INFORMATION TECHNOLOGY

CLASS X

EMPLOYABILITY SKILL

COMMUNICATION SKILL

What is communication?
The imparting or exchanging of information by speaking, writing or using some other medium and means of sending or receiving information.

What is Writing?
Writing is a form of communication that allows students to put their feelings and ideas on paper, to organize their knowledge and beliefs into convincing arguments, and to convey meaning through well-constructed text. In its most advanced form, written expression can be as vivid as a work of art.
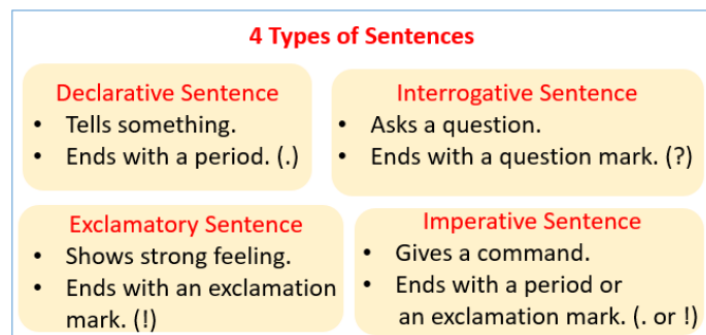
What are Phrases?
Phrases are a group of words that work together to communicate an element of speech. Differet types of phrases are:
1. Prepositional
2. Appositive
3. Participial
4. Gerund
5. Infinitive

What is a sentence?
A set of words that is complete in itself, typically containing a subject and predicate, conveying a statement, question, exclamation, or command, and consisting of a main clause and sometimes one or more subordinate clauses.

4 Types of Sentences

Declarative Sentence
- Tells something.
- Ends with a period. (.)

Interrogative Sentence
- Asks a question.
- Ends with a question mark. (?)

Exclamatory Sentence
- Shows strong feeling.
- Ends with an exclamation mark. (!)

Imperative Sentence
- Gives a command.
- Ends with a period or an exclamation mark. (. or !)

What is a paragraph?

A paragraph is a series of sentences that are organized and coherent, and are all related to a single topic.

What are the different barriers to effective communication?

Physical Barriers – Physical barriers separate people from each other and mark territories. These barriers can often be seen in the workplace where offices and closed doors stop communication.

Language Barriers – Not using words another can understand will certainly stop your message from being conveyed. This not only applies to actual languages but also expressions, format used, buzz words and other jargon.

Gender Barriers – Variation exists among masculine and feminine styles of communication. There are distinct differences between the speech patterns in a man and those in a woman.

Attitudinal B**arriers -** as those behaviors or perceptions that are divisive in nature – the ones that can lead to nagging doubt, sullen disagreement or even overt conflict.

Perceptual Barriers – Different world views can create misunderstanding. People tend to interpret messages from their own point of view or ideologies. Without thinking, one might only view a message from his or her own mindset rather than looking at it from another viewpoint.

Cultural Barriers – Ethnic, religious, and social differences can often create misunderstandings when trying to communicate. These differences can also affect one's perception and create confusion in getting a message.

Emotional Barriers –If one is consumed with emotion he will have difficulty in understanding what is communicated. Hostility, anger, fear, and other emotions make it hard to hear outside one's own self.

What are the different technique to handle the barriers to effective communication?

Engage in face-to-face interactions whenever possible. As you've probably learned from experience, text messages and even emails can be misinterpreted without the nonverbal "assist" of facial expressions, tone and inflection

Reduce or eliminate distractions around you. Noise from other people and office machines can sink even the most pleasant interactions, dooming them to a rough start.

Try to assess the needs of the receiver. This is not an easy objective. But as an employer, look at the bright side: you're privy to some attitudinal variables: age, culture, education, experience, gender and race.

Hone your active listening skills.

a) Acknowledge the other person's ideas, thoughts or feelings. Paraphrase the other person's words to ensure understanding.

b) Ask questions without judging. Summarize and clarify what you hear. Offer your opinion if it's requested.

c) Organize your thoughts. You don't have to write notes, but if doing so helps you organize what you want to say and how you want to say it, then by all means, start writing.

Soften your tone and language. As the boss, you know people watch your every move, so you also know that being courteous and professional is a must in every interaction. To defeat any attitudinal barriers, it can help immensely to maintain a gentle, reassuring tone and use simple, non-confrontational language. **Keeping sentences short and direct** can also help to prevent any misunderstandings.

Encourage feedback. Even this seemingly benign step can be fraught with peril, if "the other guy" clams up and disses you behind your back. Now might be a good time to remember the advice about how the receiver also bears responsibility for whether a two-way exchange is a success or a failure.

ICT(INFORMATION AND COMMUNICATION TECHNOLOGY)

Basic Computer Operations

What do you mean by Operating System and its functions?
An operating system is the basic software that controls the computer. It serves as an interface between the user and the computer.
Some of the functions of Operating system are:
- It manages all the devices of a computer and keeps track of the status of the device, whether it is busy or not.
- It also checks whether the device is functioning properly or not.
- It also controls software resources of the computer.
- it manages the computer memory and keeps track of which memory space
- is in use by which program and which space is free.
- It manages the structure of the files and directories on a computer system.
- It keeps track of the amount of disk space used by a specific file.
- It allows you to create, copy, move and delete files.

What are the different types of Operating Systems? Explain
- **DOS** DOS (Disk Operating System)
- **Windows** It is an operating system developed by Microsoft.
- **Linux** It is an operating system designed for personal computers. It is a free and open-source software
- **Mobile operating Systems**
- **Android**
- **Symbian**
- **Windows Phone**
- **iOS**

Types of Operating Systems

The different types of operating systems are as follows:

Interactive (GUI-based) A graphical user interface is a user-friendly operating system in which commands can be entered by clicking/double-clicking/right clicking a mouse. Windows operating system is an example of an interactive operating system.

Single-user , single-task operating system This type of operating system allows only one user to do a task on the computer and one thing at a time.

Single-user, multi-task operating system This type of operating system is used on Desktop computers, laptops, where a single user can operate on several programs at the same time. For example, Windows, Apple MacOS are examples of single-user multitask operating system.

Multi-user A multi-user operating system enables multiple users to work on the same computer at different times or simultaneously.

Real Time A real time operating system is used to control machinery, scientific instruments, like robots, in complex animations and computer controlled automated machines.

A real-time operating system is a computing environment that reacts to input within a specific period of time. It manages the resources of the computer so that any particular operation is executed in the same amount of time every time it is executed.

Windows CE and Lynx OS are examples of real-time operating systems.

Distributed A distributed operating system runs on a set of computers that are interconnected by a network. It combines the different computers in the network into a single integrated computer and storage location. Windows, UNIX, and LINUX are examples of distributed operating systems.

## Windows 7 operating system

What is windows 7 Operating System?
Windows 7 is an operating system developed by Microsoft and is used on personal computers.

Describe the File System used by operating system.
Everything we store on your computer is stored in the form of a file. File system is a way in which you give name to a file, store it and retrieve it. There are specific naming conventions for naming files or folders, like characters that can be used, maximum number of characters, etc.

Files can be separately placed into groups, called folders/directories. Each directory/folder can contain related files and/or sub-folders. A sub-folder may contain one or more files and sub-folders within. This allows easy accessibility of files.

Files are managed in a hierarchy. This allows you to view the files in the current directory and then move to sub-directories.
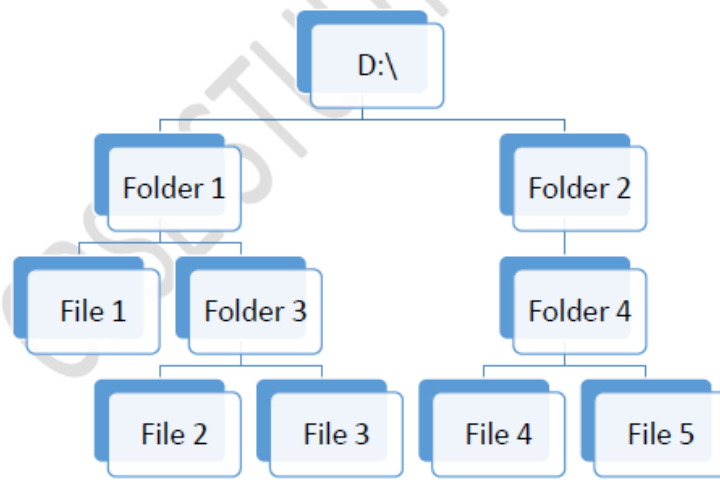
File Structure 1

Importance and need of care and maintenance of computer

What is the Importance and need of care and maintenance of computer?
Computer systems require maintenance so that the system works efficiently. Poor maintenance may lead to system failure.
Computer virus, malware, and other harmful softwares can cause damage to the working of the computer. If anti-virus is installed in the computer, and is updated and run periodically, then any loss of data can be prevented.
Regular maintenance of the system includes installing updates, security, taking backups, scans, etc

Both internal and external parts of the computer system should be taken care of.
1. Keep the computer dust free.
2. Do not eat or drink while working on the computer. Food or drink may spill on the system.
3. To keep the keyboard clean, make sure your hands are clean before using it.
4. CDs and DVDs should be handled carefully so that it does not get any scratches.
5. Keep keyboard covered when not in use.

Preparing computer against virus
To prevent our computer from being infected with virus, we should install anti-virus software, run it periodically and keep it updated so that it can scan and remove new viruses.
Antivirus software is a program designed to detect and remove malicious programs from the computer.
Some examples of antivirus software are McAfee VirusScan, Norton AntiVirus, Microsoft Security essentials, and Quick Heal.

