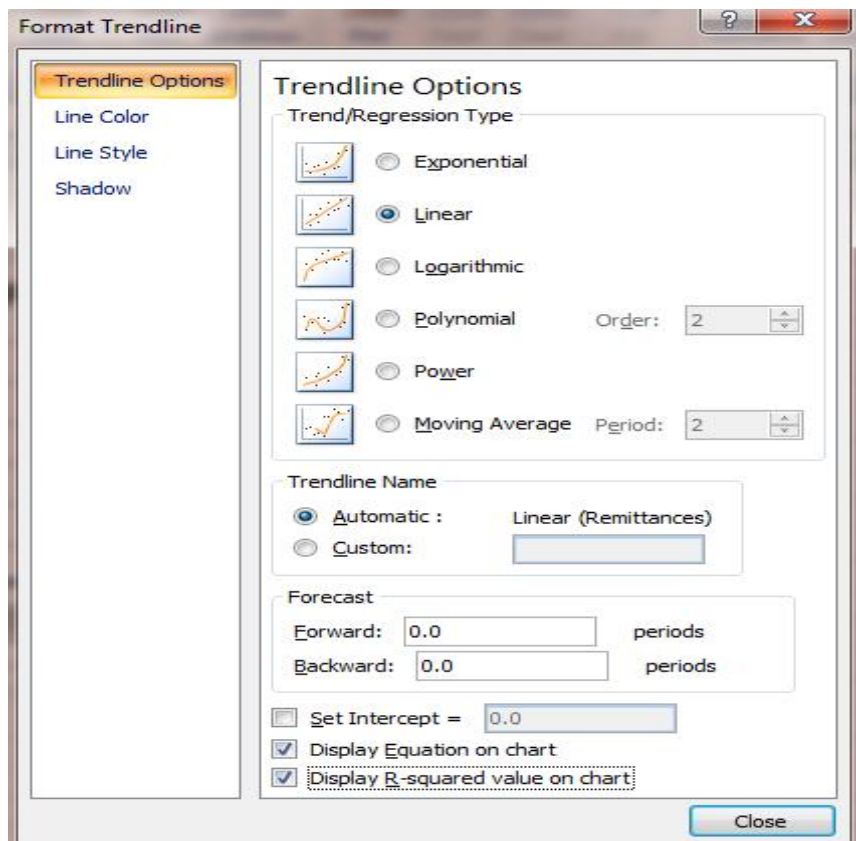
STEPS TO FIT TREND LINE IN EXCEL

Here let us estimate the trend line for the variable remittance flow to Kerala. First we have to insert a line plot for the data. Then we can estimate trend line using layout tab. Detailed Steps to insert the trend line are given below.

1. Select the data.
2. Then Click on insert tab.
3. Then select simple line graph under charts group.
4. Now line chart appears. Now edit the horizontal axis by inserting the year.
5. Click on line plot
6. Click on layout tab
7. Click on trend lines in Analysis group.
8. A drop down menu appears. There click on more trend line options.

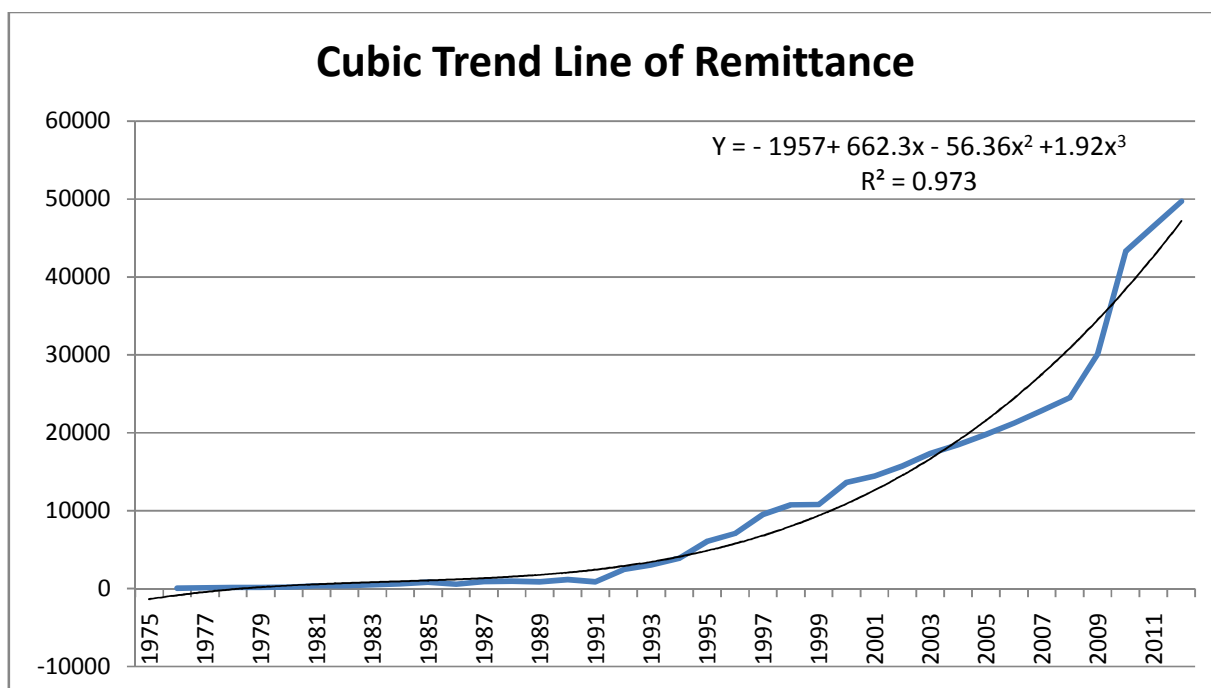


9. Now Format trend line dialog box appears with various options.
10. For linear trend, select linear trend line.
11. To display equation on chart, select display equation on chart.
12. To display R^2 value on chart, select display R-squared value on chart.



13. Then close the dialog box, now the fitted linear trend line appears with equation and R^2 value.
14. Similarly, insert other three non-linear trend lines with equations and R^2 values separately.
15. For exponential trend line select exponential trend line. For quadratic trend line, select Polynomial and specify order as 2. Similarly, for cubic trend line, select Polynomial and specify order as 3. Select display R-squared value on chart and display equation on chart for all the three equations.
16. Now compare the R^2 value of all four estimated equations, and select the trend equation with highest R^2 value. In the case of remittance cubic trend line has the highest R^2 value (0.97). Thus we select cubic trend line for remittance variable, which displayed below.

We can also forecast values for future years by substituting respective values for time in the selected equation.



2. Explain How MS Excel is used to estimate regression.

Regression Analysis using Data Analysis ToolPak in MS Excel

Regression analysis is also used to study the relationship between variables. The basic aim of regression is to predict the mean value of dependent variable given the values of independent variable. Unlike correlation, in regression analysis we have to distinguish between dependent and independent variables. The simple regression line is specified as $Y = a + bx$ and Ordinary Least Square Method is used to estimate the values intercept **a** and slope **b**. The slope of regression

line (b) would explain the amount of change in Y (dependent variable) resulting from one unit change in X (independent variable). And the value of intercept (a) explains the value of Y when the value of X is zero.

Firstly we have to plug in the data analysis toolpak from excel add in options. The steps are given below.

1. To plug in data analysis tool pack, click on MS office button and select excel options
2. From excel options select Add-Ins
3. From Add-Ins select Analysis ToolPak
4. Click ok and follow the subsequent steps to get Data Analysis ToolPak installed.
5. Now click on data tab and select Data Analysis button.
6. Now data analysis dialog box will appear with a list of analysis tools.
7. From analysis tools, select **Regression** and click ok.
8. If Regression is selected then Regression dialog box will appear.
9. There we need to give input range for Y (dependent) and X (independent) variables by selecting respective data range in excel sheet.

A	B	C	D	E	F	G	H	I	J	K
	Income	Consumption								
1982	4620.3	3081.5								
1983	4803.7	3240.6								
1984	5140.1	3407.6								
1985	5323.5	3566.5								
1986	5487.7	3708.7								
1987	5649.5	3822.3								
1988	5865.2	3972.7								
1989	6062	4064.6								
1990	6136.3	4132.2								
1991	6079.4	4105.8								
1992	6244.4	4219.8								
1993	6389.6	4343.6								
1994	6610.7	4486								
1995	6742.1	4595.3								
1996	6928.4	4714.1								

10. We also have to give output range where we want the result to appear, and this must be blank cells. We can specify the output range in the existing sheet, or we can select the new worksheet for the results to appear.

11. Now click ok. The results with the values of intercept, slope and other statistics will appear in the output range.

3. Explain how MS Excel is used to find Descriptive and Summary Statistics.

Estimation of Descriptive and Summary Statistics

Descriptive statistics or Summary Statistics include measures of central tendencies like mean, median, mode, and measures of dispersion like range, standard deviation, variance, and also kurtosis and skewness. In general there are two methods to estimate Descriptive statistics in excel.

1-Using functions

Here we have to estimate each measure separately. There are three ways to perform calculations using functions. First one is to write proper syntax including the function and range of values in the cell where we want the result to appear. Secondly we can use insert functions button (*fx*) beside the formula bar and thirdly we can use Function Library under Formula Tab.

a-Follow the Syntax

Here we need to write proper syntax for all functions directly in the cell where the final result will be shown. While using functions to perform an operation, there are certain compulsory steps to be followed; otherwise they cause an error in the result. Compulsory steps include syntax of the function, name by which function is recognized or called in Microsoft excel. If a function is not written in proper format then the function will not work properly. Steps of using syntax to perform a calculation are as follows with an example of standard deviation function.

1-First of all, click your mouse in the cell in which you want your result to appear.

2-Now write proper syntax for the function. A function must begin with an equal sign (=) followed by the function's name and its arguments (range of values). The function name tells excel what calculations to perform. The arguments or the range of values are entered in a parenthesis by selecting the cell references. For example if we have to calculate standard deviation, it can be written as =STDEV(A1:A9). Once we start entering the name of the function many functions will appear on the drop down arrow of the cell. We can also select right name from them instead of typing.

3-After writing the complete syntax press enter, result will appear in the cell.

b-Using Insert Function Option

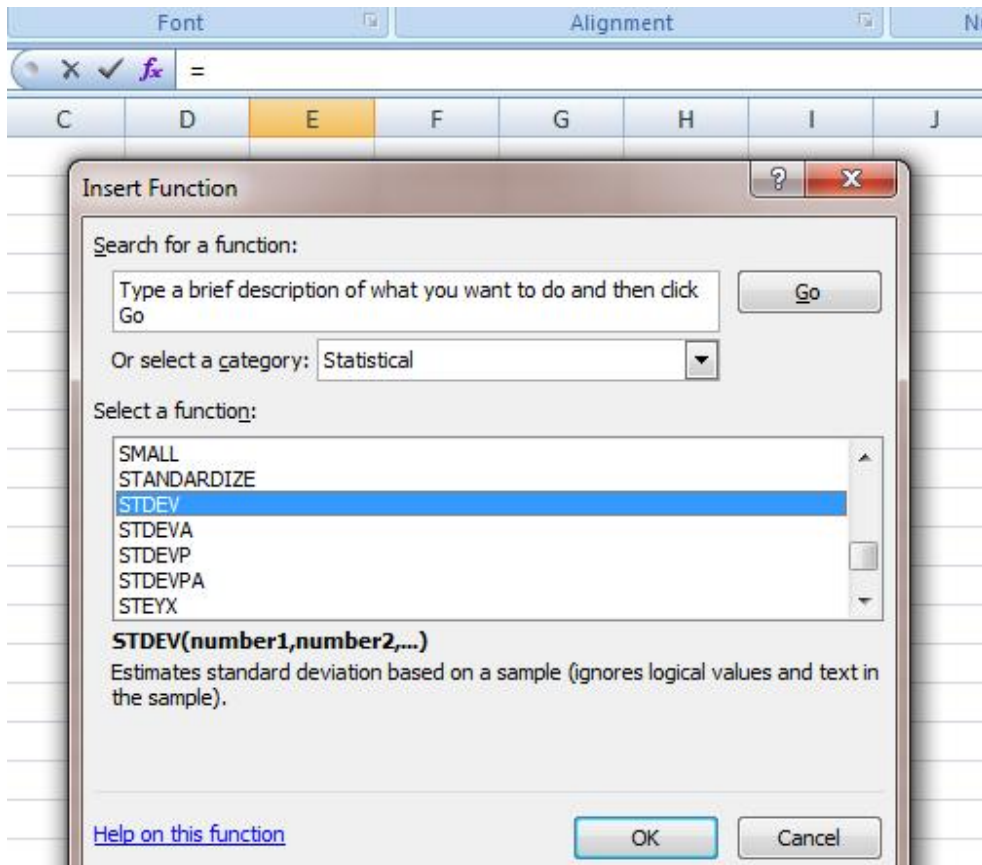
It is very difficult to remember the syntax of each and every function present in Microsoft excel. Besides functions, Excel provides insert function Option. The steps are given below.

1-Firstly, click your mouse in the cell in which you want your result to appear.

2- We have to get Insert Function option by using one of following two options. Firstly, click on the insert functions button (*fx*) beside the formula bar. Insert function dialog box will appear. Now insert function dialog box will appear.

3-Under select the category, we have a list of subcategory like financial, statistical, mathematical and trigonometry etc.. Each formula is sub divided into relevant sub categories. To select a function firstly, we have to select relevant sub category under 'select a category' option and then

we have to select particular function from 'select a function' option. For example if we have to calculate standard deviation we have to select 'Statistical' under select a sub category and select 'STDEV' under select a function.



4 -Now function argument dialog box will appear. Now we have to give the range of values or some values. If we have continuous data we can insert this data by clicking on function argument 'number 1' and by giving the range of values. (B2:B17). Or if we have some discontinuous values we can insert them separately by entering them to function arguments 'number 1', 'number 2', 'number 3' etc..

5- After entering range of values click on ok, result will appear on the cell.

c- Using Function Library

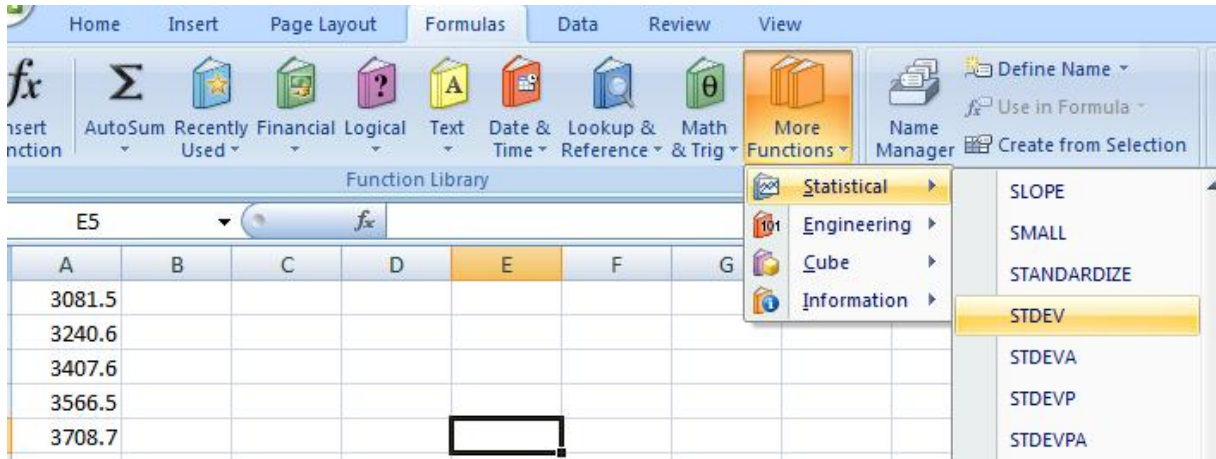
Under Formulas Tab we have a group named 'Function Library' which offers different types of sub categories of functions like financial, logical, and mathematical and trigonometry functions. When you scroll the mouse over a function of a category excel will have a small dialog box that explains the purpose of each function. Thus we can select functions based on our purpose from 'Function Library' for performing different calculations. The steps are given below.

1-Firstly, click your mouse in the cell in which you want your result to appear.

2-Click on Formula Tab and select a particular function form a sub category. For example 'STDEV' under Statistical.

3-Once we select a function (STDEV) from subcategory then the function arguments dialog box will appear. Now enter the cell references (A3:A15) or range of values.