SELF-MANAGEMENT SKILLS

Meaning and Importance of Stress Management
Stress Management refers to focusing human efforts for maintaining a healthy body and mind capable of better withstanding stressful situations.
A Stress well managed can help one view events and situations as challenges and contributes in the growth of individual. Unmanaged stress leads to anxiety and sorrow resulting in ill status of mental and physical health. Stress causal agents can have following origins.
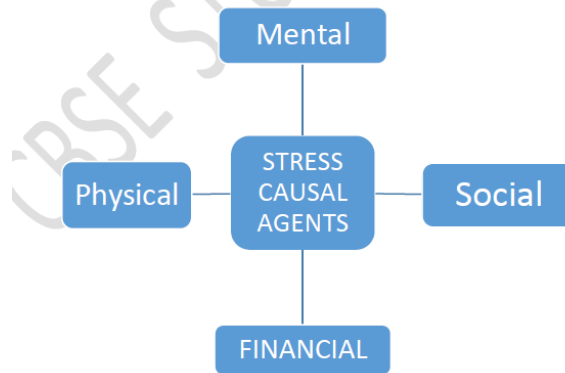
Types of Stress 1

What are the different types of Stresses? Explain

Mental: Students can be left overwhelmed, if they are unable to handle their assignment submission deadlines and examinations grades. Overly high expectations from self can leave one with chronic anxiety and stress.
Physical: As children grow up they may seek more independence, may become critically conscious of their looks and have to cope up with hormonal changes. Issues related to general well-being and health of an individual can lead to low self-esteem and cause stress.
Social : Discord amongst family members, peer pressure for doing things which kids will generally avoid , maintaining balance in relationships amongst friends, status show off may lead to stress at times.
Financial: Youngsters may have aspirational financial stress. This may of becoming Independent or Finances aspirational stress may

What are the different Stress Management Techniques? Explain

Physical Exercise
When stress affects the brain, rest of the body also feels the impact. Physical exercise in the form of walking, skipping or for that matter indulging in any sports has been found

to relieve stress as they stabilize mood, improve self-esteem and induce sleep.

Yoga

Yoga is a school of Hindu philosophy reduces stress, which includes a series of postures and breathing exercises practiced to achieve control of body and mind.

Meditation

It is a practice where an individual is supposed to focus his/her mind on a particular object, thought or activity to achieve a calm mental state reducing stress.

Enjoying

Recreational activities like watching movies, attending concerts, playing games, involving in adventure sports, singing, dancing or even sketching can help individuals transcend to a happier mental state and help manage stress.

Going On Vacations with Family and Friends

Vacations provide an opportunity of taking a holiday from our routine and appreciate different facets of life. Vacations can be taken up to friends and relatives place as well as to far flung attractive locations. Vacationing helps in de-stressing individuals.

Taking Nature Walks

Taking nature walks in a pristine environment of a national park or a sanctuary or a trail in country side / village, brings us a calmness by allowing our over stimulated minds a chance to relax and helps us relax.

ENTREPRENEURIAL SKILLS

What is Entrepreneurship?

What is Entrepreneur?

Describe Entrepreneurship Development?

Entrepreneurship development is the process of strengthening the skills and knowledge of budding and existing entrepreneurs by handholding them during their entrepreneurial journey. It involves enabling entrepreneurs through structured training and institution building programs, which empowers them to run their business effectively and efficiently.

What are the different Objectives of Entrepreneurship Development?
- Assisting entrepreneurs in undergoing the process of entrepreneurship.
- Helping aspiring entrepreneurs start and grow dynamic businesses that provide high value add.
- Developing the motivational needs of entrepreneurs.
- Training entrepreneurs to develop the required skills and gain knowledge for running and managing a   new business.
- Supporting entrepreneur in creating effective business plans.
- Providing incubation and acceleration to new ideas.

What are the different phases of Entrepreneurship Development?
Stimulatory phase :
It is called stimulatory phase because it includes activities which stimulate the individual's need, interest and motivation for being an entrepreneur.
Support phase
This phase is all about supporting the new ventures in their establishment by mentoring, incubating, financing and advising the entrepreneurs. This includes providing support across various activities such as registration of enterprises; designing the right business model; development of the product prototype etc.
Sustenance phase:
In this phase, entrepreneurship development is focused on helping enterprises to grow after they have been established. It helps in continuous and efficient functioning of enterprises within a society.

National Skill Development Mission:

Make in India
It is an initiative of the Government of India, launched on 25th September 2014 to encourage multi-national, as well as domestic, companies to manufacture their products in India. The major objective behind the initiative is to focus on job creation and skill enhancement in 25 sectors of the economy. Make in India also aims at high quality standards and minimising the impact on the environment. The initiative hopes to attract capital and technological investment in India.
Start-Up India
The main aim of Start-up India is to encourage entrepreneurship among the youth of India. The 'Start-up India: Stand up India' promotes bank financing for start-ups and offer incentives to enhance entrepreneurship and job creation. This initiative aims to provide a new dimension to entrepreneurship and help in setting up of a network of start-ups in the country.
 ATAL Innovation Mission (AIM)
It also called as AIM Platform and was established through 2015 budget within National Institution for Transforming India (NITI) to provide innovation promotion platform involving academicians, and drawing upon national and international experiences to foster a culture of innovation, research and development.

What are the different functions of an entrepreneur?
1. **Entrepreneurial functions**
    a. **Organisation Building and Management**
    b. **Risk taking**
    c. **Risk taking**

2. **Promotional functions**
    a. **Idea Discovery**

b. **Detailed Investigation**
c. **Assembling the Requirements**
d. **Financing:**

3. **Managerial functions**
   a. **Planning**
   b. **Organizing**
   c. **Directing**
   d. **Staffing**

Define Importance of Entrepreneurs.

1. **Free market evolution**
2. **Efficiency improvements**
3. **New markets**
4. **New values**

What are the myths of Entrepreneurship?

Entrepreneurs are born that way

Many people assume that entrepreneurial qualities are innate and that only people who have certain natural talents can be entrepreneurs. However, the truth is that almost anyone can become an entrepreneur if they can learn the necessary skills. Entrepreneurs may be gregarious extroverts or quiet introverts; they may be "big picture" thinkers or more focused on the details of executing an idea. Entrepreneurship is a learned skill, not a natural-born ability.

All entrepreneurs have great ideas

Some people may not attempt to start their own business because they don't have a unique idea. It is not needed to reinvent the wheel to be an entrepreneur. There is nothing wrong with taking an existing idea and making your own business out of it.

The only requirement is a good idea

Even the very best ideas, ones with the potential to disrupt an entire industry, need proper execution to become reality. Ideas are important, but so are planning, talent, leadership, communication, and a host of other factors.

Businesses either flourish or fail

Because the select few start-ups that skyrocket out of the gate receive the bulk of the media, it's easy to adopt an all-or-nothing outlook on entrepreneurship. While many ventures make it big and many fail, a lot of businesses are run with patience and strategy with a focus on self-sustenance and gradual growth.

Entrepreneurs take lots of risks

Entrepreneurs take risks. With that said, they don't necessarily take lots of risks or put themselves in high-risk situations all the time. Entrepreneurs learn how to take calculated risks. It is all about balancing the risk and reward.

One must know everything before starting a business

Real entrepreneurs thrive on being in a constant state of learning. They enjoy creating, improvising and pushing boundaries. Being new and even somewhat naïve can be an asset in today's rapidly changing world. That's because succeeding at entrepreneurship requires energy, innovation and the ability to push yourself outside your comfort zone. It's often not what you know, but how fast you learn, that counts.

A lot of money is required to start any business

While certain amount of capital is required for take a business off the ground, it varies depending on the business. The key in entrepreneurship is to start with resources available and grow slowly and steadily. It is not necessary that one should fear or deter from entrepreneurship due to lack of financial resources.

What are the advantages and disadvantages of entrepreneurship?

Advantages

Control. One can choose the work they like to do, use their strengths and skills, and follow their own style of working and doing things. This can result in more work satisfaction.

Excitement. Entrepreneurship can be exciting and many entrepreneurs consider their work highly enjoyable. Each day is filled with new opportunities to challenge one's abilities, skills, and determination.

Flexibility. Entrepreneurs can schedule their work hours around other commitments, including spending quality time with their families.

Freedom. Freedom to work whenever they want, wherever they want, and however they want draws many people to entrepreneurship. Most entrepreneurs don't consider their work actual work because they are doing something they love.

Rational salary. As an entrepreneur, one's income is directly related to their efforts and the success of the business.

Disadvantages

Administration. While making all the decisions can be a benefit, it can also be a burden. Being an entrepreneur comes with a lot of paperwork that can take up time and energy.

Competition. Staying competitive is critical as a small business owner. One needs to differentiate their business from others in order to build a solid customer base and be profitable.

Loneliness. It can be lonely and scary to be completely responsible for the success or failure of one's business.

No regular salary. Being an entrepreneur often means giving up the security of a regular paycheck. If business slows down, one's personal income can be at risk.

Work schedule. The work schedule of an entrepreneur can be unpredictable. A major disadvantage to being an entrepreneur is that it requires more work and longer hours than being an employee.

GREEN SKILL

What are the main sectors of the green economy? Explain.
- E-waste management
- Green transportation
- Renewal energy
- Green construction
- Water management

E-waste Management:
E waste comprises of discarded electronic devices. Which can be reused, resale, salvaged, or recycled or disposed

Green Transport:
Green transport refers to making efficient and effective use of resources,modification of transport structure and making healthier travel choices. Green transport factors in climatic and environmental impact globally. Green transport is also termed as Smart transportation that supports and enhances walkable urbanization. It reduces congestion, reduces our dependency on cars and foreign oil, green transport is safer and less costly and helps save our planet. smart cycle

Renewable energy:
Energy that is collected from renewable resources, which are naturally replenished on a human timescale, sunlight, wind tide, rain waves, geo thermal heat.

Green construction:
Green construction is also referred as sustainable building; includes both the structure and processes that are environmental friendly, responsible and resource efficient through the building lifecycle i.e. from design, operation, maintenance renovation and demolition.

Water Management:
Water management is also referred as optimization of water usage. It's management of water resources under a set of policies and regulation. Water once an abundant natural resource is becoming a valuable resource, due to draughts and over use.

What are the objectives of the green economy?
Green economy's objective is to reduce environmental risks and ecological scarcities that aim for sustainable development, without degrading the environment.

What is the role of government in greening economy?
Government has important role for setting policies that serve, advance and protect the public's interest in transitioning towards an energy system that is more sustainable from both a supply and environmental standpoint. Government can play crucial role in helping to plug gaps by conducting research.

SUBJECT SKILLS

Unit 2:- Web Applications

Session 1:- WORKING WITH ACCESSIBILITY OPTIONS

Q1:- What do you mean by Computer Accessibility?

Ans:- Computer Accessibility refers to the user friendliness of a computer system for all, regardless of their disability.

Q2:- What do you mean by Assistive Technology?

Ans:- when a combination of hardware and software, it enables a person with a disability or impairment to use a computer.

Q3:- What are the numerous types of impairment that impact computer usage?

Ans:-

- Cognitive impairments and learning disabilities, such as dyslexia, attention deficit-hyperactivity disorder (ADHD) or autism.
- Visual impairment such as low-vision, complete or partial blindness, and color blindness.
- Hearing impairment including deafness.
- Motor or dexterity impairment such as paralysis, cerebral palsy, or carpal tunnel syndrome and repetitive strain injury.

Q4:- Define the following terms:-

a. Sticky Keys
- Sticky Keys is an accessibility feature to help computer users with physical disabilities, but
- it is also used by others as a means to reduce repetitive strain.
- Sticky Keys allows the user to press and release a modifier key, such as Shift, Ctrl, Alt, or the Windows key, and have it remain active until any other key is pressed.

b. Filter Keys
- Filter Keys is a feature of Microsoft Windows. It is an accessibility function that tells the keyboard to ignore brief or repeated keystrokes, making typing easier for people with hand tremors.

c. Toggle Keys
- ToggleKeys is also a feature of Microsoft Windows. It is an accessibility function which is designed for people who have vision impairment or cognitive disabilities.
- When ToggleKeys is turned on, computer emits sound cues when the locking keys (Caps Lock, Num Lock, or Scroll Lock) are pressed.

d. Serial Keys

- Serial Keys is an accessibility feature that assists people that have difficulty using a keyboard or a mouse (or both).
- They can use special devices such as Sip, Puff and Breath Switches to provide input to the computer through Serial Ports.

e. Sound Sentry
- Sound Sentry is designed to help users with auditory impairments.
- Sound Sentry generates visual warnings, such as a blinking title bar or a flashing border, whenever the computer generates a sound.

f. High Contrast
- High Contrast is an accessibility feature to assist people with vision impairment.
- We can change the size and color of fonts and the background for ease of viewing.

g. Cursor Options
- Cursor Options is also an accessibility feature that assists people with vision impairment by changing the blink rate and width of the cursor

h. Mouse Keys
- Mouse Keys is an accessibility feature that assists people who have difficulty using a mouse.
- This option uses the keyboard (especially numeric keypad) as a pointing device instead of a mouse.

Session 2:- NETWORKING FUNDAMENTALS

Q1:- What do you mean by computer network?

Ans:- A computer network is a collection of computers and other hardware components interconnected by communication channels (cables or satellites) that allow sharing of resources and information.

Q2- Define the following Network Architectures?

a. Peer-to-peer (P2P) Architecture:
- Networks in which all computers have an equal status are called peer to peer networks.
- Generally in such a network each terminal has an equally competent CPU.

b. Client-Server Architecture:
- Networks in which certain computers have special dedicated tasks, providing services to other computers (in the network) are called client server networks.
- The computer(s) which provide services are called **servers** and the ones that use these services are called **clients**.

Q3- Discuss the types of computer network?
Ans:- There are three types of networks
1. Local Area Network(LAN)
- A local area network (LAN) is one which connects computers and devices in a limited geographical area such as home, school, computer laboratory, office building, or closely positioned group of buildings.
- Usually local area networks offer very high speeds and are used for connecting computers and peripherals such as printers, scanners, etc.

2. **Metropolitan Area network (MAN)**
   - A metropolitan area network (MAN) is a computer network that interconnects users with computer resources in a geographic region of the size of a metropolitan area.
   - The term MAN is applied to the interconnection of local area networks (LANs) in a city into a single larger network
3. **Wide Area Network(WAN)**
   - A wide area network (WAN) is one which covers a broad area (i.e., any network that links across metropolitan, regional, or national boundaries).
   - The Internet is the most popular WAN, and is used by businesses, governments, non-profit organizations, individual consumers, artists, entertainers, and many others.

Q4- Define Internet?

Ans:- The Internet is a global system of interconnected computer networks that use the standard Internet protocol suite to serve billions of users worldwide.
It is a network of networks that consists of millions of private, public, academic, business, and government networks.

Q5- What is World Wide Web?

Ans:- World Wide Web (abbreviated as WWW or W3, commonly known as the Web), is a system of interlinked hypertext documents accessed via the Internet.

Q6- What are the advantages of Networking?

Ans:- Some of the advantages associated with networking are:

• **Data Sharing:** One of the most important uses of networking is to allow the sharing of data. Users can send text files, spread sheets, documents, presentations, audio files, video files, etc. to other users.

• **Hardware Sharing:** Hardware components such as printers, scanners, etc. can also be shared. For example, instead of purchasing 10 printers for each user, one printer can be purchased and shared among multiple users thus saving cost.

• **Internet Access Sharing:** We can purchase a single Internet connection and share it among other computers in a network instead of purchasing multiple Internet connection for each computer. This is very commonly found in Internet café (browsing centres), schools, colleges, companies, etc.

• **Usage of network based applications:** Such as web browsers, email clients, chat application, audio & video calling, etc is another advantage.

Q7- Which companies provide Internet Connection?

Ans:- Internet connections are provided by Internet Service Providers such as Bharat Sanchar Nigam Limited (BSNL), Airtel, MTS, Vodafone, Tata Docomo, etc.

Q8- What is ISP? Give Some examples.

Ans:- An Internet service provider (ISP) is an organization which provides you with access to the Internet via a dial-up (using modem) or direct (hard wired) or wireless connection.
Example:- (BSNL), Airtel, MTS, Vodafone, Tata Docomo, etc.

Q9- What is Modem?

Ans:- Á modem is a device that converts digital computer signals into a form (analog signals) that can travel over phone lines.

It also re-converts the analog signals back into digital signals.

The word modem is derived from its function MOdulator/DEModulator.

Q10- Define the following types of Internet Connectivity?

Ans:-Some of the commonly used Internet connectivity are:

Dial-up: Dial-up Internet access is a form of Internet access that uses the facilities of the public switched telephone network (PSTN) to establish a connection to an Internet service provider (ISP) via telephone lines using a device called MODEM.

Dial-up connections are extremely slow and in most cases, it is replaced by a high speed connection such as DSL or Cable Modem.

DSL: Digital subscriber line(DSL) provide Internet access by transmitting digital data over wires of a local telephone network.
DSL service is delivered along with wired telephone service on the same telephone line.

Cable Internet Access: Cable Internet Access is a form of broadband Internet access that uses the cable television infrastructure.

Cable Internet Access is provided through existing cable TV networks;

3G: 3G, short for 3rd Generation is a set of standards used for mobile devices and mobile telecommunication services and networks.

High-Speed Downlink Packet Access (HSDPA) is 3G mobile telephony communications protocol that allows higher data transfer speeds and capacity.

WiMAX: WiMAX (Worldwide Interoperability for Microwave Access) is a wireless communications standard designed to provide mobile broadband connectivity across cities and countries through a variety of devices.

WiMAX is a long range system, covering many kilometres and is typically used where DSL or Cable Internet Access cannot be used;

WI-Fi: Wi-Fi is a popular technology that allows an electronic device such as computers or mobile phones to exchange data wirelessly over a network, including high-speed Internet connections.

Wi-Fi devices such as personal computer, smartphones, video game console, etc. can connect to a network resource such as Internet through a device called the Wireless Access Point (WAP).

Wi-Fi is used where cables cannot be run (such as old buildings, outdoor areas) to provide network and Internet access.

Wi-Fi connectivity is used in home & offices, hotels, college & school campus typically for Internet Access.

Q11- Discuss the type of Wired Internet Connectivity?

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Q13- How is the data is transferred on Internet?

Ans:-

• The data is broken up into bits of same sized pieces called **packets.**

• A **header** is added to each packet explaining where the data has come from, where it should end up and where it fits in with the rest of the packets.

• Each packet is sent from computer to computer until it finds its **destination.** Each computer on the way decides where next to send the packet. All packets may not take the same route.

• At the destination, the packets are **examined.** If any packets are missing or damaged, a message is sent asking for them to be re-sent. This continues until all packets have been received intact.

• The packets are now **reassembled** into their original form. All this done in seconds!

Session 3:- INTRODUCTION TO INSTANT MESSAGING

Q1- What is IM?

      OR

What do you mean by instant messages?

Ans:- Instant messaging (IM) is a form of communication over the Internet that offers an instantaneous transmission of text-based messages from sender to receiver.

Q2- What are the Key Features of an Instant Messaging?

Ans:-

- Text Messages can be sent to one or more person (Similar to SMS)
- Audio calling and conferencing.
- Video calling and conferencing.
- File transfers (Not limited to documents, spread sheets, audio files, video files, etc.)
- Message history (Save messages for future reference).

Q3- List any five application based instant messaging software?

Ans:-

- Google Talk
- Yahoo! Messenger
- Skype
- Windows Live Messenger
- Rediff Bol, etc.

Q4- What are Web based instant messaging software?

Ans:-

- Meebo
- Yahoo! Messenger for the Web
- MSN Web Messenger
- IMO, etc.

Session 4:- CHATTING WITH A CONTACT – GOOGLE TALK

Q1- What are general rules and etiquettes to be followed while chatting?

Ans:-

- Messages should be short and to the point.
- Always introduce yourself by name if your screen name doesn't reflect it.
- Always ask if the other person has time to chat first - regardless of how important you think what you have to say is, it's not going to be well received if the recipient is busy.
- In a business environment, know exactly what you want to discuss.
- Typing your messages in uppercase is extremely rude - it's considered shouting and very aggressive.
- Give people time to respond - Multiple questions sent to a recipient before they've had a chance to answer can seem more like an interrogation rather than a conversation.
- It's important to properly end an IM conversation - you may think the chat is over, but the other person may not. While you're off doing other things, they may be sitting there staring at the screen waiting for further communication from you!!

Q2- What are the basic needs to use instant messaging (chat) softwares?

Ans:- Instant messaging happens in real-time and the response from participants can be spontaneous.
Instant messaging software allows users to view messages received when they are not logged on.

Session 5:- CREATING AND PUBLISHING WEB PAGES - BLOG

Q1- Explain the purpose of a blog?
           OR
State the purpose of creating a Blog.
Ans:- A blog is a discussion style site used by non-technical (or technical users) users for creating personal web pages.
Blog is used to convey messages about events, announcements, news, reviews, etc.
Blogs are usually managed using a web browser and this requires active internet connection.

Q2- List any 5 websites that provide blog service?
Ans:-

- www.WordPress.com
- www.blogger.com
- www.blog.com
- www.weebly.com
- www.blogsome.com

Q3- Difference between web page and website ?

Ans:- A **Web page** is a document for the World Wide Web that is identified by a unique uniform resource locator (URL).A **website** is the group of web pages which are placed in a location on the internet under a domain.