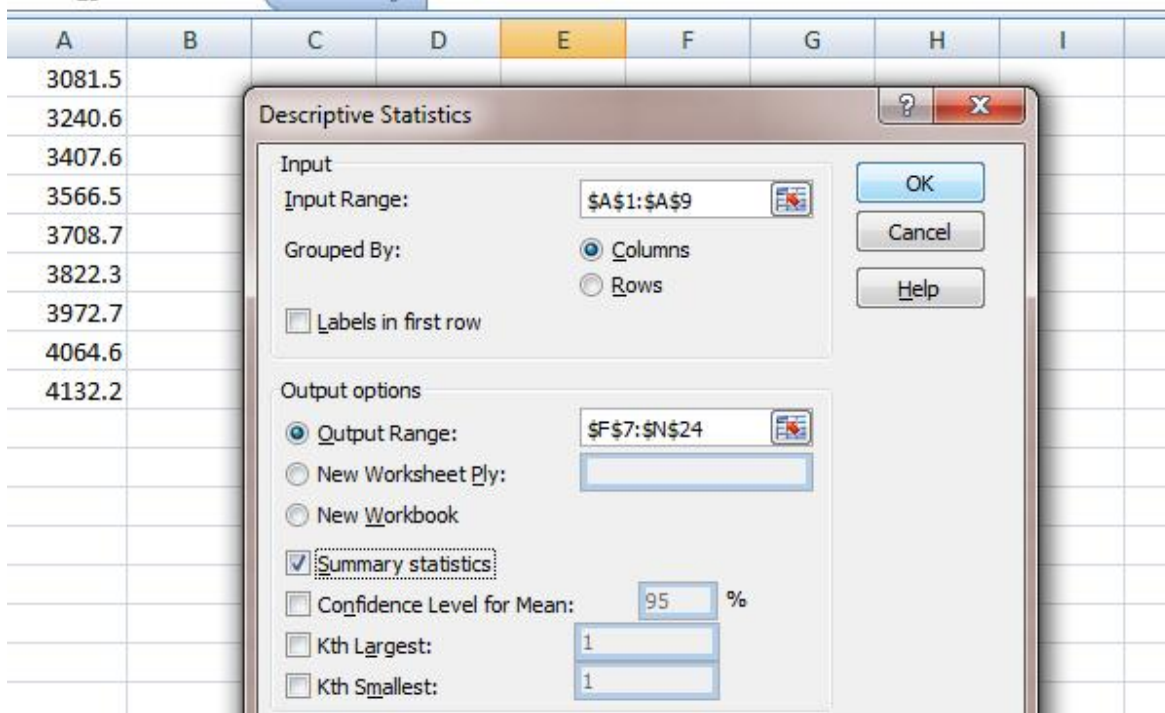
4-After entering range of values click on ok, result will appear on the cell.



2- Using data analysis toolpak

In data tab using analysis toolpak, we can estimate all this statistics for a data set. Once data analysis tool package is added to data tab, we can use this easily instead of writing functions. To use this click on data tab, click on data analysis, select tool, and then give input data range and output range. Then all the measures will be estimated in single step. Firstly we have to plug in the data analysis toolpak from excel add in options. The steps are given below.

1. To plug in data analysis tool pack, click on MS office button and select excel options
2. From excel options select Add-Ins
3. From Add-Ins select Analysis ToolPak
4. Click ok and follow the subsequent steps to get Data Analysis ToolPak installed.
5. Now click on data tab and select Data Analysis button.
6. Now data analysis dialog box will appear with a list of analysis tools.
7. From analysis tools, select **descriptive statistics** and click ok.
8. If descriptive statistics is selected then descriptive statistics dialog box will appear.
9. There we need to give input range by selecting respective data range in excel sheet.
10. We also have to give output range where we want the result to appear, and this must be blank cells. We can specify the output range in the existing sheet, or we can select the new worksheet for the results to appear.
11. Check summary statistics option by selecting it. Now click ok. The results will appear in the output range.



4. Explain the Applications of Excel in Economics and business analysis

Applications of Excel in Economics and business analysis

1- Excel facilitate report writing using tables and charts

Most of the economic and financial reports use tables and charts to explain changes in economic in variables. Excel facilitates report writing by helping to create tables and charts, which would show the changes in economic variables and economic situations. While line graphs show trend in a variable over time, column chart helps to understand the differences in values across categories (example, differences in sector wise growth rates for last three years), Pie charts can be used to show the contribution of different sectors to GDP.

2- Data can be entered and stored in excel

Economic data can be entered and saved in excel. Data provided by Central Statistical Organization (CSO), RBI, and National Stock Exchange (NSE) are stored in Excel format, which makes it easier for users to download and analyze the data easily by creating charts.

3- Data manipulation options helps to handle data efficiently and calculate variables.

Excel provides many data manipulation options like sorting, filtering, formulas and functions, which help a lot to handle data efficiently. Using these options we can easily edit and manage existing data. We can estimate financial variables. We can also estimate economic variables from a given data. If we have data on Net Domestic Product at factor cost (NDP_{FC}), then the Net National Product at factor cost (NNP_{FC}) or National Income can be calculated by adding Net factor

incomes from abroad to NDP_{FC} . This can be done using addition operator in Excel for one year and same formula can be copied for all other years. Similarly if we have total household income, to calculate per capita household income we can use division operator for dividing total household income by number of family members.

4- Excel helps to create product, cost and revenue curves

We can plot any economic curve if we have data for X and Y axis. Thus Excel helps to plot product curves, cost curves and revenue curves. For example we can calculate and plot Average Product and Marginal Product if we have data for Total product and Number of workers.

5- Excel helps to estimate trend lines and forecast values of economic variables

Excel helps to identify and estimate trends in economic variables like GDP, Public Expenditure etc. The line plot will show the behavior of a data over the past years, and one can easily identify whether any clear trend is there in the data series. Once we identify the trend the same trend can be projected into future to forecast the values. We can use Linear and Non-Linear Trend Lines for forecasting.

6- Excel helps to estimate descriptive statistics

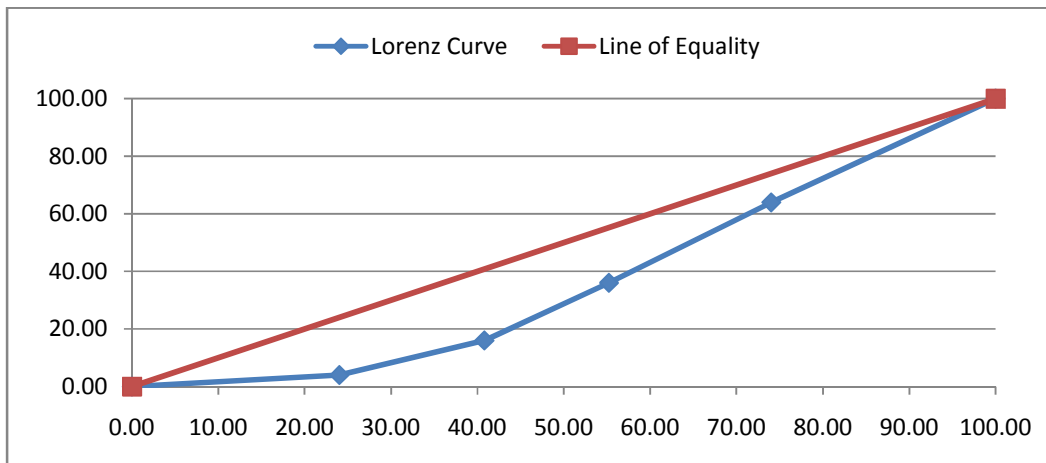
Descriptive statistics include measures of central tendencies like mean, median, mode, and measures of dispersion like range, standard deviation, variance, and also kurtosis and skewness. In general there are two methods to estimate Descriptive statistics in excel.

a-Using functions – Here we have estimate each measure separately (for detailed discussion see previous section on Functions)

b- Using data analysis toolpak. - In data tab using analysis toolpak, we can estimate all this statistics for a data set. Once data analysis tool package is added to data tab, we can use this easily instead of writing functions. To use this click on data tab, click on data analysis, select tool, and then give input data range and output range. Then all the measures will be estimated in single step.

7-Income inequality can be studied using Lorenz curve

Lorenz curve can be fitted using Excel to study income inequality among different sections of the society.



8-Excel helps to study the relationship between variables

Relationship between variables can be studied using X Y scatter plot, correlation and regression. Scatter plot gives a rough idea about the relationship between two variables. If the points on a scatter plot are clustered around a straight line then there is some relationship between the variables. The degree and direction of (positive or negative) association can be studied in detail using Correlation and regression with the help of data analysis toolpak. The correlation coefficient would tell us the strength and direction of relationship. If value is closer to +1 it means strong positive relationship and if it is closer to -1, that means strong negative relationship. If the value is closer to '0', then there is no clear relationship. If we run regression, the slope of regression line (b) would explain the amount of change in Y (dependent variable) resulting from one unit change in X (independent variable). And the value of intercept (a) explains the value of Y when the value of X is zero.

9- Excel helps to estimate financial variables.

Function in excel can be used to estimate financial variables like Internal Rate of Return, Net Present value, future Value etc...

SHORT ESSAY (PARAGRAPH) TYPE QUESTIONS (5 MARKS)

1. Explain the features of excel


Features of excel 2007 or essential elements of spread sheet

Working in Excel requires some knowledge about basics of a spread sheet.

1-Cell and cell Address

A spread sheet consists of cells and columns. A **cell** refers to the intersection of a row and column. We enter data into cell. **Cell address** indicates the location of each cell. A cell address is a combination of column letter and the row number. Ex: **A1** is the address of the cell that is formed at the intersection of column A and row 1. Remember cell address always starts with column letter. 3B and 10A are invalid cell address.

2- Cell Pointer

In Excel spread sheet, a cell pointer is a bold bordered rectangular () which appears if the mouse pointer is clicked inside at any place. The cell pointer is placed on the currently active cell.

3-Values and Labels

Entries into excel can be either a value or a label. Value is a number, on which calculations are done, using formulas. When an entry starts with a digit or a sign (-,+), MS Excel considers it as a value. Label is any text entry that contains alphabet or non- numeric characters (#,&). Ex: Accounts,#4, monthly expenses. Entries containing an alphabet or letter, even if they start with a number are considered as text entries. So, 24th street is a text entry.

4-Formulas

In an excel spreadsheet, you can carry out any calculations by using a formula. Formulas are self defined instructions for performing calculations. We can insert any formula in a cell to do a mathematical or analytical operation on the cell data and get the desired output.

5-Functions

In Excel calculations also can be done using various functions. Formulas built-in into a spreadsheet are called functions. Functions are predefined formulas that come with excel to perform various mathematical and statistical calculations. Example: AVERAGE, COVAR, CORREL are the functions for calculating average, covariance and correlation respectively.

6-Data Analysis Tool Package

In Excel data analysis tool package can be added into data tab using excel options on office button and this package can be used to estimate descriptive statistics, correlation, regression etc..

7-What if analysis

What if analysis is a very useful feature of spread sheet. Using this feature, we can see that how the change in values or data of one or more cells affect the outcome of formulas in the worksheet. Example: if Rahul's marks in science are to be changed as '90' instead of '79', then using the what if analysis feature we can quickly find out what would be his total marks and how much would be the increase in the percentage.

8-Automatic Recalculations

If any data input to a computation changes Excel automatically does all recalculations. All we have to do is to just change the data and the rest is taken care of by Excel.

2. Explain various types of charts available in excel.

Charts and Graphs available in excel.

Data also can be presented in the form of charts or graphs. A chart is visual representation of numeric values. Charts are often used to compare the data or to show the relationship between the given quantities. There are various types of charts such as line charts, column charts, pie charts etc.. The important thing is to select a chart type that is suitable to the given data. **First you have to select the data for the chart and next step is to select the type of the chart given under group named charts in insert tab. Different chart types** are discussed below.

1-Column chart: Column charts are used to compare values of a variable across categories.

Example: if you want compare average income of different categories of employees. In column chart value of variable (income) is measured on vertical (Y) axis and categories are shown on horizontal axis(X). Shape of the column can be changed as cylinder, Cone or Pyramid.

2-Line charts: Line charts are useful to display trend of an economic variable over a time period.

Line charts plot continuous data and shows values corresponding to each time period. Example: The trend in Gross Domestic Product (GDP) from 1970 to 2010 can be shown by plotting a line graph of values of GDP from 1970 to 2010. GDP is measured on vertical axis(Y) and years are shown on Horizontal Axis(X). Each point on the line shows value of GDP for a particular year. To insert line chart, first we need to select the data of variable (GDP for Y axis) and insert a line graph using insert tab. Once line is created, then we can add data, here years to X axis. Right click on the X axis on the line chart, and then click on select data. 'Select data source' dialog box will appear. Under Horizontal axis (category) Axis label select edit, now select range of years and click ok. The years are added to X axis.

3-Pie Charts: A Pie Chart is used to show relative contribution or proportion of a category to total. Example: it can be used to show the proportion or percentage of different religions in total population.

4-Bar Chart: Bar chart is a column chart that has been rotated 90 degrees clockwise. It compares values across categories using horizontal bars. Values are shown on X axis and categories are shown on Y axis. It is more useful when we have too many categories and small values.

5-Area chart: Area chart is a type of chart in which an area represents a value. It is useful to show differences between several sets of data over a period of time.

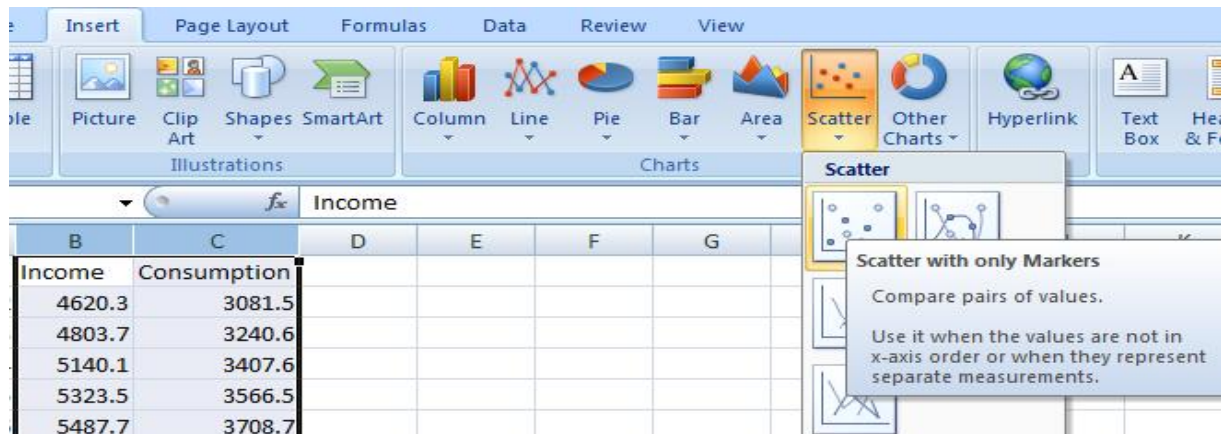
6-Scatter chart or XY chart: These charts are used to show the relationship between two variables. Example: Relationship between income and consumption expenditure can be shown using scatter plot.

3. Explain how scatter plot is created using MS Excel

Scatter chart or XY chart

These charts are used to show the relationship between two variables. Example: Relationship between income and consumption expenditure can be shown using scatter plot. To insert the scatter plot perform following steps.

- 1-First we have to select the data on income and consumption expenditure in excel
- 2-Next step is to select the insert tab.
- 3- Then select scatter under charts group.



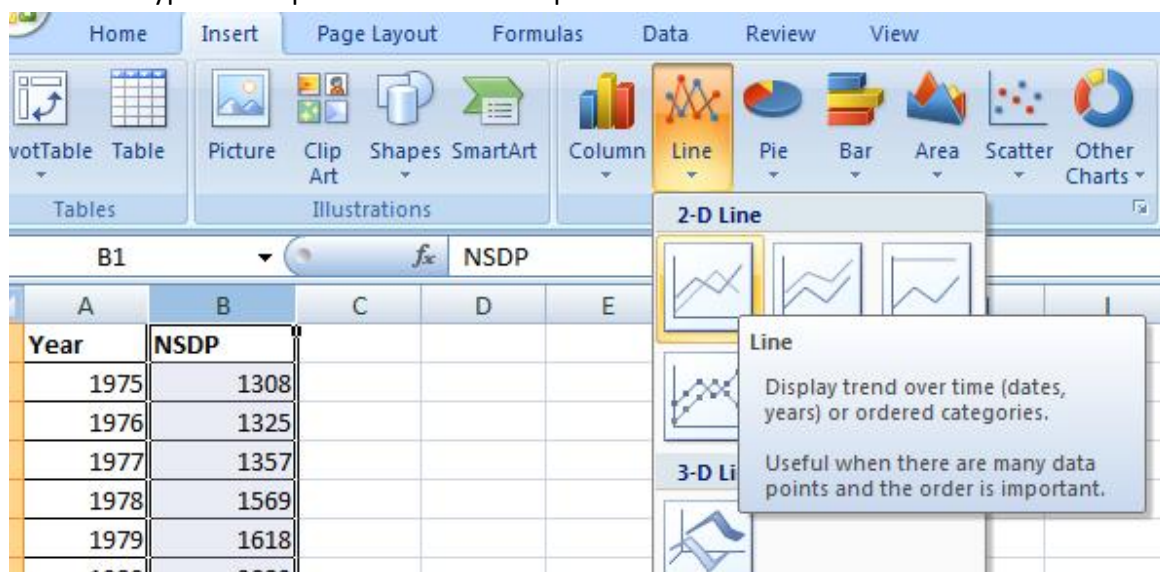
- 4- Select a type of scatter plot from available options.
- 5-Now the scatter plot will be inserted in the excel sheet.
- 6-Now Add chart title and axis titles.

4. Explain how the line plot is created using MS Excel with an example

Line charts

Line charts are useful to display trend of an economic variable over a time period. Line charts plot continuous data and shows values corresponding to each time period. Example: The trend in Net State Domestic Product (NSDP) from 1975 to 2011 can be shown by plotting a line graph of values of NSDP from 1975 to 2011. NSDP is measured on vertical axis(Y) and years are shown on Horizontal Axis(X). Each point on the line shows value of NSDP for a particular year. The steps to create line chart are given below.

- 1-First we have to select the data on NSDP for Y axis.
- 2-Next step is to select the insert tab.
- 3- Then select line under charts group.
- 4- Select a type of line plot from available options.