Session 6:- USING OFFLINE BLOG EDITORS

Q1- Explain the purpose of an offline blog editor.
Ans:- If we do not have an active internet connection, we can create blogs using a blog application and publish the blog whenever internet connectivity is available.

Q2- List any five offline blog editors.
Ans:-
- Qumana
- Windows Live Writer
- Blogdesk
- Blogo
- Scribefire

Session 7:- ONLINE TRANSACTIONS

Q1- Explain the purpose of Online transactions.
Ans:- Online transaction is a payment method in which the transfer of fund or money happens online over electronic fund transfer.

Q2:- List any five websites that allow online transactions.
Ans:-
- IRCTC (www.irctc.co.in), an online portal for booking flight and train tickets.
- Flipkart(www.flipkart.com), an online shopping portal for buying consumer products.
- EBay(www.ebay.com), an online portal for buying and selling goods.
- Redbus(www.redbus.in), an online portal for booking bus tickets.
- Snapdeal(www.snapdeal.com), an online portal for buying and selling goods.

Q3:- List any three payment tools to use online transactions.
Ans:-
- credit card
- debit card
- net banking
- e-gift voucher
- Cash on Delivery

Q4:- What are the advantages of using Online shopping?
Ans:-

- A customer does not have sufficient time to visit stores.
- Visiting a store is more expensive than purchasing a product online.
- A product or service that is not available in the local market is available online.

Q5:- Explain the following website that provides Online Transaction?

Ans:- **Flipkart:-** It is an online store where you can purchase a variety of electronic goods, books, accessories,digital cameras, mobile phones and peripherals such as printers, etc.

Flipkart offers multiple payment methods like credit card, debit card, net banking, e-gift voucher,and Cash on Delivery.

IRCTC:- It stands for Indian Railway Catering and Tourism Corporation.

It is an online portal that can be used for booking travel tickets.

Session 8:- INTERNET SECURITY

Q1- Explain the purpose of Internet Security.

Ans:-

- Internet security is a branch of computer security specifically related to the Internet, often involving browser security but also network security.
- Its objective is to establish rules and measures to use against attacks over the Internet.

Q2:- Explain different kinds of online threats.

Ans:- Online threats such as Phishing, email spoofing, chat spoofing, etc.

1. **Phishing:-** It is the fraudulent attempt to obtain sensitive information such as usernames, passwords and credit card details by disguising oneself as a trustworthy entity in an electronic communication.
2. **Email spoofing :-** It is the creation of email messages with a forged sender address.
   Because the core email protocols do not have any mechanism for authentication, it is common for spam and phishing emails to use such spoofing to mislead or even prank the recipient about the origin of the message.
3. **chat spoofing**:- When a computer system or a **user** of a computer **masquerades** to be **another identity** while engaging in chat is known as **chat spoofing**.

Q3:- What are the guidelines for managing strong passwords.

Ans:-
- Keep the length of the password at least 12-14 characters if permitted.
- Avoid keeping passwords based on repetition, dictionary words, letter or number sequences, usernames, relative or pet names, etc.
- Including numbers, and symbols in passwords if allowed.
- Use capital and lower-case letters.
- Avoid using the same password for multiple sites or purposes.
- Avoid using something that the public or workmates know you strongly like or dislike.

• Use random password generators if possible.
Example of a strong password: u1vX:,4Hd{]$

Q4:- Explain the best practices for Security.

Ans:- 1.**Use strong passwords,** a combination of alphanumeric and special characters could be used for creating a password that is not so easy to crack or guessed by other users.

2. **Backup your data:** Always keep copies of personal data in additional media such as compact discs, pen drives, etc.

3. **Use encryption software:** (Usually available within the operating system) to protect your data from unauthorized users. If encryption software is not available within the operating system, use a 3rd party software.

4. **Keeping your username and password private:** Never save your username or password on computers that are used in shared environments such as internet café.

5. **Registering with websites:** Read the privacy statement or policy whenever you register with a website, the statement or policy will include information about how the website use personal data.

6. **Do not share personal information:** Websites require you to fill out forms containing fields such as name, gender, age, email address, school, etc. Be cautious when filling out such forms; research and verify if it's a trustable website.

7. **Use antivirus and antispyware software.**
8. **Do not immediately respond to mails from unknown users.**
9. **Never install software from unknown sources:**
10. **Remove unwanted or unknown software applications**

Q5:- What do you mean by secure transactions.

Ans:- if the website uses secure transaction; usually it is indicated through a digital certificate represented as a golden lock in the web browser's address bar.

Q6:- What do you mean by cookies.

Ans:-
• Cookies are programs that are created on your local computer when you visit websites.
• Though cookies are meant for storing data based on your activity performed during your earlier visit such as logon details, details of a shopping cart, visited pages in a website

Q7:- What do you mean by firewall.

Ans:-
• Firewalls could be software or hardware and can assist in keeping a compute and a network secure.
• Firewalls analyze the network traffic and determine if the traffic should be allowed or not.

Unit 3:- Word Processing

Session 2:- MANAGING HEADERS

Q1:- What do you mean by Header. Write down the steps to insert Headers.

Ans:-
- Headers are text or images included at the top of the page.
- They usually contain important information such as company or department name, logo, page numbers, name of the author, etc.

Steps:-

1. Click on the **Insert** tab on the **Ribbon.**
2. Click on the option **Header** in the **Header & Footer** group
3. A drop down list appears which lists predefined header options

Q2:- List any five items that can be added to the header area.

Ans:- company or department name, logo, page numbers, name of the author, etc.

Session 3:- MANAGING FOOTERS

Q1:- What do you mean by Footers. Write down the steps to insert Footers.

Ans:- **Footers** are text or image included at the bottom of the page and may repeat in all pages of the document.

Steps:-

1. Click on the **Insert** tab on the **Ribbon**.
2. Click on the option **Footer** in the **Header & Footer** group.
3. A drop down list appears which lists collection of predefined Footer options

SESSION 4: MANAGING STYLES

Q1:- What do you mean by Styles or Style sets.

Ans:- **Styles or Style sets** are pre-defined or customized options used for creating good looking professional documents with least efforts.

Steps:-

1. To view list of styles, locate the **Style** group under **Home** tab
2. If we would like to view the list of style sets available, point to **Style Set** under **Change Styles** option.
3. A drop-down with different styles will be displayed
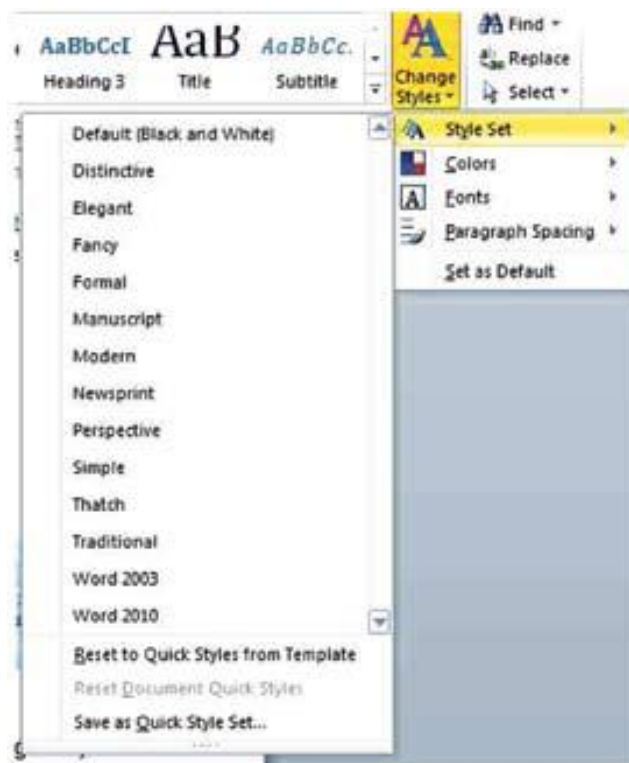
SESSION 5: DOCUMENT TEMPLATE

Q1:- What do you mean by Templates or document templates.
Ans:-
- Templates or document templates refer to a sample fill-in-the-blank document that can help in saving time.
- Usually templates are customized documents that may have sample content, themes, etc.

To view sample templates available with word processor

Go to *File > New.* You will be displayed with different types of templates

Creation of own template
We create the template as a normal document, but the magic step is where we save it.

Click on **File >Save As,** and give the template a name. Select **Word Template** from the **Save as type:** drop down list.

There is a **Templates folder** within **Microsoft Word**. If you save your template there, then we'll be able to see the template in the **My templates category**. So select that and click *Save.*

Q2:- Write down the website which provides free templates.
Ans:-
- office.microsoft.com/templates
- www.thepapermillstore.com
- openoffice.blogs.com/openoffice/templates/
- www.docstoc.com

SESSION 6: WORKING WITH PAGE AND SECTION BREAKS

Q1:- What is Page Break. Write down the steps to insert page break.

Ans:- **A page break** can be inserted anywhere in a document to force the end of a page and the beginning of a new one.

Steps:-

a) Click on the **Page Layout tab** on the Ribbon.

b) Click on the option **Breaks** in the **Page Setup group**

c) A dropdown list with options for different types of breaks appears. An explanation is given for each type of page or section break.
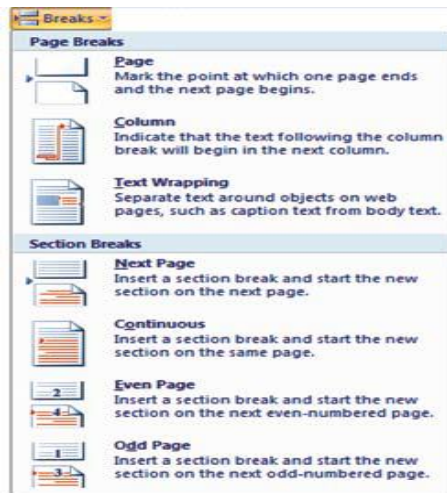
Q2:- What is Section Break. Write down the steps to insert Section Break.

Ans:- **A section break** controls the formatting of the document content that precedes it, until it reaches another section break.

Steps:-

a) Click on the **Page Layout tab** on the Ribbon.

b) Click on the option **Breaks** in the **Page Setup group**

c) A dropdown list with options for different types of breaks appears. An explanation is given for each type of page or section break.

Q3:- Differentiate between Page Break and Section Break options of a word document.

Ans:- **A page break** can be inserted anywhere in a document to force the end of a page and the beginning of a new one.

A section break controls the formatting of the document content that precedes it, until it reaches another section break.

SESSION 7: APPLYING CHARACTER FORMATS

Q1:- What are character formatting features in word processor.

Ans:- There are following character formatting features:-

Font Face: After selecting the text you need to click Font Name in the Font group to select the

particular font style from the fonts listed.

Font Size: After selecting the text you need to click Font Size in the Font group to select the particular font size from the values given.

Grow Font: After selecting the text you need to click the icon in the Font group to make the font size larger than the current font size by the specified point.

Shrink Font: After selecting the text you need to click the icon in the Font group to make the font size smaller than the current font size by the specified point.

Strikethrough: After selecting the text you need to click the icon in the Font group to make a strike through the middle of the selected text.

Subscript: After selecting the text you need to click the icon in the Font group to make the selected text lower than the normal text position.

Superscript: After selecting the text you need to click the icon in the Font group to make the selected text higher than the normal text position.

Clear Formatting: Clear Formatting is used to clear the character formatting (such as Bold, Italics ,Underline, font face & size, superscript & subscript etc.) of the selected text. To remove the character formatting, select the text and click on icon in the Font group.

Text Highlight Colour: Use this option to change the background colour. To do so, select the text and click on icon in the Font group. You can choose the background colour by clicking on the down arrow on the icon.

Font Colour: Use this option to change the colour of the text. To do so, select the text and click on icon in the Font group. You can choose the text colour by clicking on the down arrow on the icon.

Change Case: Word processor helps us to change the text case to capital letters or small letters. You can also capitalize each word in the sentence and capitalize the starting word of the sentence using Change Case under Font Group. To do so, after selecting the text you need to click the icon in the Font group

Sentence Case: On selecting this option from the dropdown list, the first character in the first word of the selected sentence will be converted to Capital Letter (Uppercase).

Lowercase: On selecting this option from the dropdown list, the selected text will be converted to Small Letters (lowercase).

UPPERCASE: On selecting this option from the dropdown list, the selected text will be converted to Capital Letters (UPPERCASE).

Capitalize Each Word: On selecting this option from the dropdown list, the first character in all the words of the selected sentence will be converted to Capital Letter (Uppercase).

tOGGLE cASE: On selecting this option from the dropdown list, the small letters in the selected text will be converted into capital letters and capital letters will be converted into small letters.

Q2:- What do you mean by Change case or cases option in Word Processor. Define the types of cases available.

Ans:- **Change Case**: Word processor helps us to change the text case to capital letters or small letters. You can also capitalize each word in the sentence and capitalize the starting word of the sentence using Change Case under Font Group. To do so, after selecting the text you need to click the icon in the Font group

Sentence Case: On selecting this option from the dropdown list, the first character in the first word of the selected sentence will be converted to Capital Letter (Uppercase).

Lowercase: On selecting this option from the dropdown list, the selected text will be converted to Small Letters (lowercase).

UPPERCASE: On selecting this option from the dropdown list, the selected text will be converted to Capital Letters (UPPERCASE).

Capitalize Each Word: On selecting this option from the dropdown list, the first character in all the words of the selected sentence will be converted to Capital Letter (Uppercase).

tOGGLE cASE: On selecting this option from the dropdown list, the small letters in the selected text will be converted into capital letters and capital letters will be converted into small letters.

Q3:- Define the followings.
   a. Grow Font
   b. Shrink Font
   c. Strikethrough
   d. Subscript
   e. Superscript
   f. Clear Formatting

SESSION 8: INSERT GRAPHICAL OBJECTS AND ILLUSTRATIONS

Q1:- What do you mean by objects in word processor.

Ans:-
- Objects can be almost any form that can be generated as a computer file.
- Sounds, Music, drawings, documents spreadsheets, etc. are all examples of possible objects that we can include in a document, or link to a document.

Q2:- What is the difference between Embedding and Linking an object.

Ans:- **Embedding** an object makes it part of the document while **linking** an object does not include the object file into the document files.

Q3:- What is Clip Art. Write down the steps to insert clip art.

Ans:-
- **Clip arts** are pre-defined images available for use in documents.
- **Clip Art** can help in making a document look colourful and presentable.
- **For example**, if we would like to create a greeting card for your friend, you can use clip arts such as balloon, flowers, etc. along with text message.

Steps:-

1. Click on the Insert tab on the *Ribbon*.
2. Click on the option Clip Art in the Illustrations group
3. The Clip Art Task Pane appears. Enter the clipart category name in the search box and Click Go. For example, if we want to insert a logo, type logo in the search box and Click "Go".
4. Once you click Go , a window appears along with list of clip arts matching the search keyword .

Q4:- Write down the website which provides free clip arts.
Ans:-

- www.openclipart.org
- www.pdclipart.org
- www.clker.com
- www.freeclipartnow.com
- www.wpclipart.com

SESSION 9: TEXT WRAPPING

Q1:- What is Text Wrapping.

Ans:- Text wrap is a feature supported by many word processors that enables you to surround a picture or diagram with text. The text wraps around the graphic.

Steps:-

Wrap *Text* option is available under **Text** section of the **Insert** Tab.

In Word:

select the ***Text Wrapping*** dropdown arrow in the ***Arrange*** group under the ***Format*** tab.
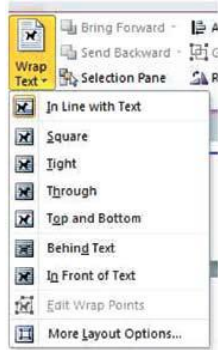
Q2:- List any five word wrapping options available in a word processing software.
Ans:-

1. Square
2. Tight
3. Through
4. Top and Bottom
5. Behind Text
6. In Line with Text
7. In Front of Text

SESSION 10: INSERTING OBJECTS

Q1:- What down the steps to insert the object.
Ans:-

Steps:-

• Select Insert Tab
• Click Object under Text section. A dialog box will be displayed
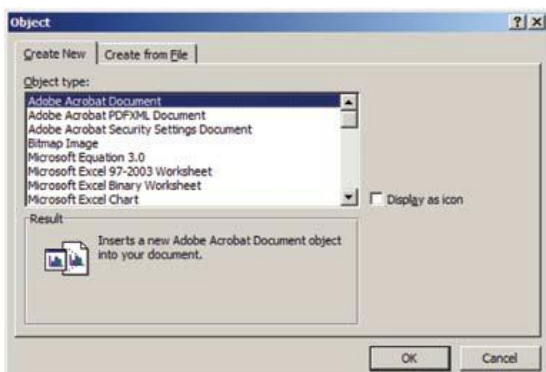
•Select **Create from File** Tab

• Click **Browse** and select a file such as a spread sheet or a PDF document that is available
on your computer, Click **Open** and Click **OK**

• the document is available embedded within your word document.

Q2:- What are the properties of Embedded Object.
Ans:-

1. The embedded objects cannot be printed.
2. The person opening our document must have the relevant software loaded on their computer to operate the embedded file.
3. If we embed an object, the size of our document increases significantly and this may cause problems in emailing the document as an attachment.
4. If we link an object, the person opening that document must have a direct connection to the original file location of the object.

SESSION 11: INSERT SHAPES, SYMBOLS AND SPECIAL CHARACTERS

Q1:- What down the steps to insert the shapes.
Ans:-

1. Click on the **Insert** tab on the Ribbon.
2. Click on the option **Shapes** in the **Illustrations** group

3. Once you click the Shapes option a dropdown list with pre-defined shape such as box, circle, etc. appears.
4. You can select the shape from the list of shapes available and draw the shape by dragging the mouse with the left button clicked. For example, if would like to insert a square, select the box shaped item from the list, click and drag the shape to draw a square
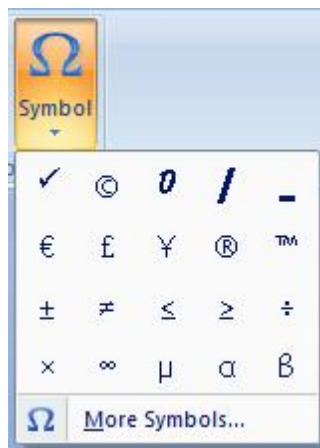
Q2:- What down the steps to insert the symbols.

Ans:-

1. Click on the **Insert** tab on the Ribbon.
2. Click on the option **Symbol** in the **Symbols** group
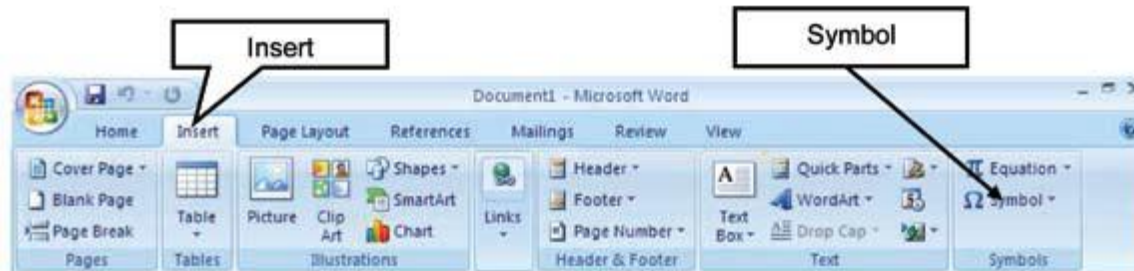
3. A dropdown list appears

4. Select a symbol from the list and double-click on to insert the symbol into the document.

Unit 4: Spreadsheet

SESSION 1: USE AUTOSUM IN CELLS

Q1:- What is Autosum feature?
Ans:- **Autosum** is used for adding the values given in cells automatically without writing the formula to perform the operation.

Steps:-

Click on the **AutoSum option** available under **Editing Group** in the **Home** tab.

SESSION 2: CONDITIONAL FORMATTING

Q1:- What is Conditional formatting?
Ans:- Conditional formatting allows you to change the formatting (font color, border, shading) of the cells based on the values in it.One or more cells can be selected, and create rules (conditions) for when and how those cells are formatted. The conditions can be, based on the selected cell's contents, or based on the contents of another cell.

For example
    Highlight the marks of the students who got marks greater than 80 with green colored text

Steps:-

Click on **Conditional Formatting option** available under **Styles group** in the **Home tab**. A drop down list appears.

Q2:- List any five conditions/formats/items that can be used for conditional formatting.
                    OR
Which formats can be controlled by Conditional formatting?