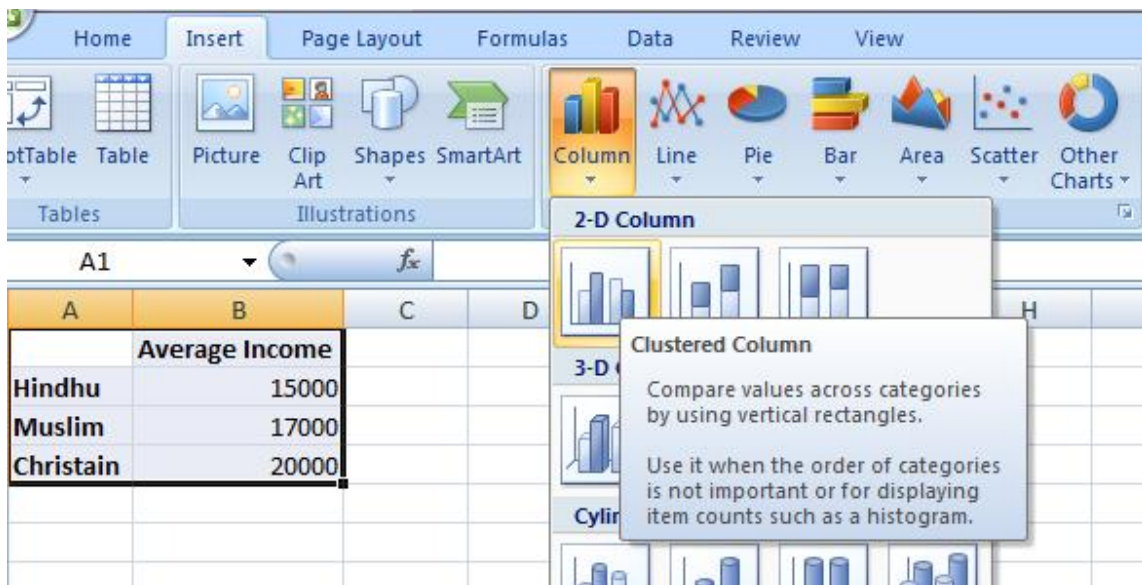
- 5-Now the line plot will be inserted in the excel sheet.
- 6-To add years to X axis, right click on the X axis on the line chart, and then click on select data.
- 7-‘Select data source’ dialog box will appear.
- 8-Under Horizontal (category) Axis label, select edit.
- 9- Now select range of years and click ok. The years are added to X axis.
- 10-Add chart title and axis titles.

5. Explain how to insert a chart in MS Excel with an Example.

Insertion of Charts and Graphs

Graphs or charts are simple tools of data analysis. Charts are easier to understand. Charts are considered as heart of data analysis. Excel provides various types of charts such as line charts, column charts, pie charts etc.. The important thing is to select a chart type that is suitable to the given data. Here we will illustrate how column chart can be inserted in excel. Column charts are used to compare values of a variable across categories. Example: if you want compare average income of different categories of employees. In column chart value of variable (income) is measured on vertical (Y) axis and categories are shown on horizontal axis(X). Steps to insert are explained below.

- 1-First we have to select the data.
- 2-Next step is to select the insert tab.
- 3- Then select column under charts group.
- 4- Select a type of column chart from available options.
- 5-Now the column chart will be inserted in the excel sheet.
- 6-Now Add chart title and axis titles.



6 Write a note on Mathematical tools available in Excel.

Excel provides several mathematical tools in the form of mathematical functions. Some important mathematical functions and their purpose are given below.

Mathematical Functions	Purpose
EXP	Returns e raised to the power of a given number
FACT	Returns factorial of a number equal to 1*2*3...Number.
FACTDOUBLE	Returns double factorial of a number
LCM	Returns the least common multiple
LN	Returns the natural logarithm of a number
LOG	Returns logarithm of a number to the base you specify
LOG10	Returns the base – 10 logarithm of a number
MDETERM	Returns matrix determinant of an array
MINVERSE	Returns the inverse matrix of the matrix stored In an array
POWER	Returns result of a number raised to a power
PRODUCT	Multiplies all the numbers given as arguments
SUBTOTAL	Returns subtotal in a list or data base
SUM	Adds all the numbers in a range of cells
SUMPRODUCT	Returns the sum of the products of corresponding ranges or arrays

7. Describe some statistical functions available in Excel.

Some important statistical functions and their purpose are given below.

Statistical Functions	Purpose
AVERAGE(data range)	To calculate Mean
MEDIAN(data range)	To calculate Median
MODE(data range)	To calculate Mode
KURT	Returns the Kurtosis of a data set
SKEW	Return the Skewness of a distribution
COUNT	Count the number of cells in arrange that contain numbers
FREQUENCY	Returns frequency distribution of a data series
PERCENTILE(data range,p/100)	To calculate P th Percentile
QUARTILE(data range, 1)	To calculate 1 st Quartile
MAX	Returns largest value in a set of values
MIN	Returns smallest value in a set of values
=MAX(data range) - MIN(data range)	To calculate Range
=QUARTILE(data range,3) - QUARTILE(data range,1)	To calculate Inter quartile Range
=VAR(data range)	To calculate variance

=STDEV(data range)	To calculate standard deviation
=COVAR(data range1, data range 2)	To calculate covariance
=CORREL(data range1, data range 2).	To calculate correlation
Simple Regression	
=INTERCEPT(y_range, x_range)	To calculate Intercept
=SLOPE(y_range, x_range)	To calculate Slope
=RSQ(y_range, x_range)	To calculate R ²

8. Describe some financial functions available in Excel.

Some important financial functions and their purpose are given below.

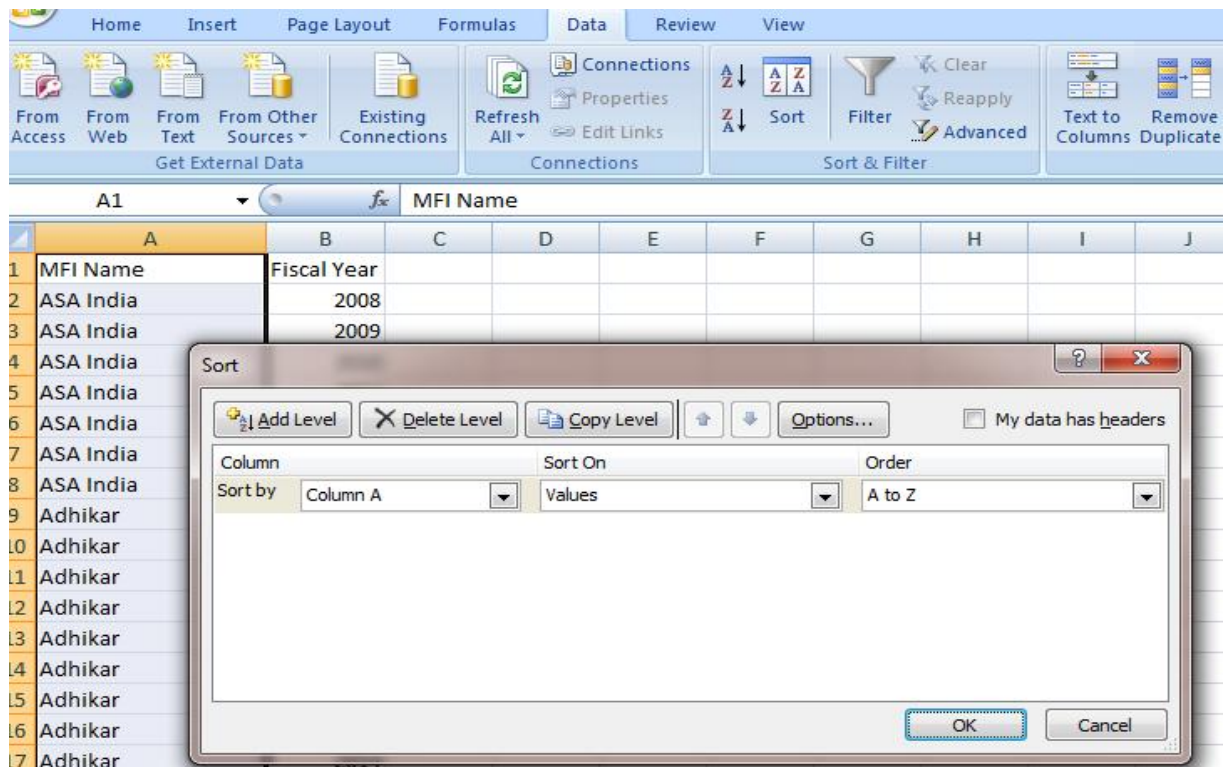
Financial Functions	Purpose
NPV	Returns the Net Present Value of an Investment based on discount rate, series of future payments and income
FV	Returns the future value of an Investment based on periodic, constant payments and constant interest rate.
Effect	Returns the Effective Annual Interest rate
FV Schedule	Returns Future Value of an Initial Principal after applying a series of compound interest rates
INTRATE	Returns the interest rate for a fully invested security.
IRR	Returns the Internal Rate of Return for a series of cash flows
PV	Returns the present value of an Investment: that is the total amount that a series of future payments worth now.

9. Explain the steps to sort the data in excel

Sorting Data

Sorting is used to sort the data and display values in ascending or descending form. Sorting a table in excel worksheet rearranges the rows based on the content of a particular column. Sometimes you want to sort a table to put names in alphabetical order by some other field present in the worksheet. In that case sorting is used to sort the data. The steps to sort the data are following.

1. Select the data from the worksheet.
2. Click the **data** tab.
3. Under **sort & filter** group, click on **sort** button
4. Now a **Sort** dialog box appears
5. Choose the **column** that you want to sort first
6. Then select the category you want to sort on Ex: Values
7. Then Give the order for sorting ex: A to Z



10. Explain the steps to filter the data in excel

Filtering Data

Filtering option helps to filter the data on the basis of criteria specified by the user and displays only those values which satisfy the criteria specified by the user. Filtering a data refers to displaying only the rows that meet certain conditions and the remaining rows are hidden. Filtering is used when we want to show only a small amount of data out of a large amount of data.

The steps to filter the data are following.

1. Select the column in which you want to filter the data.
2. Click the **data** tab.
3. Under **sort & filter** group, click on filter button.
4. Now a down arrow button on the selected cell. Click on the down arrow.
5. A drop down list appears with values in the selected cell.
6. From the drop down list select the value or number by which we want to filter the data.
7. Then click ok. Now the data will be filtered by the selected value or number.

The screenshot shows an Excel spreadsheet with the following data:

A	B	C	D	E	F	G	H	I	J	K	L	M
Average Age of Working Members	Average Years of Education Working Members		Monthly Family Income from Employment	Number of Working Members in a Family	Total Annual family Income	Monthly Food Expenditure	Monthly Expenditure on Clothing	Monthly Expenditure on Entertainment	Number of Total Members in a Family	Annual Total Saving	Annual total investment	Annual Income from Agriculture
29.3	13		30000	3	417000					43100	43105	57000
42	8		8000	1	111000					21000	0	15000
42	8		13000	1	186000					15200	0	30000
39	9		15000	1	180000					19000	0	0
27.6	9.6		43000	3	581000					19200	50000	65000
44	11		20000	2	256000					18000	18005	16000
42	12.5		14000	2	168000					18000	50000	0
59	17		17000	0	204000					28000	0	0
30.7	2.5		15000	4	180000					0	0	0
36	10.6		16000	3	192000					10800	0	0
42	8		50000	1	600000					22000	400000	0
49	7		6000	1	130000					12000	0	58000

The 'Filter' dropdown menu is open over column J, showing options: Sort Smallest to Largest, Sort Largest to Smallest, Sort by Color, Clear Filter From "Number of Total ...", Filter by Color, and Number Filters. The 'Number Filters' section shows a list of values: (Select All), 2, 3, 4 (checked), 5, and 6.

11. What you mean by formula syntax.

Formula syntax is the structure or order of the elements of a formula. The major elements of a formula are equal sign, cell reference or operands and operator. All formulas begin with an equal sign followed by operands and operator. **Operands** can be values that take the form a number (20,100) or a cell reference. **A cell reference (Reference Operators)** refers to a single cell or a group of cells on a worksheet and tells excel where to look for values that we want to use in a formula.

12. What are the different types of cell addresses

There are three types of types of Cell References ((Reference Operators);

1-Individual cell refers to single cell (A10).

2-Range refers to all cells between two reference cells including them. Range consists of two cell addresses separated by a colon. Example: A1:A4 includes cells A1,A2,A3 and A4. Range is useful if we want to use all values in a row or column for calculation.

3-Union refers to two or more cell addresses separated by comma. Example: 'A7,B6,C4' refers to cells A7, B6, and C4. Union is useful if we want to use some values in a row or column for calculation.

Types of Cell References

Cell References	Types of Cell References	Refers to values in
A10	Individual cell	The cell in column A and row 10
A10:A20	Range	Values from the range of all cells between A10 and A20
A10,A20	Union	Values in two cells A10 and A20 only

13. Explain how you will use insert function option to estimate a statistics.

Using Insert Function Option

Excel provides insert function option to estimate a statistics. The steps are given below.

- 1-Firstly, click your mouse in the cell in which you want your result to appear.
- 2- We have to get Insert Function option by using one of following two options. Firstly, click on the insert functions button (*fx*) beside the formula bar. Insert function dialog box will appear. Now insert function dialog box will appear.
- 3-Under select the category, we have a list of subcategory like financial, statistical, mathematical and trigonometry etc.. Each formula is sub divided into relevant sub categories. To select a function firstly, we have to select relevant sub category under 'select a category' option and then we have to select particular function from 'select a function' option. For example if we have to calculate standard deviation we have to select 'Statistical' under select a sub category and select 'STDEV' under select a function.
- 4 -Now function argument dialog box will appear. Now we have to give the range of values or some values. If we have continuous data we can insert this data by clicking on function argument 'number 1' and by giving the range of values. (B2:B17). Or if we have some discontinuous values we can insert them separately by entering them to function arguments 'number 1', 'number 2', 'number 3' etc..
- 5- After entering range of values click on ok, result will appear on the cell.

What you mean by Function Library? How it is useful?

Using Function Library

Function library offers different types of functions like financial, logical, and mathematical and trigonometry functions to perform calculations. These functions can be easily accessed from function library to do the calculations. Under Formulas Tab we have the group named 'Function Library' which consist of various categories of functions like financial, logical, and mathematical and trigonometry functions. When you scroll the mouse over a function of a category excel will have a small dialog box that explains the purpose of each function. Thus we can select functions based on our purpose from 'Function Library' for performing different calculations. The steps are given below.

- 1-Firstly, click your mouse in the cell in which you want your result to appear.
- 2-Click on Formula Tab and select a particular function form a sub category. For example 'STDEV' under Statistical in more functions button.
- 3-Once we select a function (STDEV) from subcategory then the function arguments dialog box will appear. Now enter the cell references (A3:A15) or range of values.
- 4-After entering range of values click on ok, result will appear on the cell.

14. Explain How will you estimate Correlation using Data Analysis ToolPak

Estimation of Correlation using Data Analysis ToolPak

Correlation is used to study the relationship or association between variables. The degree and direction (positive or negative) of association can be studied in detail using Correlation. Data analysis ToolPak can be used to estimate correlation coefficient. The correlation coefficient would tell us the strength and direction of relationship. If value is closer to +1 it means strong positive relationship and if it is closer to -1, that means strong negative relationship. If the value is closer to '0', then there is no clear relationship. A higher value correlation coefficient shows higher degree of relationship. Firstly we have to plug in the data analysis toolpak from excel add in options. The steps are given below.

1. To plug in data analysis tool pack, click on MS office button and select excel options
2. From excel options select Add-Ins
3. From Add-Ins select Analysis ToolPak
4. Click ok and follow the subsequent steps to get Data Analysis ToolPak installed.
5. Now click on data tab and select Data Analysis button.
6. Now data analysis dialog box will appear with a list of analysis tools.
7. From analysis tools, select **correlation** and click ok.
8. If correlation is selected then correlation dialog box will appear.
9. There we need to give input range by selecting respective data range in excel sheet.
10. We also have to give output range where we want the result to appear, and this must be blank cells. We can specify the output range in the existing sheet, or we can select the new worksheet for the results to appear.
11. Now click ok. The results will appear in the output range.

15. Explain How will you estimate Descriptive statistics using Data Analysis ToolPak

Estimation of Descriptive statistics (Summary Statistics) using Data Analysis ToolPak

Descriptive statistics or summary statistics are used to describe the data. The measures of descriptive statistics include measures of central tendency, measures of dispersion, skewness, kurtosis, minimum and maximum values. Data analysis toolPak can be used to estimate all these measures together. Firstly we have to plug in the data analysis toolpak from excel add in options. The steps are given below.

1. To plug in data analysis tool pack, click on MS office button and select excel options

2. From excel options select Add-Ins
3. From Add-Ins select Analysis ToolPak
4. Click ok and follow the subsequent steps to get Data Analysis ToolPak installed.
5. Now click on data tab and select Data Analysis button.
6. Now data analysis dialog box will appear with a list of analysis tools.
7. From analysis tools, select **descriptive statistics** and click ok.
8. If descriptive statistics is selected then descriptive statistics dialog box will appear.
9. There we need to give input range by selecting respective data range in excel sheet.
10. We also have to give output range where we want the result to appear, and this must be blank cells. We can specify the output range in the existing sheet, or we can select the new worksheet for the results to appear.
11. Check summary statistics option by selecting it. Now click ok. The results will appear in the output range.

SHORT ANSWER TYPE QUESTIONS (MARKS 2)

1- What you mean by spread sheet?

Spreadsheet is a simple worksheet consisting of rows and columns in which any data can be entered. Spread sheets are used for doing various tasks, such as performing mathematical and statistical calculations, creating graphs and charts and creating economic and financial reports. Examples: Spread can be used to create annual financial report of a company, to plot trend line of macroeconomic variables, and to calculate descriptive statics such as mean, median, mode and standard deviation.

2-Distinguish between absolute cell addressing and relative cell addressing in MS Excel ?