Ans:- We can control the following formats:
• Number format
 • Font, font style, and font colour (but not font size)
 • Fill colour and fill pattern
 • Border colour and border style (but not border thickness)

SESSION 3: HIDE / UNHIDE / FREEZE ROWS AND COLUMNS

Q1:- What is Hiding rows and columns?
Ans:- Hiding feature of a spreadsheet is the ability to hide a row/column that is not to be shown to the end user. The data in hidden row/column is available for calculations though not visible!

Steps:-

• In order to hide any row or column you can either select the particular row or column that is to hidden or just one cell in the corresponding row or column.

• Click on *Format* option available under Cells group in the **Home tab**.

• A dropdown list appears as shown below.

• Click on Hide & Unhide > Hide Rows.

Q2:- What is UnHiding rows and columns?
Ans:- UnHiding feature of a spreadsheet is the ability to unhide a row/column that is to be shown to the end user.

Steps:-

• In order to unhide the row or column that is hidden you have to select any cells before and after the cell that is hidden then click **Unhide Rows** in the **Format option** available under *Home* tab.

Q3:- What is Freezing rows and columns?
Ans:- When we are dealing with a huge amount of data that spans several rows or columns, you may want the headers to remain constant (frozen) while you scroll through the data so that you can see the identifying names of the rows/columns.

Steps:-

• In order to freeze rows or columns click on *Freeze Panes* option available under *Window* group in *View* tab.
• A drop down list appears as shown below. Click on *Freeze Panes*. Doing so will freeze all the rows above and all the columns to the left of the selected cell. Scroll your mouse in the spreadsheet the frozen rows and columns remain constant.

SESSION 4: SET PAGE BREAKS

Q1:- What is Page Breaks in Spreadsheet?
Ans:-

- To print a worksheet with the exact number of pages that you want, we can adjust the page breaks in the worksheet before printing it.

- This feature is very useful especially when printing huge sheets.
- We can use the Page Break view to see how other changes (e.g. changing row height /column width) affect the automatic page breaks.

On the **View** tab, in the **Workbook Views** group, click **Page Break Preview.**

Q2:- How can we insert vertical and horizontal Page Breaks in Spreadsheet?
Ans:-
- To insert a vertical page break, select the column to the right of where you want to insert the page break.

- To insert a horizontal page break, select the row below where you want to insert the page break.

Click on **Breaks** down arrow under **Page Setup** group in the **Page Layout** tab. A dropdown appears as shown below.
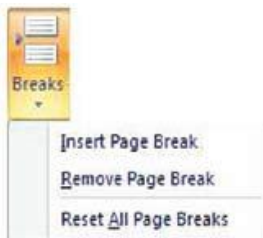
• Click on **Insert Page Break** option.

Note: We can also remove the page breaks by clicking the **Remove Page Break** option in **Breaks** drop down list.

SESSION 5: SET PAGE LAYOUT

Q1:- What is Page Layout in Spreadsheet?

Ans:- If we have a worksheet that contains a huge amount of data with many charts and we want a professional looking printout. Spread sheet software provides various page layout options for organizing pages using the Page Layout option.

We can set the following features in **Page Layout Option**
- Margins
- Orientation
- Page headers and footers
- Hide or display grid lines
- Size of the page
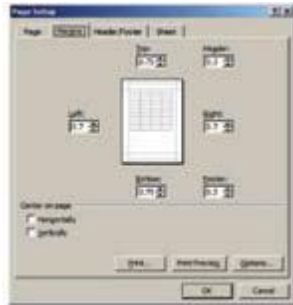- Define the print area
- Specify the background

Q2:- How can we set the Margins in Spreadsheet?

Ans:-

• Click on **Margins** option under **Page Setup** group, a dropdown list appears
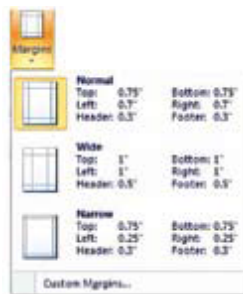
We can either select anyone of the predefined margin option available or else we can define our own margin settings by clicking **Custom Margins**. option. A dialog box appears.

Q3:- How can we set the orientation in Spreadsheet?

Ans:-We can set the orientation of the page to either Portrait or Landscape by clicking the **Orientation** option under **Page Setup** group in the **Page Layout** tab.

Q4:- How can we set size of page in Spreadsheet?

Ans:-We can set the size of the page by clicking the **Size** option under **Page Setup** group in the **Page Layout** tab.

Q5:- How can we set the PrintArea in Spreadsheet?

Ans:- We can specify the area to be printed by selecting the area and then clicking **Print Area** option under **Page Setup** group in the **Page Layout** tab. A drop down list appears as shown below.

SESSION 6: MANAGE WORKBOOK VIEWS

Q1:- Elaborate the five types of Views available in a spreadsheet.

Ans:-

1. **Normal View:** The default view of the spreadsheet application is the Normal. It's a collection of cells arranged in the work area.
2. **Page Layout:** You can select the Page Layout view in order to quickly fine tune a worksheet that contains many charts or huge amounts of data and achieve professional looking results.
3. **Page Break Preview:** This option is similar to the Page Layout option except you can set the area that is to be set as a page after inserting page break.
4. **Custom Views:** If you would like to view selected areas of a document , you can use the custom view option. For example, if you would like to point out certain row and column, you can add that to the Custom view.
5. **Full Screen:** Selecting this option makes the workbook cover the entire screen. All tabs are hidden from view. To get back the tabs, click on *File> Restore.*

SESSION 7: APPLY CELL AND RANGE NAMES

Q1:- What is Range Name. How can we give Range Name in Spreadsheet.

Ans:- We can assign names to cells in a worksheet and use it for quickly locating specific cells by entering the names.

• Select the values (Keep the **Ctrl** key pressed and click on the cells – you will be able to select selective cells together!). Right click and select **Name a Range**…. Alternatively, you can select **Define Name** under **Defines Names** group in the **Formulas** tab.

• A **New Name** dialog box appears prompting to enter a name. Enter Range Name in the **Name** field and click **OK** (figure below).
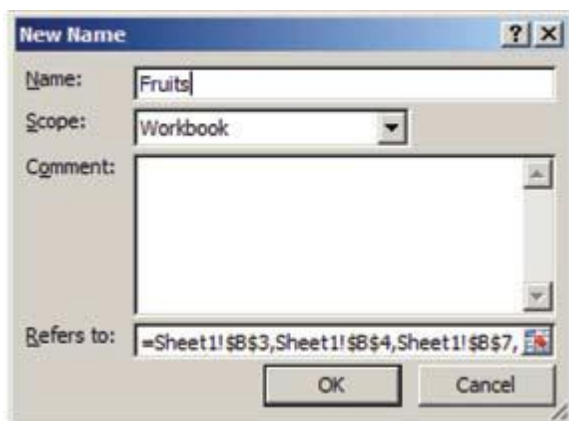
SESSION 8: CREATE MODIFY AND FORMAT CHARTS

Q1:- What is Chart. Write down the steps to create chart.

Ans:- A chart is a graphical representation of data, in which the data is represented by symbols, such as bars in a bar chart, lines in a line chart, or slices in a pie chart. A chart can represent tabular numeric data, functions or some kinds of qualitative structures.

Steps-

- Select all the data.
- Click on the chart type that you want from **Charts** group under the **Insert** tab.

Q2:- What down the elements of Chart.

Ans:-

1. *Chart Area* of the Chart
2. *Plot Area* of the Chart
3. *Data Points* that are plotted in the chart
4. *Horizontal and Vertical* Axis in the chart
5. *Legend* of the chart
6. *Chart and Axis Title* used in the chart
7. *Data Label* for identifying details of data point in the chart

Q3:- Discuss the types of Charts.

Ans:-

1. **Bar charts:** A bar chart (horizontal bars) emphasizes the comparison between items at a fixed period of time. This chart type also includes cylinder, cone, and pyramid subtypes.
2. **Column charts:** A column chart, unlike a bar chart to which it is often compared, emphasizes variation over a period of time. This chart type also includes cylinder, cone, and pyramid subtypes
3. **Line charts:** A line chart shows the relationship of the changes in the data over a period of time.
4. **Pie charts:** Pie charts contain just one chart data series. A pie chart shows the relationship of the parts to the whole.
5. **Area charts:** An area chart shows the relative importance of values over time.
6. **XY (Scatter) charts:** Scatter charts are useful for showing a correlation among the data points that may not be easy to see from data alone.
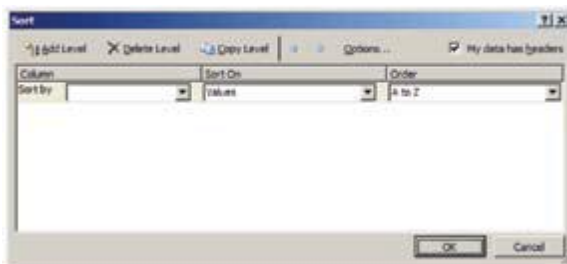
SESSION 9: SORT AND FILTER DATA

Q1:- What is Sorting. Write down the steps to sort the data.

Ans:- Sorting is a feature that helps us to arrange the selected data either in an ascending or descending order.

Steps:-

- Select the data to be sorted and then click on **Sort** option under **Sort & Filter** group in the **Data** tab. A dialog box appears as shown below.

Q2:- What is Filtering. Write down the steps to filter the data.

Ans:- Filter is a feature used for extracting particular data using some conditions.

Steps:-

• Click the **Filter** option available under **Sort & Filter** group in the **Data** tab. Before applying a filter you have to select the data along with the header

	A	B	C	D	E	F
1	Region	Sales 2008	Sales 2009	Sales 2010	Sales 2011	
2	New Delhi	56	67	85	87	
3	Mumbai	66	77	54	91	
4	Chennai	74	85	67	77	
5	Calcutta	75	65	47	63	
6						

• Once you click on filter, the headers will be displayed with a down arrow as shown below.

	A	B	C	D	E
1	Region ▾	Sales 20 ▾	Sales 20 ▾	Sales 20 ▾	Sales 20 ▾
2	New Delhi	56	67	85	87
3	Mumbai	66	77	54	91
4	Chennai	74	85	67	77
5	Calcutta	75	65	47	63

Unit 5: Digital Presentation

SESSION 1: INSERTING A MOVIE CLIP

Q1:- Write down the two ways to insert Movie clip in Presentation.

Ans:- We can insert a movie in two ways:
- Using Insert tab
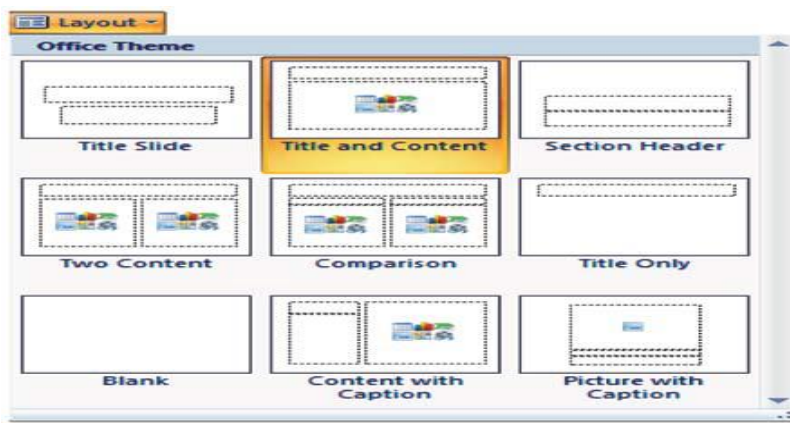- Using Title and Content Layout Option

1. ## Using Insert Tab

   Click on **Movie** option under **Media clips** group in the **Insert** tab, a drop down appears as shown below.

   We can select the **Movie from File**... option to insert the movie clip

2. ## Using Layout Option

   Click on **Layout** option available under **Slides** group in the **Home** tab, a dropdown list appears as shown below.

Click on *Title and Content* option

SESSION 2: INSERTING AN AUDIO CLIP

Q1:- Write down the steps to insert Audio in Presentation.

Ans:- Click on **Sound** option under **Media clips** group in the **Insert** tab, a drop down appears

- We can select the **Sound from File**… option to insert the sound clip.
- We can locate the audio clip and click **OK** to insert the same in the slide.

SESSION 3: WORKING WITH TABLES

Q1:- State the purpose of creating Tables in a digital Presentation. Mention two ways to insert a table in a presentation.

Ans:- Table is used to represent the statistical data meaningfully Tables .It can be used to present text and numerical data. Data is shown in the grid format.
Tables can be inserted in two ways
- Using Insert tab
- Using Title and Content Option

**Q2:- Write down the steps to insert table in the presentation.**

Ans:- Click on **Table** option under **Tables** group in the **Insert** tab, a drop down appears as shown below.
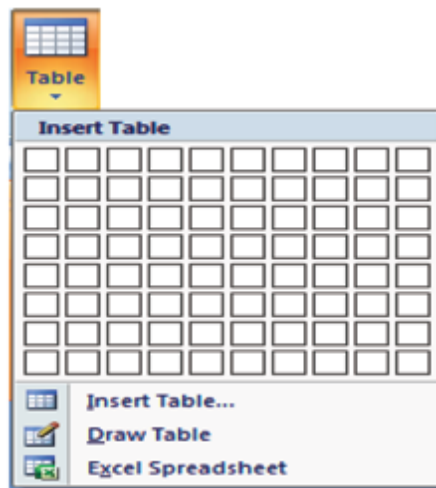
Q3:- Write down the steps to insert table using the Title and Content Layout in the presentation.

Ans:-

- Click on *Layout* option available under *Slides* group in the *Home* tab.
- Click on *Title and Content* option from the dropdown list
- You can insert the table in the slide by clicking the ⊞ icon available within the layout. Once you click the icon, a dialog appears as shown below.
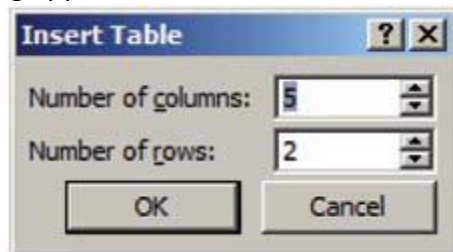
Q4:- How can the table design be changed in presentation.

Ans:-
- We can change the design of the table by changing background, borders or effects by using *Table Styles* group in the *Design* tab.
- To use a particular design, Select a design under *Table Styles* group and double-click on it.

SESSION 4: WORKING WITH CHARTS

Q1:- State the purpose of creating Charts in a digital Presentation. Mention two ways to insert charts in a presentation.

Ans:- Presentation software enables the user to insert charts in slides to present statistical table data in a pictorial representation. This ensures that the audience can grasp complex data at a glance.

Charts can be inserted in two ways

- Using Insert tab
- Using Title and Content Option

Q2:- How can the chart style be changed in presentation.
Ans:-

- We can change the colors and effects of the chart by using *Chart Styles* available under *Design* tab.
- To change to a different style, select a style from *Chart Styles* and double-click on it.

Q3:- What are the basic guidelines about the charts in presentation.
Ans:-

- Convey one message per chart. Make the message the heading.
- Make the chart easy to read. Label the X and Y axis and label the lines, bars, or pie wedges. Make the most important text largest, the most important data lines or sections darkest.
- Make bars and columns wider than the spaces between them.
- Be accurate. Always start a numerical axis at zero. Compare only like variables.
- Eliminate all unnecessary details. Avoid grid lines, data points, boxes, etc. unless they relate to the message.
- Use a few (maximum four) colors per visual.

SESSION 5: INSERTING TRANSITIONS

Q1:- What is Transition. Write down the step to insert transition.
Ans:- A slide transition is the visual motion when one slide changes to the next during a presentation.

spetS:-

click the *Animations* tab.

To apply, select an effect from *Transitions to this slide* group and double-click on it.

Q2:- Mention two points stating the effective use of transition in a presentation.
Ans:-

- Transition effects can help in increasing audience's interest during a present
- It brings the special effects in the slide.

SESSION 6: INSERTING ANIMATIONS

Q1:- What is Animation. Write down the steps to insert animation.
Ans:- Animation allows us to put slide elements, such as text and graphics, in motion within a slide.

Steps:-

- Click *Animations* tab
- To apply, select the graphical object and click *Animate* under *Animations* group. Select the animation effect under the *Animate* dropdown list.
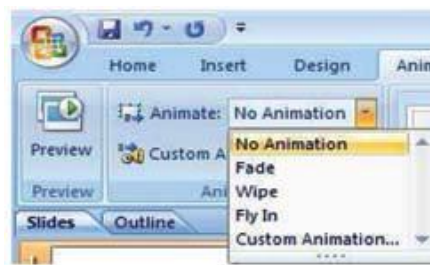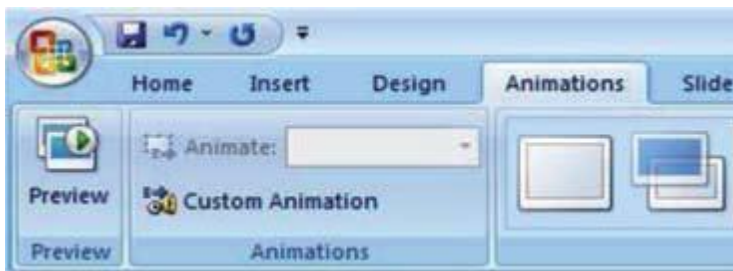
Q2:- Mention two points stating the effective use of animation in a presentation.
Ans:-
- It helps focus audience attention on information.
- It controls the flow of information especially while explaining a diagram.
- It reveals concepts one by one.

SESSION 7: GROUPING OBJECTS

Q1:- What is Grouping. Write down the steps to group the objects.
Ans:- Grouping can help when you want to move, rotate or resize multiple objects in a presentation. We can group objects such as pictures, clip art, shapes and text box; once grouped they appear as a single object.

Steps:-

To select more than one objects in the slide hold down the ctrl key and select the object in the slide.
To group the objects, click **Format** tab.

We can select the *Group* option available under *Arrange* group in the *Format* tab.

Similarly you can ungroup the grouped objects by selecting the ungroup option available under *Group* dropdown menu.

SESSION 8: INSERTING SPEAKER NOTES

Q1:- What are Speaker Notes. Write down the steps to insert Speaker Notes.
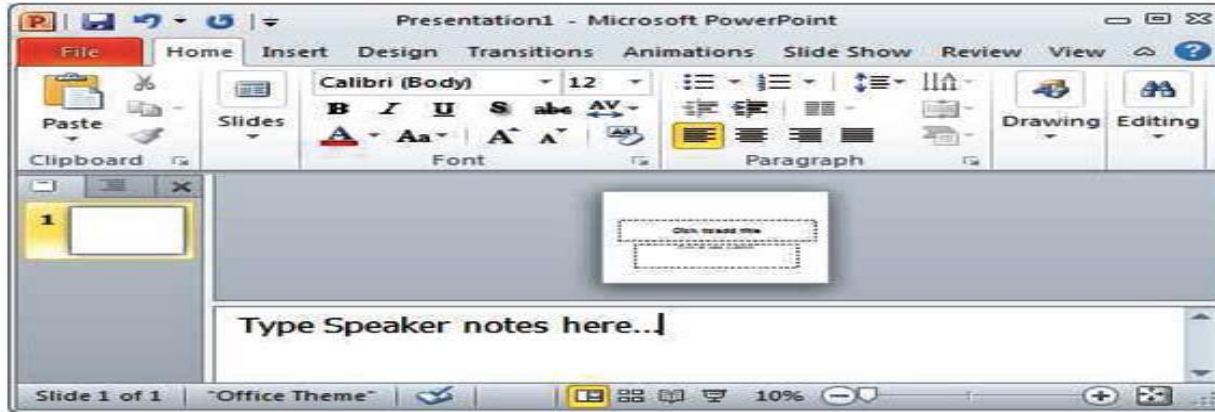**Ans:-**
- Speaker notes are guided text used by the presenter during a presentation.

- Speaker notes can be short or long texts that can be used as a reference by the presenter while making a presentation.

Steps:-

First way

To add notes to a particular slide, select the slide and type the notes in the ***Click to add notes area*** located at the bottom of the presentation software

Second way

Alternatively, you can select ***View*** tab and click ***Notes*** page under ***Presentation Views*** Group.

Q2:- What are key things of Speaker Notes.
Ans:-

1. They should not restate the contents of the slide.
2. Speaker notes should support the content of the slide with in-depth information.