Relative and absolute cell references behave differently when copied and filled to other cells. Relative references change when a formula is copied to another cell. Absolute cell address on the other hand remains constant, no matter where they are copied.

3-How will you find logarithm of a number to any base using MS Excel ?

We can use LOG function to find logarithm of a number to any base. First type the function name, then number and base. For example if you want to find logarithm of 250 to the base 20 type =LOG (250, 20) then press enter. Now the result will appear as 1.843109.

4-State the simple mathematical operators used in MS Excel.

Operators specify the type of calculations to perform on the values. Simple mathematical operators are as follows.

Operator	Meaning	Example with data	Example with Syntax	Result
+	Addition	=4+2	=A7+A8	6
-	Subtraction	=4-2	=A7-A8	2
*	Multiplication	=4*2	=A7*A8	8
/	Division	=4/2	=A7/A8	2
^	Exponentiation	=4^2	=A7^A8	16

5-Explain how will you enter and edit a formula in excel.

Entering and editing a formula

Click in the cell where we want the formula and begin typing. Hit enter when we have completed entering the formula. The formula itself displays at right in the formula bar. The result of the formula we typed appears in the spreadsheet cell. We will always use cell references in the formulas we build. We need not enter cell references into a formula by typing them. Instead, once we have typed an equal sign we can click a cell whose reference we want to include in the formula. We can edit a formula by selecting the cell, then the formula will appear in the formula bar, there we can make necessary changes.


6- What is autosum

Autosum can be used to calculate sum, average, minimum and maximum of a series of values. AutoSum option is available under editing group in home tab or under formula tab in function library.

The steps to calculate sum,

1. Select the range of cells you wish to add
2. Click the AutoSum button on the Home Tab or the Formulas Tab
3. Now the sum of values of selected cells will appear in the cell next to the last cell.

7-What you mean by cell pointer?

In Excel spread sheet, a cell pointer is a bold bordered rectangular () which appears if the mouse pointer is clicked inside at any place. The cell pointer is placed on the currently active cell.

8- What you mean by cell address?

Cell address indicates the location of each cell. A cell address is a combination of column letter and the row number. Ex: **A1** is the address of the cell that is formed at the intersection of column A and row 1. Remember cell address always starts with column letter. 3B and 10A are invalid cell address.

9-What is formula bar in excel?

Formula bar is present just below the ribbon of a tab and just above the work area of the worksheet. Formula bar displays the data or formula stored in the active cell, it can also be used to enter or edit a formula, a function, or a data present in the cell.

10-Explain the steps to set chart title.

Setting chart title: You can add title to your chart to identify the chart data. The steps followed are

- 1-Select the chart that is to be titled
- 2-Click the lay out tab
- 3-Under the labels group, click the group, click **Chart Title**.
- 4- In the drop down list, click on a location to place the chart title. For example, click the **Above Chart** location to place the chart title at top of the chart.
- 5-Replace the default chart title text with your own title text.

11-Explain the steps to set axis title.

Setting Axis Title: Two dimensional charts consists of X (Horizontal) axis and Y (Vertical). These axes are known as value axes, because they contain the values of the charts drawn. The following steps show how to set the axes title.

1-Select the chart

2-Click the lay out tab on the Ribbon

3-Under the labels group, click the **Axis Title** button. A drop-down list appears

4- In the drop-down list, place the mouse-pointer over the primary vertical axis title. A sub menu appears

5- In the sub menu, click the axis title position. Click the horizontal title position to display axis title in vertical on the chart.

6- Replace the default axis title text with your own text.

12-Explain the steps to add data label.

Setting Data Labels

1-Select the chart

2-Click the lay out tab on the Ribbon

3-Under the labels group, click the **Data Labels** button. A drop-down list appears

4- Click on a position to display data labels on chart. For example, click on the **above** to display data labels above data points.

13-What you mean by formula syntax?

Formula syntax is the structure or order of the elements of a formula. The major elements of a formula are equal sign, cell reference or operands and operator. All formulas begin with an equal sign followed by operands and operator. Operands can be values that take the form a number (20,100) or a cell reference. Operators specify the type of calculations to perform on the values.

Ex: =4+2

14- What you mean by function in excel?

A function is a predefined formula that performs calculations by using specific values in a particular order. The values used in function are called arguments and those arguments must appear in a specific order. For example, the average function is used to calculate the average of several values or arguments.

15-What you Data Analysis ToolPak

Data analysis toolPak is included in excel as an add-in options and it can be used to estimate summary or descriptive statistics, correlation, and regression. This is the easiest method for estimation. Here we need not type the function name separately. We have to specify the input range and output range only. Calculation will be done automatically. Firstly we have to plug in the data analysis toolpak from excel add in options. Once it is plugged in we can easily estimate all descriptive statistics together. We can also do the correlation and regression analysis.

MODULE IV

PREPARATION OF PRESENTATIONS

Objectives of the module

3. To explain the basics of word processing
4. To familiarise various options to manipulate and edit the documents.
5. To illustrate the methods to insert various objects.
6. To explain the steps to create mail merge.

Terms and concepts discussed:

- **Word Processor:** Word processor is software package used to create, edit, print and save documents for future retrieval and references. When we use a computer program to create, edit, and produce text documents, then it is called word processing in computer terminology. Microsoft Office word is one of the most sophisticated word processing programmes available today.
- **Word Basic Toolbars:** Toolbars MS word include Title bar, Quick access tool bar, menu bar, rulers, scroll bar, and status bar.
- **Working with Ribbon:** In MS word 2007 menus are categorized in the form of **tabs**. There are seven Menus or Tabs arranged horizontally and each represents an active area like Home, Insert, and Page Layout etc... The active area under each tab is known as **Ribbon**. Each Ribbon has several groups of related items and is displayed below the tile bar. **A group** show different related items together. A command under a group is known as **button**.
- **Manipulation of the first document:** There are certain important things related to text settings to consider before preparing first document. Important of these are page margins, document size, orientation of the document, font and paragraph settings.
- **Editing the document:** While typing a document we will need to edit the contents. Editing includes changing words or phrases, moving texts to another place, correcting spelling and grammar mistakes, changing the formats etc.. MS Word provides options like find and replace, correcting spelling and grammar mistakes, selecting the text etc..
- **Inserting Pictures and charts:** Pictures and Graphs can be inserted into MS Word using insert tab and following subsequent steps.
- **Inserting Equations:** Equation can be typed into word using symbols and Microsoft Equation Editor.
- **Mail Merge:** Mail merge is a tool which helps to send letters, labels and envelops to multiple recipients by linking main document to data source. It is the process of

combining data source with main document to send same copy of main document to many recipients.

QUESTION BANK ESSAY QUESTIONS (12 MARKS)

1. What is word processor Explain its features.

Introduction

When you use a computer program to create, edit, and produce text documents, then it is called word processing in computer terminology. Microsoft Office word is one of the most sophisticated word processing programmes available today. With MS word it is easier to create a wide range of business and personal documents.

Word processor is software package used to create, edit, print and save documents for future retrieval and references. Creating the document involves typing the content of the document using key board and saving it. Editing a document involves checking the spelling and grammar mistakes and correcting them, rearranging sentences using cut and paste options and deleting words or sentences. We can also change the appearance of the document by changing layout, font size, orientation etc..

Features of word processor

1-Texts are typed into the computer

The contents of the documents such as letters and numbers are typed into computer using key board and mouse. We can also move the contents of other documents into a document.

2-Words and sentences can be inserted, changed and deleted.

Sentences can be changed or deleted using cut, copy, paste or delete options.

3-Paragraphs or texts can be copied or moved into another place in the document.

Copying a text involves copying and pasting it another place of the document. Moving the text involves cutting and pasting it in another place of the document.

4- Margins and Page length can be adjusted as desired.

Margins and Page length can be changed using page layout tab. The margin button helps to select desired margin. Similarly height and width of the document can be changed using size button. Similarly the direction in which a page is laid out can also be changed using orientation button.

5-Spelling and grammar mistakes can be verified and corrected.

Spelling and grammar mistakes can be corrected using Review button. The word indicates the spelling errors with a red underline and grammar mistakes with a green under line. To correct the spelling mistakes, right click on the misspelled word. A short cut menu appears. In the short cut menu click on the correct replacement of the misspelled word. The correct word replaces the

misspelled word in the document. To correct the grammar mistakes, right click on the green underlined sentence. A short cut menu appears. In the short cut menu select grammar, then a Grammar dialogue box appears. Grammar dialogue box will show the correct replacement or explain the error occurred. Either click on the correct replacement or consider revising the sentence as suggested.

6-Multiple documents can be merged.

7-Multiple copies of the letter can be sent to many recipients using mail merge facility.

Suppose we have to send a letter to a number of people, we can use the Mail Merge facility in MS word. Mail merge is a tool which helps to send letters, labels and envelopes to multiple recipients by linking main document to data source. It is the process of combining data source with main document to send same copy of main document to many recipients.

2. What are the various options to manipulate first document? Explain.

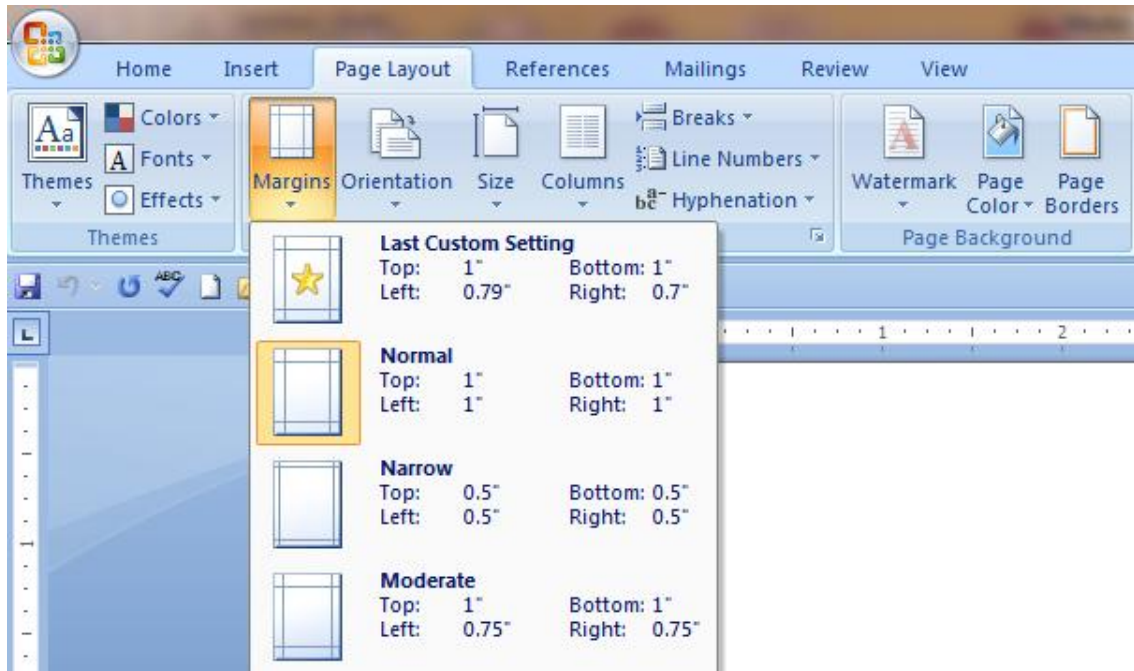
Manipulation of the First Document (Considerations before preparing a document)

There are certain important things related to text settings to consider before preparing first document.

1-Page Margins

Page Margins are empty spaces along the left, right, top and bottom edges of the page. Margins serve as a frame to the text and make it easier to read. Word offers various types of page margins like normal, narrow, moderate, wide etc.. The following steps are to be followed to set the page margin.

- 1- Click the page layout tab
- 2- click the margins button in page set up group
- 3- Select the desired margin option from the drop down menu



2-Document Size

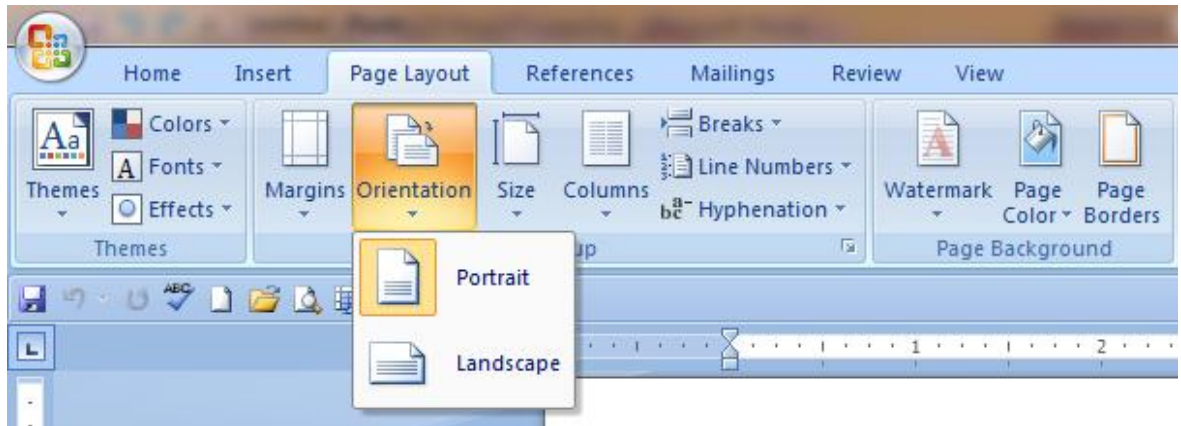
Following are the steps to fix the document size.

- 1- Click the page layout tab
- 2- Click the size button in page set up group.
- 3- Select the desired page size from the drop down list.

3-Orientation of the document

Page orientation is the direction in which a page is laid out on a paper. There are two options. First one is Portrait, for which the height of the page is larger than the width of the page. The second option is landscape, for which width of the page is larger than the height of the page. Following are the steps to fix the Page orientation.

- 1- Click the page layout tab
- 2- Click the orientation button in page set up group.
- 3- Select the desired orientation from the drop down menu.



4-Font

Font refers to the collection of letters, numbers and symbols in a document. The look of the document is determined by style of the font, colour of the font etc.. Under the font option we can select the font, style of the font, size of the font, colour of the font and whether font is italic, bold, underlined etc..For selecting all these options first tow steps are similar and only the step is different as given below.

- 1- Select the text for which the font is to be selected.
- 2- Click the home tab and go to font group.

Under font group select a particular font from the drop down list (for other options click on that button, ex: click on bold to make letters bold)

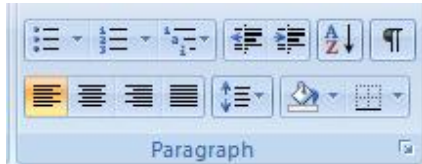


5-Paragraph

Paragraph Formatting consists of alignment, indentation, line spacing, bullets and numbers and outside borders.

- a- **Aligning a Paragraph:** Alignment refers to the arrangement or position of the text with in a document in an organized way. Word provides four types of alignment left, right, centered, and justified. To fix the alignment select the text or paragraph, click the home tab, in the paragraph group select the desired alignment.
- b- **Indentation:** Indentation determines the distance of paragraph from either left or right margin. To fix the Indentation select the text or paragraph, click the home tab, in the paragraph group click on decrease indent or increase indent buttons as per requirement.
- c- **Line Spacing:** Line spacing helps to determine the distance between lines. To set the line spacing click the home tab, in the paragraph group select the desired line space.

- d- **Bullets and Numbers:** we can set off a list of information in the document by using bullets and numbers. A bulleted list adds bullets dots in front of each list item, while a numbered list adds numbers in front of each list item. To create bullets or numbers select the points for which we have insert bullets and numbers. Then click the home tab, in the paragraph group select the desired bullets or numbers.



2. What are the various options to edit a document? Explain.

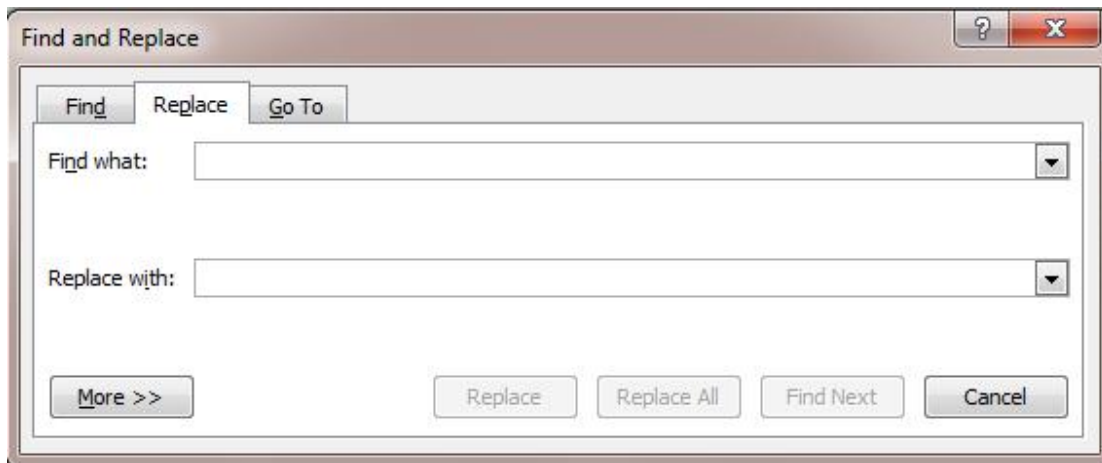
Editing the Document

While typing a document we will need to edit the contents. Editing includes changing words or phrases, moving texts to another place, correcting spelling and grammar mistakes, changing the formats etc.. MS Word provides options like find and replace, correcting spelling and grammar mistakes, selecting the text etc.. The simple editing tools include cut, copy, and paste and delete etc...

1-Finding and Replacing the text

If we have to find a word throughout the document and replace it with another one, we can use the find and replace button under the editing group in the home tab. Following are the steps.

- 1- Click the home tab
- 2- In the editing group click the find button, then find and replace dialogue box will appear.
- 3- Type the search text in the find what text box.
- 4- Click the find next button. Now MS word starts searching the instances of text in the document. On finding the first instances of word MS word highlights the word in the document. Keep on clicking find next button to find more instances of word in the document.
- 5- To replace this text or word with another one, click on the replace button in find and replace dialogue box
- 6- In the replace text box type the text you want to use as replacement.
- 7- Click replace button to perform replacing. Keep on clicking replace button to continue replacing the text. To complete replacement of all instances at a stretch click on replace all.



2-Select

We can use the select button to select the text in a document. There are three options available.

- a- **Select all:** This will select the entire text in the document.
- b- **Select a Object:** This can be used to select objects like images and equations.
- c- **Select text with Similar Formatting:** This can be used to distinguish text with similar formatting.

3-Checking Spelling and Grammar Mistakes

As we type in MS Word, spelling and Grammar checkers operates in the background and examines the errors. The word indicates the spelling errors with a red underline and grammar mistakes with a green under line. Following are the steps to correct spelling mistakes.

- a- Right click on the misspelled word. A short cut menu appears.
- b- In the short cut menu click on the correct replacement of the misspelled word. The correct word replaces the misspelled word in the document.
- c- Sometimes the word we typed may be correct. In that case we have the options like ignore and add to dictionary.

Following are the steps to correct grammar mistakes.

- a- Right click on the green underlined sentence. A short cut menu appears.
- b- In the short cut menu select grammar then a Grammar dialogue box appears.
- c- Grammar dialogue box will show the correct replacement or explain the error occurred. Either click on the correct replacement or consider revising the sentence as suggested.

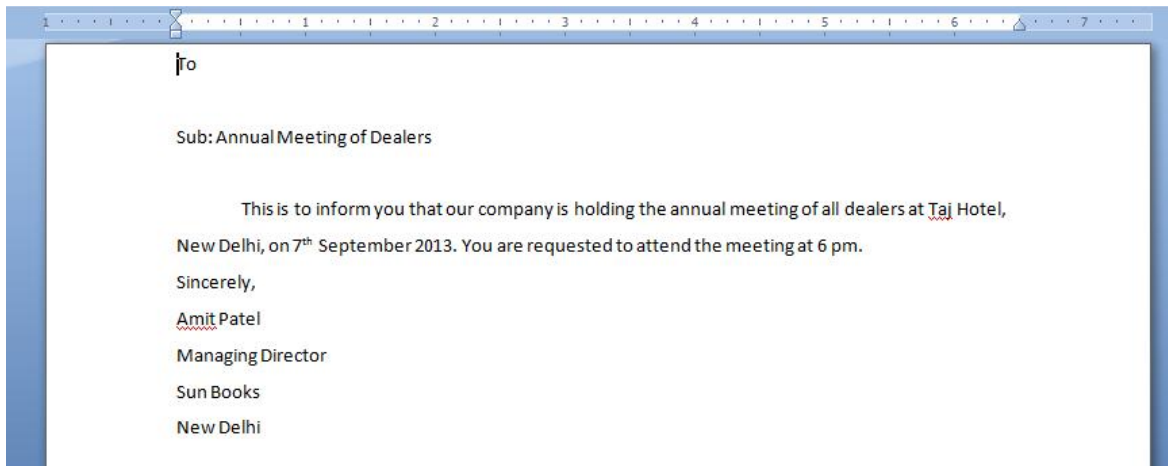
3. What you mean by Mail Merge? Explain the Steps to create Mail Merge.

Records and Mail Merge

Suppose we have to send a letter to a number of people, we can use the Mail Merge facility in MS word. Mail merge is a tool which helps to send letters, labels and envelopes to multiple recipients by linking main document to data source. It is the process of combining data source with main document to send same copy of main document to many recipients. To use mail merge we need two documents

1-Main Document: it is a document and format file that contains any common text, like letter or Label that we want to send to the recipients. It also contains merge fields to bring information from data source at appropriate positions in the document.

Business Letter as Main Document



2-Data Source: Data source is data base which consist of information about recipients like names, address, pin code, e mail id etc.

Data source created in Excel

	A	B	C	D	E	F	G
1	First Name	Last Name	Company	Address	City	Pincode	E-mail
2	Abhinav	Sharma	Tech Books	35-Sarojini Nagar	New Delhi	110023	Abhinav@gmail.com
3	Rahul	Gupta	khanna books	A-2 Daryaganj	New Delhi	110002	Rahul@gmail.com
4	Surbi	Jain	Dreamtech Press	7-Ansari Road	New Delhi	110002	Surbi@gmail.com
5	Nidhi	Bansal	Asian Publishers	55-Pitambura	New Delhi	110007	Nidhi@gmail.com
6							

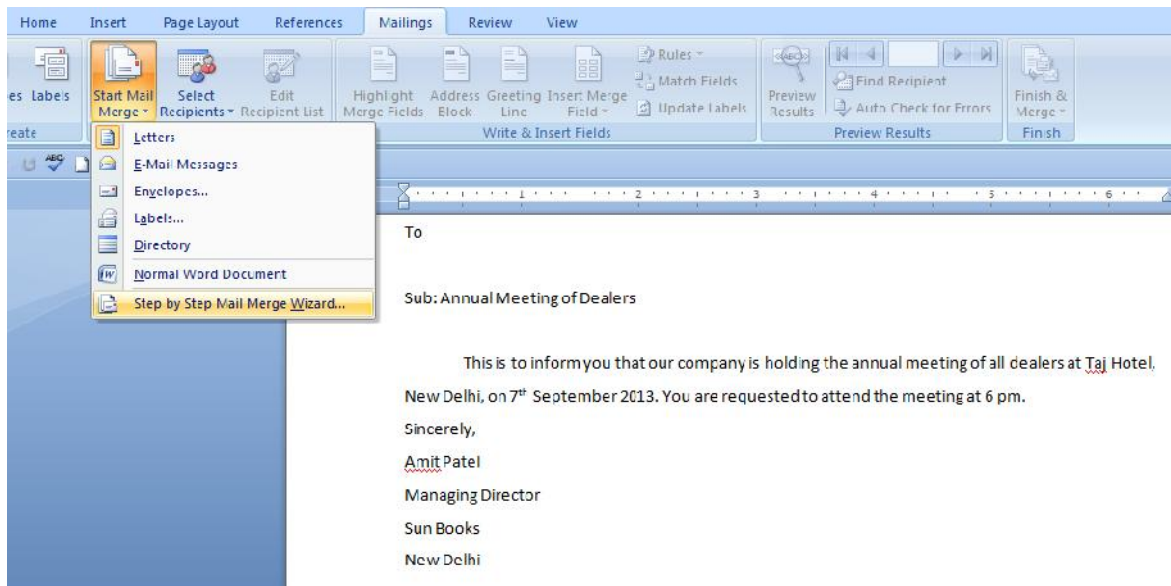
Creating Mail Merge

To create mail merge we need to undertake the following three basic tasks

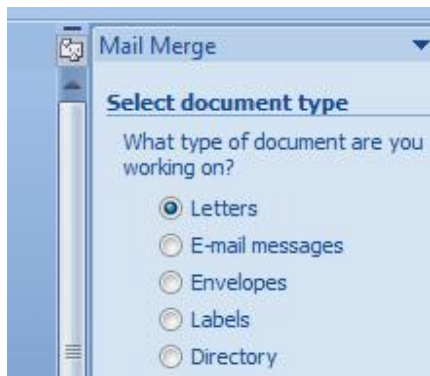
1. Creating a main document
2. Creating a data source
3. Merging the main document with the data source

Thus firstly we have to create the document and data source. Document like letters and labels can be prepared in word. The data source usually will be prepared in excel workbook. Here if have already created the Letter and data source, then we have to follow the steps given below to create mail merge.

1. Firstly open the main document here it is letter.
2. Click the mailings tab and click start mail merge button under start mail merge group.
3. Now a drop down menu appears and from available options click on Step by Step mailings wizard.



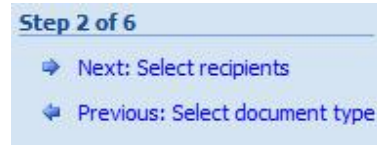
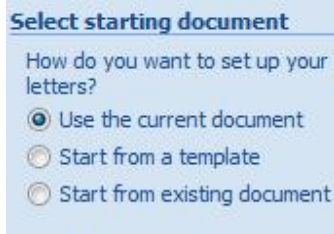
4. Now the mail merge task panel appears at the right side of the document. Since we want to send letter, select letter under select document type.



5. Now click the **Next: Starting document** link



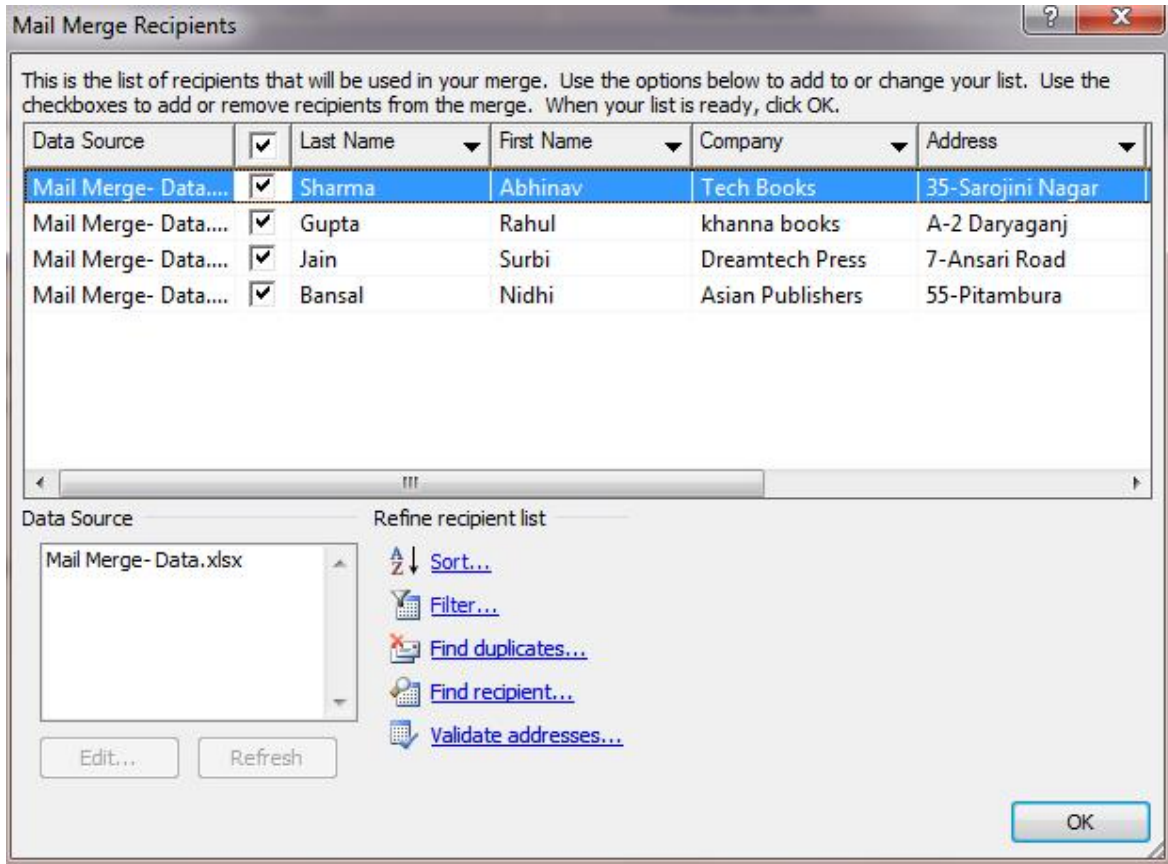
6. Now a new mail merge panel appears where we have to select an option under **select starting document**. Since we have already opened the letter select **use the current document** and click on **Next: Select Recipients**



7. Now **Select Recipients** option appears on the mail merge. Here there are 3 options, use an existing list, select from outlook contacts or type a new list. Since we have already created the data source select use an existing list. And click on browse under **use an existing list** title.



Now a small window appears where we need to indicate the file location where we have saved the data source. After selecting the file click open and indicate the sheet no. Now the **Mail Merge Recipients** box appears with names and addresses of the recipients, and click ok on the box.



In case if we have not already created the data source select **Type a new list** and click on create. Now new address list box appears where we have to enter names, addresses, and other details of recipients. We can also customize the address list by adding necessary fields and deleting unnecessary fields. Once we have entered the information of all the recipients click ok.

8. As next step click on **Next: Write your Letter**

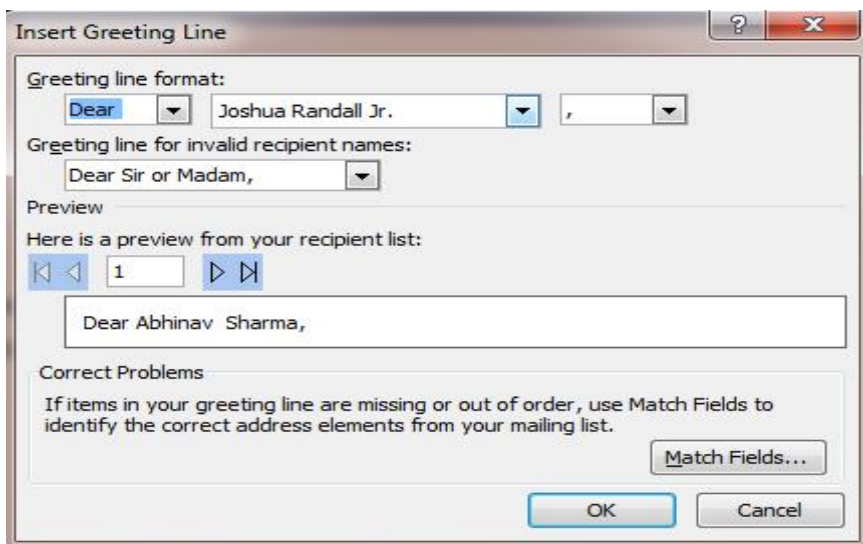
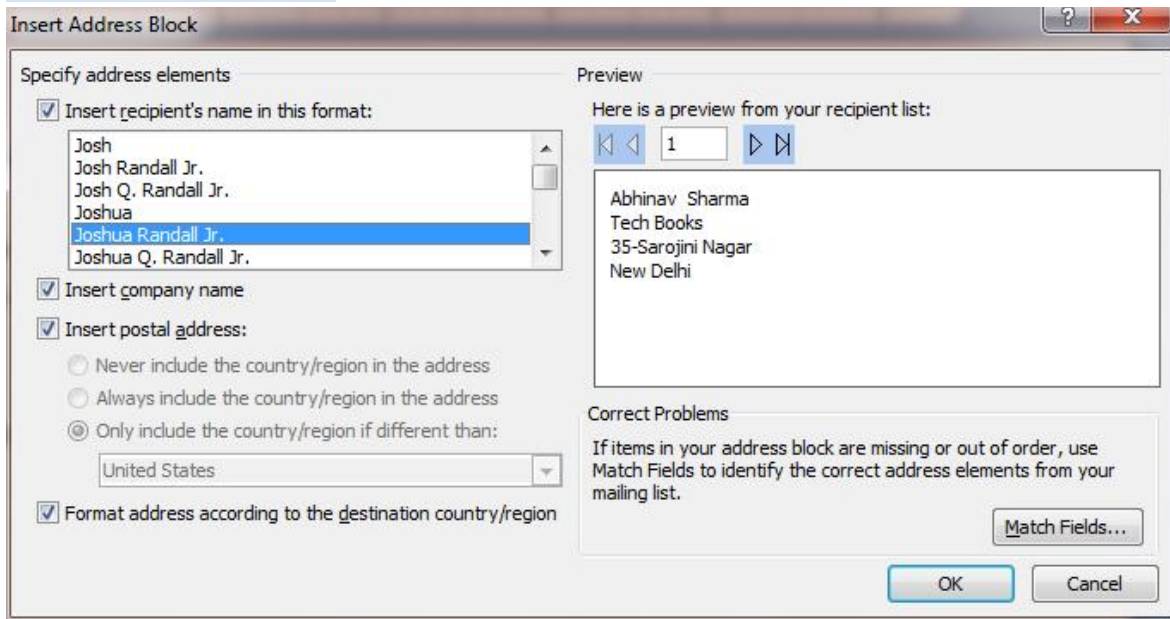
Step 3 of 6

- ➔ Next: Write your letter
- ➔ Previous: Starting document

9. If we have already written the Letter, then we have to add recipient information by clicking on **Address block**. Now **Insert Address block** box appears where we have to select the address elements we want to include. Preview address of first recipient, if it looks fine click ok. Now the address block will be inserted into document and will look like this <<AddressBlock>>. After this we can add greeting line by clicking on **'Greeting line'** and pressing ok in the **insert greetings line** dialog box.

To add recipient information to your letter, click a location in the document, and then click one of the items below.

- Address block...
- Greeting line...
- Electronic postage...
- More items...



10. Now Click **Next: Preview Your Letters**. Here we can see the letter for the first recipient and make sure that contents of the letter are right.

Step 4 of 6

- ➔ Next: Preview your letters
- ➔ Previous: Select recipients

Letter for the First Recipient



11. Now Click on complete the merge. Save the document. To send the letter via online click on finis and merge button under mailings tab. A drop down menu appears and select e mail message and follow the further steps.

Step 5 of 6

- ➔ Next: Complete the merge
- ➔ Previous: Write your letter

4. What are the basic tools bars in MS Word? Explain.

Toolbars in MS Word

1-Title Bar:

It displays the name of the currently active word document.

2- Quick Access Toolbar

Quick Access Toolbar appears just beside the right of the office button. It consists of most frequently used commands such as cut, copy, paste, print etc. The customize quick access toolbar option helps to add some more commands or delete existing commands. Clicking customize quick access toolbar displays a drop-down list containing many options, each of these can be added to the toolbar by selecting it and can be removed by deselecting it.

3-Minimise/Maximise/Close Buttons

All these buttons are present on the right most upper corner of the window. These are used to Minimise, Maximise and Close the word document.

4-Menu Bar

In MS word 2007 menus are categorized in the form of **tabs**. There are seven Menus or Tabs arranged horizontally and each represents an active area like Home, Insert, and Page Layout etc... The active area under each tab is known as Ribbon. Each Ribbon has several groups of related items and is displayed below the tile bar. **A group** show different related items together. A command under a group is known as **button**. Example, Page Layout is a tab, under Page Layout we have different groups like Themes, Page setup, Page Background, Paragraph etc...., and under the group Page set up we have different buttons like margins, size, orientation etc .

5-Rulers

Rulers are margins that indicate writable area of the document.

6-Scroll Bars

Scroll bars are used to scroll vertically and horizontally.

7-Status Bar

Status bar consists of informations about the active document like number of words, lines, active page number etc...

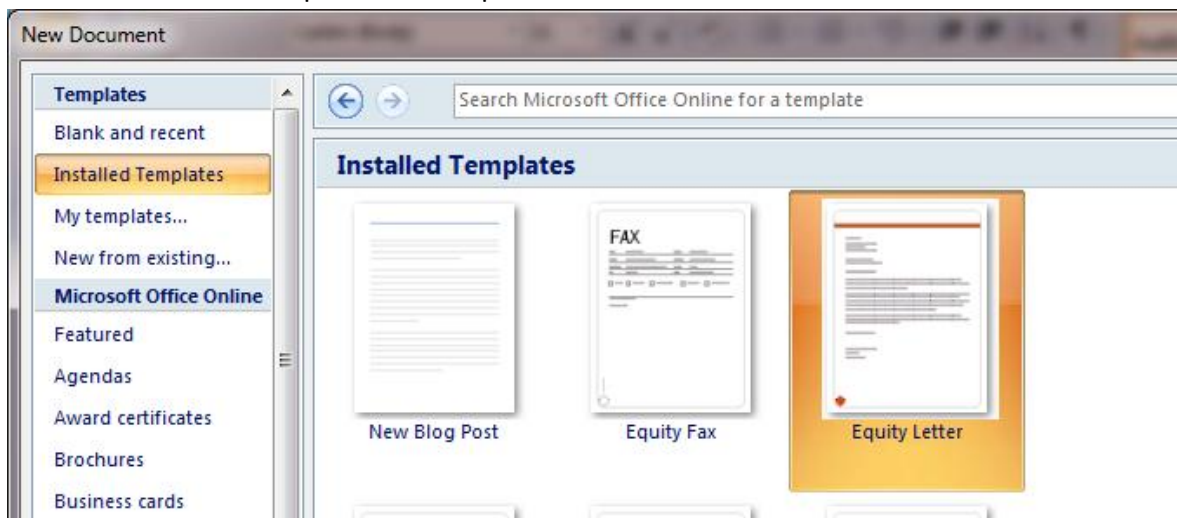
5. Explain the methods to create a new blank document?

Creating a New Blank Document

There various options to create a blank document

- I. To create a blank document from an already existing word document, click on MS office button, then select new, then select blank document, click on create button, then a blank document will appear. (Ctrl + N).
- II. If we have not opened a word document, click on the start button in the lower left hand corner of the desk top. Move the mouse pointer to all programs, then go over to MS Office, then choose MS word from available options. Now word will automatically open a blank document.
- III. To create a new blank document with a specified name, right click on the mouse on the desktop, select new option, and then select micro soft office word 2007 from the available options and name the new document.
- IV. Creating new document using templates.
If we want to create a document that reuses text, formats and other settings, use a template that includes this information. In order to create a document from templates perform the following steps.

- 1-On the Ms Office button click new
- 2-A new document window will be opened.
- 3-this window offers variety of templates categories, such as blank and recent, installed templates, my templates etc..
- 4-When we select a category in the left panel; the templates available in that category will appear.
- 5-select a template that best suits your needs and click on create.
- 6-now the selected template will be opened and we can make entries into the document.



SHORT ESSAY (PARAGRAPH) TYPE QUESTIONS (5 MARKS)

1. What you mean by ribbon, tab, group and button. Explain with example

In MS word 2007 menus are categorized in the form of **tabs**. There are seven Menus or Tabs arranged horizontally and each represents an active area like Home, Insert, and Page Layout etc... The active area under each tab is known as **Ribbon**. Each Ribbon has several groups of related items and is displayed below the tile bar. **A group** show different related items together. A command under a group is known as **button**. Example, Page Layout is a tab, under Page Layout we have different groups like Themes, Page setup, Page Background, Paragraph etc...., and under the group Page set up we have different buttons like margins, size, orientation etc ..

2. What is a Word Processor? What are its uses?

Word Processor and Its Uses

Word processor is software programs used to create, edit, print and save text documents for future use. Creating a document involves typing by using key board and saving it. Editing a document involves correcting the spelling mistakes, if any, deleting or removing words sentences or paragraphs. Microsoft Word 2007 is most popular word processor. Word processors have a

variety of uses and applications within the business world, home, education, journalism, publishing, and the literary arts.

1-Business: Within the business world, word processors are extremely useful tools. Typical uses include legal copies, letters and letterhead, memos, and reference documents. Business tends to have their own format and style for any of these. Thus, versatile word processors with layout editing and similar capabilities find widespread use in most business.

2-Home: While many homes have word processors on their computers, word processing in the home tends to be educational, planning or business related, dealing with assignments or work being completed at home, or occasionally recreational, e.g. writing short stories. Some use word processors for letter writing, résumé creation, and card creation.

3-Education: Teachers can use word processors to prepare notes and students can prepare assignments.

4-Literature: Novelists, poets, playwrights, screenwriters, and essayists naturally gravitated toward word processing once the technology became widely available.

5- Government Records

Government departments can make use of word to prepare various documents and keep record of official information and updates.

3. What you mean text editor? List out some popular text editor programmes?

Text editor and Some Popular text Editors

A text editor is a type of program used for editing plain text files. A text editor is a computer program that lets a user enter, change, store, and usually print text. Text editors are often provided with operating systems or software development packages, and can be used to change configuration files and programming languages.

Some Popular text editor programmes

Notepad is a simple text editor for Microsoft Windows.

vi is a screen-oriented text editor originally created for the Unix operating system.

TextEdit is a simple, open source word processor and text editor, first featured in NeXT's NeXTSTEP and OpenStep.

EditPlus is a Windows text editor for HTML and programming.

E – TextEditor, or just called *E*, is TextMate for Windows.

GNU Emacs is an open source, cross-platform (available for various distros of Linux, Mac OS X, and even Windows) text editor.

gedit is the official open source text editor for GNOME

TextPad is a general purpose text editor for Windows-based systems.

UltraEdit is a popular and powerful Windows-based text editor for developers and programmers.

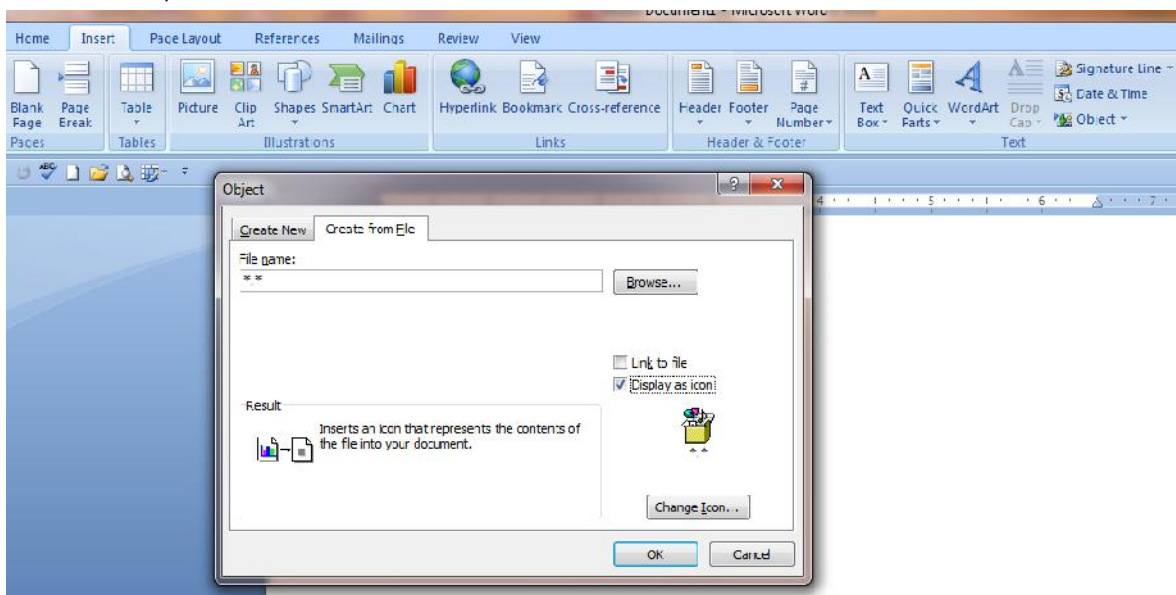
PSPad is a freeware programmer's editor for MS Windows.

TextMate is a powerful Mac OS editor for programmers and designers.

4. Explain the steps to insert video into MS word.

Inserting a Video

- 1- In MS word click where you want to insert the movie.
- 2- Now select Insert tab, in the text group, click object,
- 3- In the object dialog box, click create from files tab.
- 4- Click browse and locate the movie you want to insert.
- 5- To insert the movie as a linked object, select the **link to file** check box.
- 6- To display the movie as an icon, select the **display as icon** check box.
- 7- Then click ok, then the movie will be inserted into word.

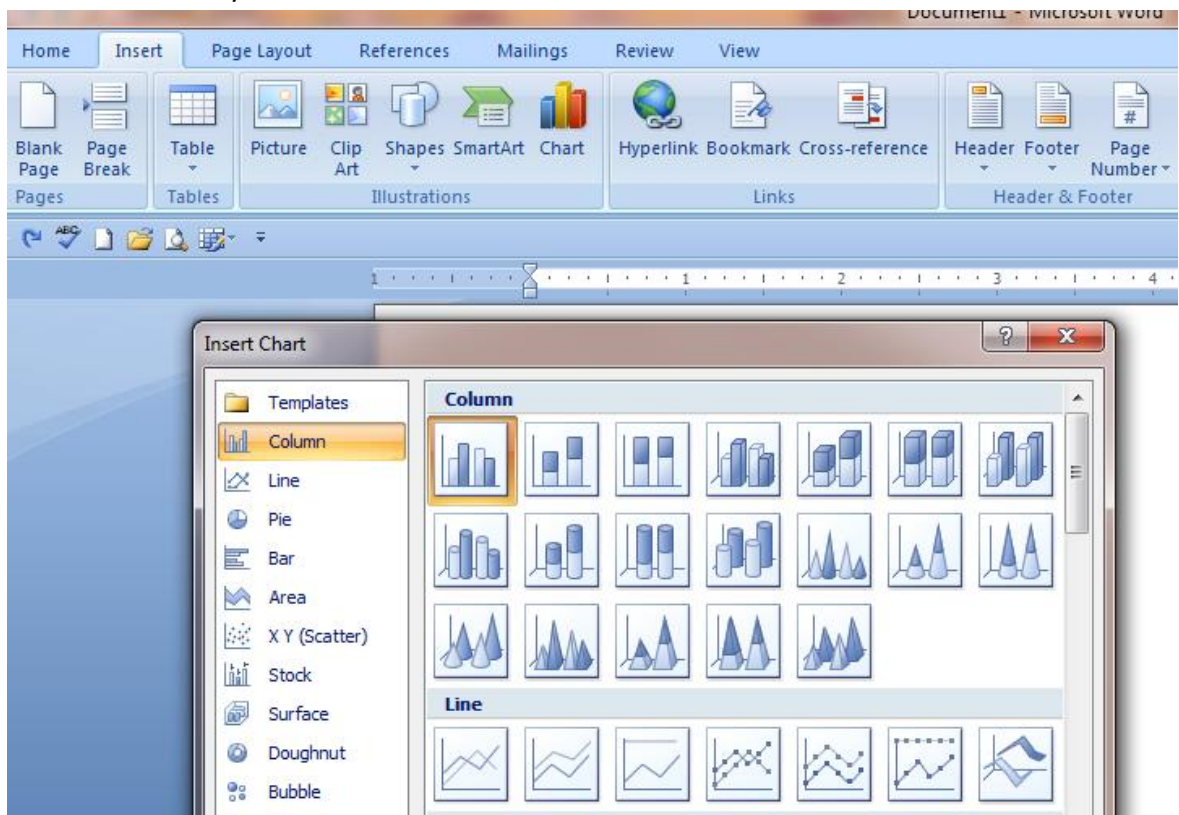


5. Explain the steps to insert a graph into MS word.

Steps to insert a Chart or graph

- 1- In MS word click where you want to insert the chart.
- 2- Now select Insert tab, in the illustrations group, click chart.
- 3- In the insert chart dialog box click a chart, and then click ok. Office excel 2007 opens in a split window and displays sample data on a work sheet.
- 4- In excel, replace the sample data by clicking a cell on the worksheet, the chart in word will be updated automatically with the new data.
- 5- In excel, click the Microsoft office button and save the data.

- 6- We can format the chart by adding chart title, axis titles and data labels. All these options are available in Layout Menu.



6. Explain the steps to insert an image into MS word.

Inserting a Picture

- 1- In MS word click where you want to insert the picture.
- 2- Now select Insert tab, in the illustrations group, click picture.
- 3- In the insert picture dialog box, indicate the file location of the picture to be inserted, and then click ok. Picture will be inserted to word.
- 4- Click the picture you want to format, then the ribbon changes to format tool. In the ribbon there are options for adjusting the contrast, brightness, colours and changing the size, format, position, effects, alignment and shape of picture.

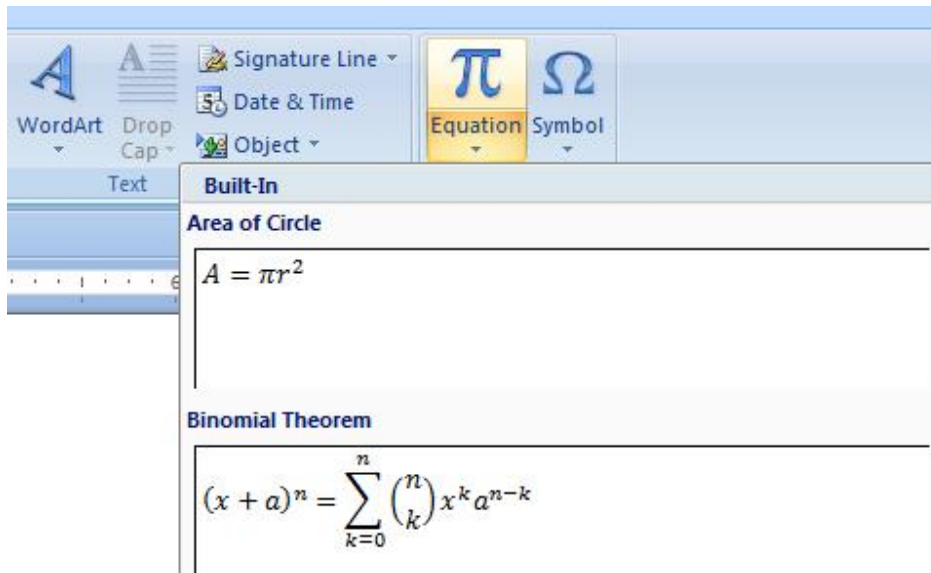
7. Explain various methods to insert equation into MS Word.

Inserting Equations

Equations can be inserted into MS word using various options under insert tab. In general there are three methods as given below.

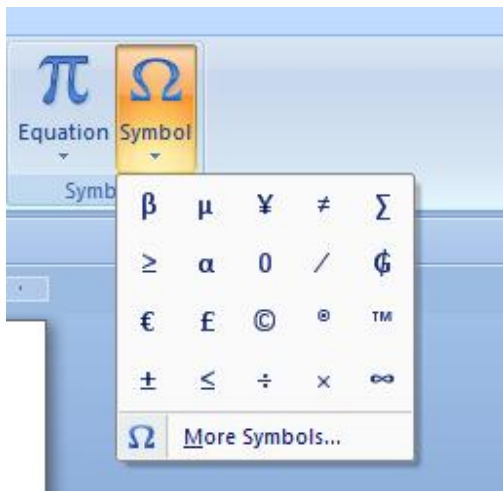
1- Using Equation

The first option using equation button under symbols group helps us to insert common mathematical equations or to build up our own equations using library of math symbols. For this select insert tab, under illustrations group select equation button. This option provides some built in mathematical equations such as quadratic formula, Taylor expansion etc.. To Build up our own equations, click on insert new equations, then a ribbon appears under design tab with a library of math symbols.



2- Using symbols

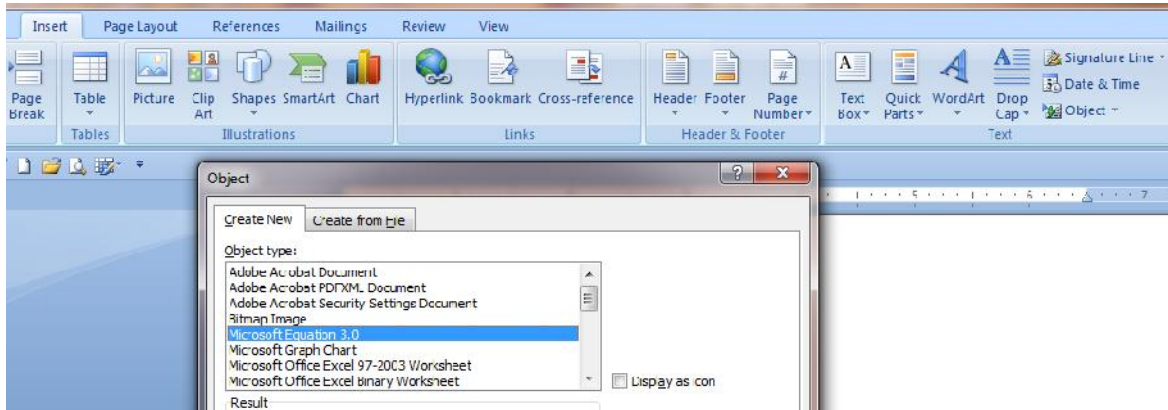
For accessing symbols select insert tab, under illustrations group select symbol button. This provides many symbols that can be used to write equations. If click on more symbols options under this, a symbol window appears with different categories of symbols.



3- Using Microsoft Equation Editor

Microsoft Equation Editor is another tool for inserting the equation. To access this click insert tab, then click object button under text group. Now an object window appears with many

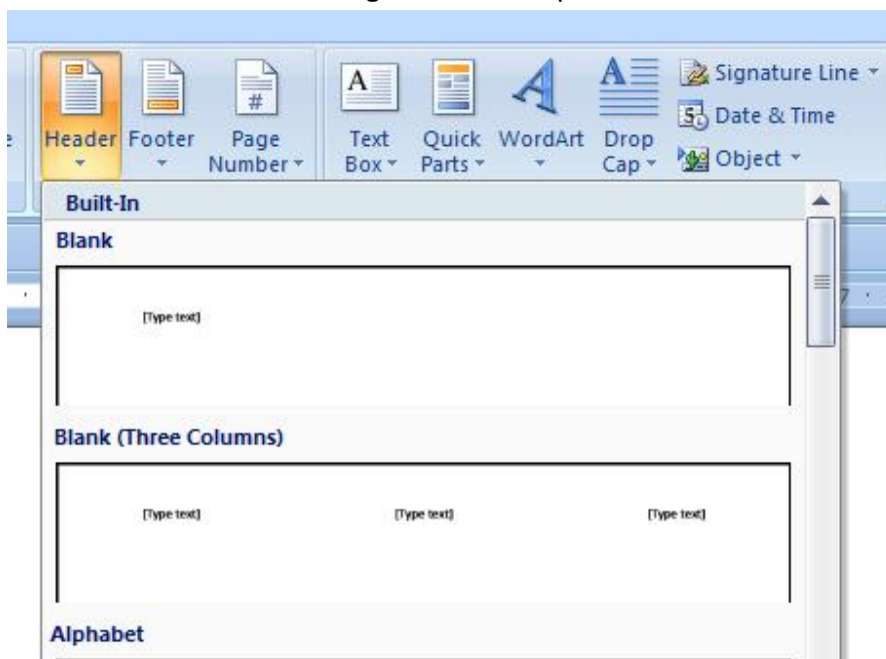
options, from which select Microsoft Equation Editor 3.0. Then the equation editor with math symbols and signs will be opened with place holder to insert equation. Now we can insert the equation by selecting the symbols form the editor.



8. Explain the steps to insert header and footer in MS Word

Inserting Header

- 1-Select Insert tab
- 2- Under Header & Footer group, select header.
- 3- Select an option given under drop down menu. Ex. Blank
- 4- Enter the text to appear as header.
- 5- Header can be edited using edit header option.



Inserting Footer

- 1-Select Insert tab

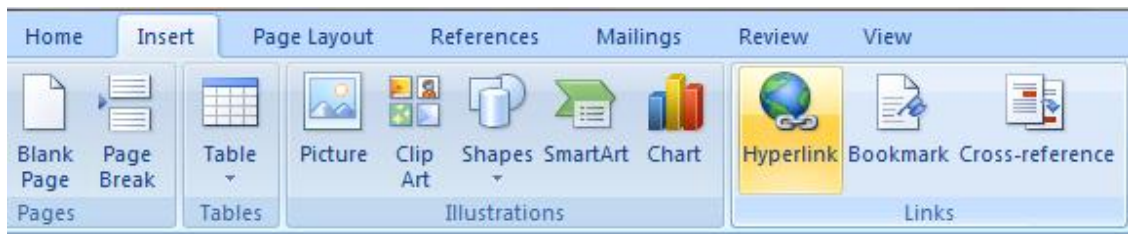
- 2- Under Header & Footer group, select footer.
- 3- Select an option given under drop down menu. Ex. Blank
- 4- Enter the text to appear as footer.
- 5- Footer can be edited using edit footer option.

8. Explain the steps to activate and deactivate hyperlink

Activating hyperlink

We can create Links web page, picture, and other programmes etc., using hyperlink option.

- 1- In MS word click where you want to insert the hyperlink
- 2- Now select Insert tab, in the links group, click on hyperlink,
- 3- In the insert hyperlink dialog box, indicate file location, where the file is saved.
- 4- Select the file and click ok.
- 5- Now the hyperlink will appear in the word file.



Deactivating hyperlink

- 6- 1-Right click on hyperlink
- 7- 2-Select the remove hyperlink option

SHORT ANSWER TYPE QUESTIONS (MARKS 2)

1- What is a text editor?

A text editor is a type of program used for editing plain text files. A text editor is a computer program that lets a user enter, change, store, and usually print text. Text editors are often provided with operating systems or software development packages, and can be used to change configuration files and programming languages.

2- What you mean by tab in MS Word?

In MS word 2007 menus are categorized in the form of **tabs**. There are seven Menus or Tabs arranged horizontally and each represents an active area like Home, Insert, and Page Layout etc...

3- What you mean by Ribbon in MS Word?

The active area under each tab is known as Ribbon. Each Ribbon has several groups of related items and is displayed below the tile bar.

4- How to insert the table MS Word?

Inserting Table

- 1- In MS word click where you want to insert the table.
- 2- Now select Insert tab, under table option, select insert table.
- 3-Now insert the number of rows and columns.

5-What you mean by Mail Merge?

Mail merge is a tool which helps to send letters, labels and envelopes to multiple recipients by linking main document to data source. It is the process of combining data source with main document to send same copy of main document to many recipients.

6- What you mean by Word processor?

Word processor is software package used to create, edit, print and save documents for future retrieval and references. Creating the document involves typing the content of the document using key board and saving it. Editing a document involves checking the spelling and grammar mistakes and correcting them, rearranging sentences using cut and paste options and deleting words or sentences. We can also change the appearance of the document by changing layout, font size, orientation etc..

7-What you mean by orientation in MS Word?

Page orientation is the direction in which a page is laid out on a paper. There are two options. First one is Portrait, for which the height of the page is larger than the width of the page. The second option is landscape, for which width of the page is larger than the height of the page.

8-What is Equation Editor in MS Word?

Microsoft Equation Editor is a tool for inserting the equation. To access this click insert tab, then click object button under text group. Now an object window appears with many options, from which select Microsoft Equation Editor 3.0. Then the equation editor with math symbols and signs will be opened with place holder to insert equation. Now we can insert the equation by selecting the symbols form the editor.

Module V

The Digital Economy

Objectives of the module

- 1.To develop basic understanding of internet and other networks.
- 2.To develop capacity to apply the uses of internet in various filed of social science studies.
- 3.To appreciate the uses of computer in various fields of economic activity such as production, consumption, exchange and distribution

Module 5: The Digital Economy (30 % weightage)

The World Wide Web – Evolution of Internet - Basic Internet Terminologies – Creating, sending and receiving email – social networks. E-commerce – Meaning and concept– History of E-commerce – importance, features & benefits of E-commerce – impacts, challenges and limitations of E-commerce – Online shopping - Electronic Payment system

ESSAY TYPE QUESTIONS (12 Marks each)

What is E Commerce? What are its basic features? What are its impacts?

E -Commerce or E-Business

Meaning

E -Commerce or E-Business is the largest application of computers and information technology in keeping and managing business and financial records. It helps in transaction of any amount of money from part of the world to other. We can purchase anything online with the help of debit and credit cards. Application of e commerce are billing to customers, tracing payments received and payments to be made and tracing supplies needed and items produced, stored, shipped, and sold, etc..

E-Commerce: Concept

E- Commerce is the process of doing business online. Or we can say that E-commerce is to conduct business by using the IT Information technology, i.e., computer technology and electronic communication. It is the buying and selling of items or goods or services on the Web using electronic communication and digital information processing technology.EDI or Electronic Data Interchange is an early form of e-commerce. Its high cost, use of proprietary standards etc.E-commerce is the process of doing business electronic. It changes the entire business scenario due to the powerful innovation of Internet, which is spreading fast through the world. The power of Internet as a global access was felt with the introduction of the World Wide Web (WWW) in 1994. This global network makes global relations with the companies made easier. It is predicted that, in the near future the digital economy will overtake the traditional economy of all developed countries.

E-commerce is a composite of technologies process and business strategies that foster the instant exchange of information within between organization. E-commerce strengthens

relationship with buyers make it easier to attract new customer, improves customer responsiveness and open new markets on a global scale. E-commerce is the application of various communication technologies to provide the automated exchange of business information with internal and external customer, suppliers and financial institutions.

Scope (advantages) of e commerce

- 1-selling can be focused to the global customer
- 2-Online Finance and Insurance Management
- 3-Commercial Transaction, ordering, delivery and payment
- 4-Online management of Product services and maintenances
- 5-Transport and Logistics management
- 6-Online trading of digital goods and books
- 7-Online payment for public and private services

Importance of E-commerce

Through, E-commerce, operating efficiency of the business firm will definitely improve and which in turn strengthen the value and service given to customers and provide a competitive edge over competitors. These improvements may result in more effective performance. The direct benefit accrue to an organization on practicing e-commerce are better quality, greater customer satisfaction, better decision making, low cost, high speed and real time interaction. More specifically e-commerce enables executing of information relating to the transaction between two or more using interconnected networks. From the business perspective with less time spent during each transaction, more transaction can be achieved on the same day. As for the consumer, they will save up more time during their transaction. Because of this, E-commerce steps in and replaced the traditional commerce method where a single transaction can cost both parties a lot of valuable time. E-commerce is the most cost effective compared to traditional commerce method. This is due to the fact where through e-commerce, the cost for the middleperson to sell their products can be saved and diverted top another aspect of their business. For e-commerce, the total overheads needed to run the business is significantly much less compared to the traditional commerce method. The reason due to that is where most of the cost can be reduced in Ecommerce. To both the consumers and business, connectivity plays an important part as it is the key factor determining the whole business. From the business point of view, E-commerce provides better connectivity for its potential customer as their respective website can be accessed virtually from anywhere through the Internet. This way, more potential customers can get in touch with the company's business and thus, eliminating the limits of geographical location. From the customer's standpoint, E-commerce is much more convenient as they can browse through a whole directories of catalogues without any hassle, compare prices between products, buying from another country and on top of that, they can do it while at home or at work, without any necessity to move a single inch from their chair. Besides that for both consumers and

business, commerce proves to be more convenient as online trading has less red tape compared to traditional commerce method. Ecommerce itself gives a boost to the global market. In short, if without any major obstacles, E-commerce will certainly continue to mature in the global; market and eventually, it will become an essential business plan for a company in order to survive and stay competitive in the ever changing market. E-commerce business have numerous advantages over off line retail locations and catalog operators consumers browsing online stores can easily search to find exactly what they are looking for while shopping and can easily comparison shop with just a few clicks of the mouse. Even the smallest online retail sites can sell products and turn a profit with a very simple online presence. Web tracking technology allows e-commerce sites to closely track customer preferences and deliver highly individualized marketing to their entire customer base.

Benefits of E – Commerce

1-Expanded Customer Base

The new market could be accessed through the online and extending the service offerings to customers globally.

2- Expanded geographical reach

Internet shrinks the globe and broadens the current geographical parameters to operate globally

3- Reduction of Marketing and Advertising costs

Marketing and promotional campaigns can be done globally at the reduced cost.

4-Retaining information of customer and customer services improves drastically

5-Strengthens relationship with customers and suppliers

6-Streamlines business process and administrative functions

7- Provide customers valuable information about your business

8- Increase visibility through Search engine Marketing

9-catelogue is quickly updatable

Impacts of E-commerce

The introduction of e-commerce has impacted on the traditional means of online exchanges. It is creating a new market place and opportunities for the reorganization of economic processes, in a more efficient way. The open structure of the Internet and the low cost of using it permit the interconnection of new and existing information and communication technologies. It offers businesses and consumers an innovative and powerful information system and another form of communication. This changes the way they search and consumer products, with these products increasingly customized, distributed and exchanged differently. The advent of ecommerce has seen a dramatic impact on the traditional ways of doing business. It has brought producers and consumers closer together and eradicated many of the costs previously encountered. It is evident that the supply

industry will benefit from e-commerce which includes those producing computers, networking equipment and the software necessary. It is also evident that a negative impact will be targeted at direct substitutes, such as retail travel agencies, retailers of software and “bricks and mortar: music stores. However, these impacts will be small compared to the developments imaginable.

1. How online shopping and Electronic payment system influenced the functioning of economic activities?

The development of electronic commerce has influenced the process and procedures of all economic activities. The most basic of economic transactions— the buying and selling of goods—continues to undergo changes that will have a profound impact on the way companies manage their supply chains. Simply put, e-commerce has altered the practice, timing, and technology of business-to-business (B2B) and business-to-consumer (B2C) commerce.

It has affected the following fields of economic activity.

- Pricing of the product.
- Product availability
- The transportation patterns
- Transaction costs.
- Cost and profit structure of all companies.
- Consumer behaviour in developed economies worldwide.

E-commerce leads the way

Business-to-business electronic commerce accounts for the vast majority of total e-commerce sales and plays a leading role in global supply chain networks. In 2003, approximately 21 percent of manufacturing sales and 14.6 percent of wholesale sales in the United States were e-commerce related; by 2008 those percentages had increased to almost 40 percent for manufacturing and 16.3 percent for wholesale trade. One reason why B2B e-commerce is more sophisticated and larger in size than direct to- consumer e-commerce is that B2B transactions developed out of the electronic data interchange (EDI) networks of the 1970s and 1980s.

The steady growth in business-to-business e-commerce has changed the cost and profit picture for companies worldwide. At the microeconomic level, growth of B2B e-commerce results in a substantial reduction in transaction costs, improved supply chain management, and reduced costs for domestic and global sourcing. At the macroeconomic level, strong growth of B2B e-commerce places downward pressure on inflation and increases productivity, profit margins, and competitiveness.

Double-digit growth for B2C

E-commerce retail has become the fastest growing trade sector and has outpaced every other trade and manufacturing sector since 1999, when the U.S. Census Bureau started collecting and publishing data on e-commerce. That year, e-commerce retail sales represented less than 1 percent of total U.S. retail sales. In 2003 that number climbed to a little less than 2 percent; by 2008 it had grown to 3.6 percent, and by the fourth quarter of 2010 B2C e-commerce reached 4.4 percent of total U.S. retail sales. In dollar terms, e-commerce retail revenue currently stands at approximately US \$165 billion, considerably less than the US \$3.9 trillion that represents the total U.S. retail market.

During the "Great Recession," which lasted from December 2007 through June 2009, manufacturing, wholesale, and bricks-and-mortar retail sales took a heavy beating. By the fourth quarter of 2010 they still had not fully recovered, even though U.S. gross domestic product (GDP) and personal spending (adjusted for inflation) had surpassed their previous peaks seen in late 2007.

Retail e-commerce, by contrast, weathered the recession relatively well, albeit with considerably slower growth than had been seen prior to the financial crisis. In the first quarter of 2002, retail ecommerce experienced quarterly, year-over-year growth of about 42 percent. On the eve of the recession, that rate dropped to a still-respectable 18 percent. Quarterly sales continued to grow until the latter part of 2008, and in the fourth quarter of 2009 sales surpassed the previous peak.

It's important to note here that a large portion of B2C sales come through mail-order houses, many of which have an online presence as well as traditional storefront outlets. Contrary to popular opinion, mail-order houses still have a very strong online presence, and until just recently their sales outperformed online-only retailers.

Economic, behavioural changes

The changes that B2C e-commerce has sparked arguably have had a more significant impact on the economy and on buyers' behaviour than has B2B ecommerce. In the past, when consumers wanted to make purchases they had to set aside time to shop during certain hours of the day, or they had to read through catalogs sent to them by mail-order houses. Today, many consumers can simply use their computers— and now smart phones or other portable electronic devices—to shop online. Buyers and sellers that engage in e-commerce retail trade are no longer restricted by store hours, geographic marketing areas, or catalog mailing lists. With a few simple clicks they can gain access to a variety of goods 24 hours a day, seven days a week.

The characteristics of retail e-commerce merchandise also have changed significantly over the past decade. Back in 2000, computer hardware was the most common type of merchandise sold over the Internet. Today, the variety of merchandise is extremely diverse, and shoppers can buy almost anything online.

Online shoppers have benefited in other ways. The growth of e-commerce retail sales has reduced consumers' search cost, placed downward pressure on many consumer prices, and reduced price dispersion for many consumer goods. But this has led to a substantial decrease in the number of small companies operating in certain industries, as they tend to be less involved with e-commerce. Larger businesses, most notably retail book outlets, new automobile dealerships, and travel agents, are better able to compete in this new market environment.

The extremely rapid growth of e-commerce retail sales has provided a major boost to residential parcel delivery services. That's because online merchandise purchases involve some form of residential delivery by a third-party vendor such as FedEx, UPS, or the U.S. Postal Service. In addition, there appear to be considerable synergies related to B2C parcel and heavier freight volumes—parcel industry insiders have observed that businesses with strong e-commerce related B2C parcel shipment volumes often have stronger B2B shipment volumes than those that do not engage in B2C e-commerce.

E-commerce influences demand patterns

As technology, e-commerce, and globalization become more intertwined, buyers and sellers are increasing their connectivity and the speed with which they conduct sales transactions. As we saw during the recent turmoil in the financial markets and some supply chain networks, speeding up sales transactions can be a very positive attribute when small market corrections are taking place. However, during a major economic correction like the one we witnessed during the Great Recession, a quicker response to sales transactions can have cascading impacts on supply chains, resulting in large contractions or expansions in orders, production, shipments, and inventory.

That's because years ago, it might have taken two years for events in one country to affect another's economy. Now, thanks to technology and instant communication, the impact can be almost immediate.

Thus, there are some potentially negative consequences to the rapid growth of e-commerce. In this volatile business environment, supply chain managers should consider developing strategies for dealing with the rapid swings that can result from increasing use of e-commerce in a globalized market.

SHORT ESSAY TYPE QUESTIONS (5 Marks Each)

1. What is E mail? What are its advantages?

Email

Electronic *mail* or *e-mail* or *email* is information stored on a computer that is exchanged between two users over telecommunications. More plainly, *e-mail* is a message that may contain text, files, images, or other attachments sent through a network to a specified individual. The messages can be notes entered via key board or electronic files like PDF or

images etc. It is a method of exchanging digital messages from an author to one or more recipients. **Email** operates across the Internet or other computer networks.

Examples of email service are Gmail, Yahooemail, rediffmail and Hotmail.

Advantages of E mail

- Quick delivery and reply of messages
 - Convenient-
 - Email keep record of contacts.
 - Keep record of mails sent and received.
 - Can contact a group of people at once
 - No limit on how short or how long the message should be and can attach large documents and other files with a click of a button
 - Doesn't use any paper (good for the environment)
2. What are the differences between a web page and a web site?

In simple words **webpage** is one single page information, while a **website** is made up of number of different webpages connected by links. A web page is a set of content in a frame-like interface that is accessed over the internet when one individual visits a given URL while a website is a collection of many such pages stored in a readily-retrievable mode on a server. The website is designed and created by IT personnel and it can be edited to add new web pages or remove old ones from it.

A **website**, is a set of related web pages served from a single web domain. A website is hosted on at least one web server, accessible via a network such as the Internet or a private local area network through an Internet address known as a Uniform resource locator(URL). All publicly accessible websites collectively constitute the World Wide Web.

A webpage is a web document that is suitable for the World Wide Web and the *web browser*. Wepage is usually written in HTML or comparable markup language, whose main distinction is to provide hypertext that will navigate to *other* web pages via links. Webpages are accessed and transported with the Hypertext Transfer Protocol (HTTP), which may optionally employ encryption (HTTP Secure, HTTPS) to provide security and privacy for the user of the webpage content. The user's application, often a web browser, renders the page content according to its HTML markup instructions onto a display terminal.

The pages of a website can usually be accessed from a simple Uniform Resource Locator (URL) called the web address. The URLs of the pages organize them into a hierarchy, although hyper linking between them conveys the reader's perceived site structure and guides the reader's navigation of the site which generally includes a home page with most of the links to the site's web content, and a supplementary about, contact and link page.

3. What is the difference between internet and intranet?

The Internet is a global system of interconnected computer networks that use the standard Internet protocol suite (*TCP/IP*) to serve several billion users worldwide. It is a *network of networks* that consists of millions of private, public, academic, business, and government networks, of local to global scope, that are linked by a broad array of electronic, wireless and optical networking technologies. The Internet carries an extensive range of information resources and services, such as the inter-linked hypertext documents of the World Wide Web (WWW), the infrastructure to support email, and peer-to-peer networks.

An Intranet is a computer network that uses Internet Protocol technology to share information, operational systems, or computing services within an organization. **Internet** is a network between organizations, but **intranet** is a network within an organization. Sometimes, the term Intranet refers only to the organization's internal website, but may be a more extensive part of the organization's information technology infrastructure, and may be composed of multiple local area networks. The objective is to organize each individual's desktop with minimal cost, time and effort to be more productive, cost efficient, timely, and competitive.

4. Distinguish between Podcast and Web cast?

A **podcast** refers to digital media files made available on the internet, for downloading to a computer or portable media players, typically available as a series, new instalments of which can be received by subscribers automatically. Thus it is a **series of digital media files**, usually **digital audio or video that** is made available for download via Web syndication. Web syndication means making web feeds available from a site by giving people updates. The syndication aspect of the delivery is what differentiates podcast from other files accessible by direct download or streaming (webcast). Web syndication means that special software applications, generically known as pod catchers (such as Apple Inc.'s iTunes or Nullsoft's Winamp), can automatically identify and retrieve new files associated with the podcast when they are made available, and that these files can be stored locally on the user's computer or other device for offline use. This is done by the pod catcher accessing a centrally-maintained Web feed, which lists files associated with a certain podcast.

A **webcast** is a media presentation distributed over the Internet using streaming media technology to distribute a single content source to many simultaneous listeners/viewers. A webcast may either be distributed live or on demand. Essentially, webcasting is "broadcasting" over the Internet.

5. What is social networking? What are its effects?

Social Networking Sites

Social networking websites are online community of internet users. The members of these online community share common relationships and interests like hobbies, politics, and social issues. Social networking often involves grouping specific individuals or organizations together. Social networking sites carry a profile page where a person is possible to upload bio data. The visibility of a profile varies by sites and is according to user discretion. The members are free to look into it and make contact with each other. Examples: My space and Facebook.

Benefits of social networking site

- 1-Social networking sites help to find job
- 2- They help to meet new people online who have the same interests.
- 3- They promote business for free
- 4- Stay in touch with contacts
- 5- These act a platform to meet long lost friend and batch mates.

Potential hazards (demerits) of social networking sites

- 1-The social networking sites display personal information such as name location and address, which can be used by others for illegal activities.
- 2-There are numbers of scammers on social networks who may try to steal personal information.
- 3-It is possible for hackers to intrude into profile through client interface.
- 4-There are fraud profiles.

6. What are the major benefits of E commerce as compared to conventional trade and commerce?

E -Commerce or E-Business is the largest application of computers and information technology in keeping and managing business and financial records. It helps in transaction of any amount of money from part of the world to other. We can purchase anything online with the help of debit and credit cards. Application of e commerce are billing to customers, tracing payments received and payments to be made and tracing supplies needed and items produced, stored, shipped, and sold, etc..

E-Commerce: Concept

E- Commerce is the process of doing business online. Or we can say that E-commerce is to conduct business by using the IT Information technology, i.e., computer technology and electronic communication. It is the buying and selling of items or goods or services on the Web using electronic communication and digital information processing technology.EDI or Electronic Data Interchange is an early form of e-commerce. Its high cost, use of proprietary standards etc.

E-commerce is the process of doing business electronic. It changes the entire business scenario due to the powerful innovation of Internet, which is spreading fast through the world. The power of Internet as a global access was felt with the introduction of the World Wide Web (WWW) in 1994. This global network makes global relations with the companies made easier. It is predicted that, in the near future the digital economy will overtake the traditional economy of all developed countries.

Advantages over E commerce over conventional trade

- E-commerce is a composite of technologies process and business strategies that foster the instant exchange of information within between organization.
 - E-commerce strengthens relationship with buyers make it easier to attract new customer.
 - It Improves customer responsiveness and open new markets on a global scale.
 - E-commerce provides the automated exchange of business information with internal and external customer, suppliers and financial institutions.
 - Expanded Customer Base: The new market could be accessed through the online and extending the service offerings to customers globally.
 - Expanded geographical reach : Internet shrinks the globe and broadens the current geographical parameters to operate globally
 - Reduction of Marketing and Advertising costs: Marketing and promotional campaigns can be done globally at the reduced cost.
 - Retaining information of customer and customer services improves drastically
 - Strengthens relationship with customers and suppliers
 - Streamlines business process and administrative functions
 - Provide customers valuable information about your business
 - Increase visibility through Search engine Marketing
 - Catalogues is quickly updatable
7. What are the recent challenges faced by E commerce in India?

E-Commerce or E-Business is the largest application of computers and information technology in keeping and managing business and financial records. It helps in transaction of any amount of money from part of the world to other. We can purchase anything online with the help of debit and credit cards. Application of e commerce are billing to customers, tracing payments received and payments to be made and tracing supplies needed and items produced, stored, shipped, and sold, etc..

Challenges of E-commerce

As far as e-commerce is concerned it is still in an infancy stage in India. The environment exist today is not much suitable for the fast growth of e-commerce.

- A. One of the important challenges faced by this sector is the lack of adequate infrastructure for IT technology and Internet. The penetration of personal computers in India is as low as

3.5 per thousand of population compared to over 6 per thousand in China and 500 per thousand in USA.

- B. Another important reason for not developing e-commerce is the high tariff rate charged by Internet Service Providers [ISPs] Speed and connectivity is also poor.
- C. Another problem faced is that e-commerce sites are one of the favourite targets of hackers.
- D. The most serious drawback is the absence of effective cyber law at the moment. E-commerce is governed by the UNCITRAL model code, but this is not binding on any country. It is expected that all WTO member countries will soon enact laws to govern e-commerce. Towards this end, India has passed her Information Technology Act in May 2000. However; this Act simply considers the commercial and criminal side of law and fails to consider other multidimensional aspects of e-commerce.
- E. The reason low growth of e-commerce is the privacy and security issues. Measures like digital signatures, Digital certificates, and fire walls can be adopted to secure safety and protection over the message passed on internet.
- F. Payment related problems also continue to block the e-commerce activities. Electronic cash, credit cards etc. are some of the popular payment method used for e-commerce transactions. But unfortunately penetration of e-cash and credit cards not only low, but Indian consumers are suspicious about the threat of fraud played by unscrupulous hackers. In order to minimize this problem, experts suggest the use of digital certificate along with credit card to secure their payment activities.
- G. Electronic commerce is also characterized by some technological and inherent limitations which have restricted the number of people using this revolutionary system.
 - a. Internet has still not touched the lives of a great number of people, either due to lack of knowledge or trust. A large number of people do not use the Internet for any kind of financial transaction.
 - b. It is not suitable for perishable commodities like food items. People prefer to ship in the conventional way than to use e-commerce for purchasing food products. So e-commerce is not suitable for such business sectors.
 - c. The time period required for delivering physical products can also be quite significant in case of e-commerce. A lot of phone calls and e-mails may be required till you get your desired products. However returning a product and getting a refund can be more troublesome and time consuming than purchasing, in case if you are not satisfied with a particular product.

Some of the other limitations are:-

- Credit card security is a serious issue if vulnerable
- Costs involved with bandwidth and other computer and server costs
- Extensive database and technical knowledge and experience required

- Customer apprehension about online Credit Card orders
- Constantly changing technology may leave slow business behind
- Some customers need instant gratification, and shipment.
- Search utilities far surpasses the speed used to find products through catalogs
- Encourages competition between small and large online retailers

8. What are the advantages and disadvantages of Online shopping?

Online shopping has become a popular shopping method ever since the internet has declared a takeover. There are many individuals that are looking for other amazing alternatives shopping and online shipping is just the fix for that. There are many advantages of online shopping; this is the reason why online stores are a booming business today. Online shopping includes buying clothes, gadgets, shoes, appliances, or even daily groceries. Listed below are several online shopping advantages and these are the following.

Advantages of Online Shopping

- **Save Time** –With just a couple of clicks of the mouse, you can purchase your shopping orders and instantly move to other important things, which can save time. No queue and other formalities.
- **Save Fuel** –fuel costs does not affect your shopping process. One of the advantages of shopping online is that there is no need for vehicles, so no purchase of fuel necessary.
- **Save Energy** –It is tiresome to shop from one location and transfer to another location. What is worse is that there are no available stocks for the merchandise you want to buy. In online shopping, you do not need to waste your precious energy when buying.
- **Comparison of Prices** – The advanced innovation of search engine allows you to easily check prices and compare with just a few clicks. It is very straightforward to conduct price comparisons from one online shopping website to another. This gives you the freedom to determine which online store offers the most affordable item you are going to buy.

- **Any time availability (24x7)** – Online shopping stores are open round the clock of 24/7, 7 days a week and 365 days. It is very rare to find any conventional retail stores that are open 24/7. The availability of online stores give you the freedom to shop at your own pace and convenience.
- **Ensure privacy to your consumption** – There are times that you want to purchase something out of the ordinary that can be a bit embarrassing when seen by other people. In online shopping, you do not need to be ashamed; your online transactions are basically done privately.
- **Easy to Search Merchandise You Want to Buy** – You are able to look for specific merchandise that includes model number, style, size, and color that you want to purchase. In addition, it is easy to determine whether the products are available or out of stock.

Disadvantages of Online Shopping

If there are advantages, most likely there will be disadvantages. Despite the success of purchasing through online shopping stores, there are still some disadvantages that most people complain about. These include:

- **Personally Check the Item**

If you are one of those shoppers who want to touch, see, and test the product personally, at online shopping, you are not able to do so. Online stores are only showing product description and photos of the merchandise, which can be a disadvantage for many online shoppers.

- **Diminished Instant Satisfaction**

Unlike buying at retail stores, you are able to use the product instantly after you buy it, which can be satisfying. However, online shopping requires patience to wait for the item to arrive at your door step about 2 to 3 days or even longer depending on the location you've ordered it from.

Online shopping is continuously becoming more popular and improving every single day. Knowing the advantages of online shopping and its disadvantages is additional knowledge for a lot of online shoppers that are useful before shopping online

SHORT ANSWER TYPE QUESTIONS (2 Marks Each)

1. Define WWW?

World Wide Web is a global web in which millions of users are communicating with each other with the help of computers. World Wide Web consists of a large number of websites that contain a number of web pages maintained by various web servers around the world.

2. What are the steps in using World Wide Web?

Whenever a user wants to retrieve a webpage, (Use internet) the www works as follows:

- The User enters URL of the webpage in the address bar of the explorer.
- The web browser requests the domain name server (DNS) for corresponding URL
- After receiving the IP address browser sends the request for the webpage to the internet using HTTP protocol
- The web server receives the request using HTTP protocol and it returns back to the web browser.
- The web browser then interprets the file and displays the contents of the webpage.

2. What is URL?

Uniform Resource Identifier or Locator (URI/URL) URL refers web address or unique internet address of different database systems (websites) which consist of objects like texts, images, audio etc.. URL refers to all type of names and addresses that refers to objects on the World Wide Web. Ex: www.keralapsc.org

3. Define FTP?

File Transfer Protocol (FTP) is a standard network protocol used to transfer files from one host to another host over TCP-based network, such as the Internet. FTP is built on a client-server architecture and uses separate control and data connections between the client and the server. FTP users may authenticate themselves using a clear-text sign-in protocol, normally in the form of a username and password, but can connect anonymously if the server is configured to allow it. For secure transmission that hides (encrypts) the username and password, and encrypts the content, FTP is often secured with SSL/TLS ("FTPS").

4. What is HTTP?

Hyper Text Transfer Protocol (HTTP) and Hyper Text Markup Language (HTML)

Hyper Text Transfer Protocol (HTTP) is a set of rules for communication between web server and web browser. The web server is a computer that hosts the website and web browser is the user applications that access the web content. The web pages are sent from web server to client in markup language called Hyper Text Markup Language (HTML). A Markup Language is language to represent text and some formatting information together in human readable text format.

5. Define E Commerce?

E- Commerce is the process of doing business online. Or we can say that E-commerce is to conduct business by using the IT Information technology, i.e., computer technology and electronic communication. It is the buying and selling of items or goods or services on the Web using electronic communication and digital information processing technology.

6. What is Electronic payment system?

Electronic Payment system is a financial exchange that takes place online between buyers and sellers. The content of this exchange is usually some form of digital financial instrument {such as encrypted credit card numbers, electronic cheques or digital cash} that is backed by a bank or an intermediary, or by a legal tender.

7. What is podcast?

A **podcast** refers to digital media files made available on the internet, for downloading to a computer or portable media players, typically available as a series, new installments of which can be received by subscribers automatically. Thus it is a **series of digital media files**, usually **digital audio or video**, which is made available for download via Web syndication.

8. Define web cast.

A **webcast** is a media presentation distributed over the Internet using streaming mediatechnology to distribute a single content source to many simultaneous listeners/viewers. A webcast may either be distributed live or on demand. Essentially, webcasting is "broadcasting" over the Internet.

9. Point out the advantages of social networking sites?

Benefits of social networking site

- a) Social networking sites help to find job
- b) They help to meet new people online who have the same interests.
- c) They promote business for free
- d) Stay in touch with contacts
- e) These act a platform to meet long lost friend and batch mates.

10. What are the disadvantages of social networking sites?

Potential hazards (demerits) of social networking sites

- a) The social networking sites display personal information such as name location and address, which can be used by others for illegal activities.
- b) There are numbers of scammers on social networks who may try to steal personal information.
- c) It is possible for hackers to intrude into profile through client interface.
- d) There are fraud profiles.