SESSION 9: REVIEWING CONTENT

Q1:- Write the points to be kept in mind to make an effective presentation for the audience.
Ans:-

1. Do prior research, know the topic and collect the material of what you will talk about.
2. Highlight key points that are necessary for the audience to remember. Keep the points as short as possible.
3. Avoid too much text Summarize the content as bullet points. Use simple language and limit the number of bullets to three or four per slide.
4. Limit the number of slides - On average, one slide per minute is recommended.
5. Fancy fonts must be avoided.
6. Keep slide color scheme consistent throughout the presentation.
7. Transitions and Animations must be used carefully to avoid distractions.
8. Use a slide design template to keep presentation look consistent.

SESSION 10: PREPARING TO DELIVER A PRESENTATION

Q1:- Rajat works for an event management company. She has prepared a presentation and while setting up the Slide Show she is getting the following options, explain them briefly.
   (i) Presented by a speaker

(ii) Browsed by an individual
(iii) Browsed at a Kiosk

Ans:

(i) Presented by a speaker (full screen) option can be used if the presentation is to be made to an audience .
(ii) Browsed by an individual is used when the presentation is to be made to an individual
(iii) Browsed at a Kiosk is used when the presentation is to be given at Kiosk computer terminal.

Q2:- What is Kiosk.
Ans:- A kiosk is a computer terminal featuring specialized hardware and software designed within a public exhibit that provides access to information and applications for communication, commerce, entertainment, and education.

SESSION 11: PRINT A PRESENTATION

Q1:- What option do we have in "print what" option while printing the presentation.
Ans:-

1. **Slides**   2. **Handouts**   3. **Notes Page**   4. **Outline View**
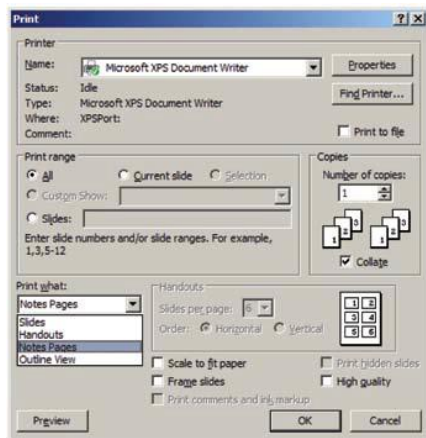
Q2:- Define Handouts and Outline.
Ans:- Handout are print out of the presentation that is given to the audience as a reference material.
   Outline prints only the text part of the presentation, without slides.

Unit 6: Email Messaging

SESSION 1: WORKING WITH CALENDAR

Q1:- What is Time Management.
Ans:- Time Management is the act of planning to stay organized that will result in increased efficiency and productivity.

Q2:- What is a Calendar Software? State its purpose.
Ans:- Calendar software provides the user an electronic version of a calendar. It is a time management tool.

Purpose:-

It is a system of organizing days for social, religious, commercial, or administrative purposes. It can be used to create appointments and schedule day-to-day activities.
For Example Outlook Calendar

Q3:- Explain three views supported by Calendar Software.
Ans:-

1. **Day View** can be used to schedule an activity for a particular time in the day
2. ***Week View*** *can be used* to view the appropriate days in the week.
3. ***Month*** view shows calendar for a month. Monthly schedule can be planned. Any appointments/meetings/commitments previously set in the day/week view will also be reflected here.
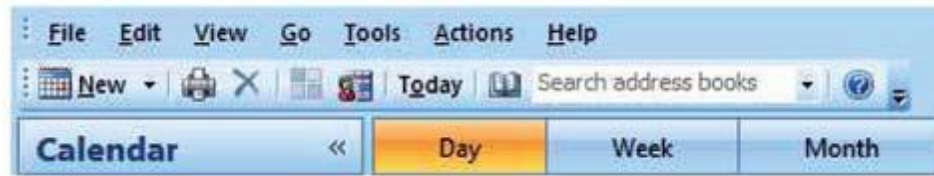
Q4:- How can the Calendar setting be changed in Microsoft Outlook.
Ans:-

- We can set the options for the calendar by selecting ***Tools*** > ***Options.***
- Click on ***Calendar Options.***

SESSION 2: SCHEDULE AN APPOINTMENT

Q1:- What are the two ways by which we can schedule Appointment.
Ans:- We can schedule an appointment in two ways:
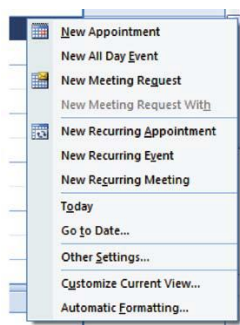1. Using menu bar.
2. Using calendar view.

Steps:-
    Go to ***File*** > ***New*** > ***Appointment***

Q2:- What is R**ecurring Appointments.**
Ans:- Recurring appointments can be used for scheduling repetitive tasks.

Steps:-
    Right-click on the calendar and click ***New Recurring Appointment.***

SESSION 3: CATEGORIZE AN APPOINTMENT

Q1:- How can we categorize the appointments.
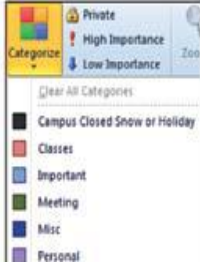   **Or**
     What is use of categorizing the appointment?

Ans:- We can categorize appointments in time management software by giving specific colors to appointments.
For example, we can use green color for all school related activities and blue for all personal activities.

Some categories are shown

SESSION 4: SHARE A CALENDAR

Q1:- What are the two ways by which the calendar is shared.
Ans:- Two ways are:

1. *Publish My Calendar*
2. *Send a Calendar via E-mail*

Q2:- What is the use of sharing calendar.
Ans:-
- Sharing your calendar helps to share various segments of your time-centric life with your spouse, family, and others.
- Calendar sharing is the last frontier for true collaboration and social networking.
-
SESSION 5: PRINT A CALENDAR

Q1:- Which options are available under "print style" while printing the calendar.
Ans:-
1. Daily style
2. Weekly style
3. Monthly style

Q2:- How can we print the private appointments.
Ans:- We can print the private appointments by uncheck the ***Hide details of private appointments*** check box.
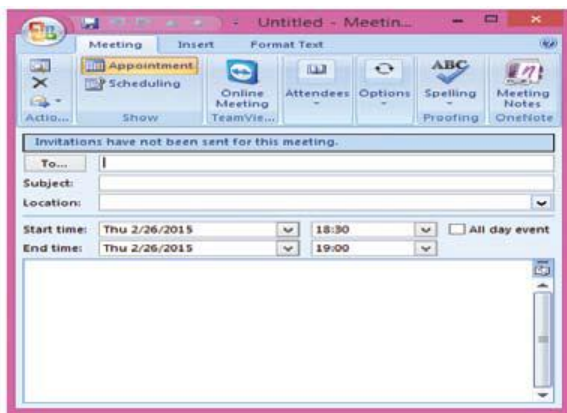

SESSION 6: CREATING A MEETING REQUEST

Q1:- What is a Meeting. Write down the steps to create meeting.
Ans:- A meeting is an appointment to which you invite people or reserve resources for (meeting hall, equipment etc.).
Steps:-
        Go to ***File > New > Meeting Request***

SESSION 7: RESPOND TO A MEETING REQUEST

Q1:- Write down the responses of Meeting Request.
Ans:-
1. *Accept*
2. *Tentative*
3. *Decline*
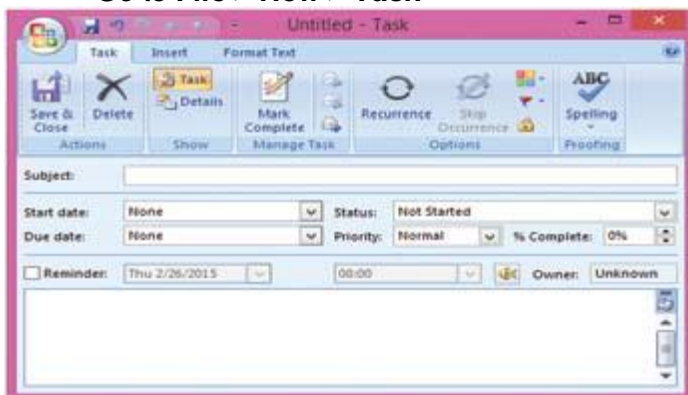4. *Propose New Time*

SESSION 8: CREATE AND EDIT A TASK

Q1:- What is a Task. Write down the steps to create task.
Ans:- Tasks refers to actions that can be performed by an user; tasks may include action items such as booking a conference room, booking tickets, reminder for a task completion itself, etc.

Steps:-

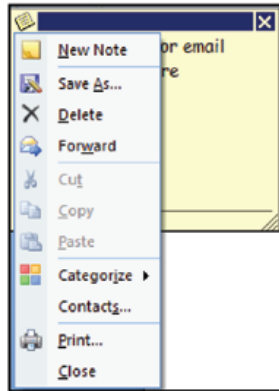Go to *File* > *New* > *Task*

SESSION 9: CREATE AND EDIT A NOTE

Q1:- What is a Note. Write down the steps to create note.

Ans:- Notes are short text messages that can be used for taking quick notes.

Steps:-

Go to **File > New > Note**

To view the notes that we have created, click **Notes** in the calendar application

SESSION 10: CREATE AND EDIT A JOURNAL ENTRY

Q1:- Define Journal Entry.
Ans:- A Journal entry creates a timeline of transactions that can be linked to a contact. A transaction might be an email, task, appointment etc.

Q2:- List the activities recorded under Journal entry.
Ans:- The following activities can be automatically recorded under Journal entry:
- Emails Sent & Received
- Telephone calls
- Meeting requests & responses
- Office documents you manage
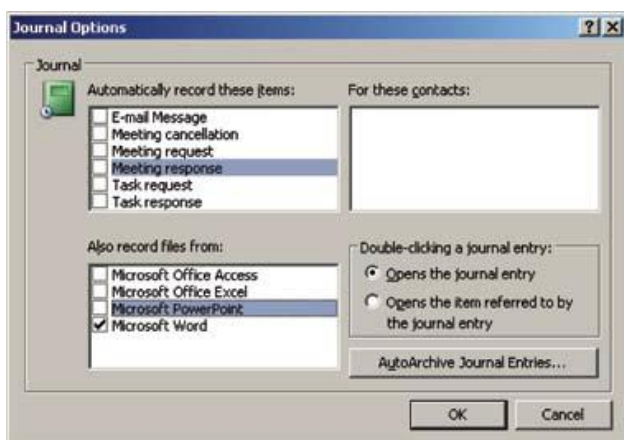
Q3:- Write down the steps to see Journal Entries.
Ans:-

- Go to **Tools >Options**
- Click on **Journal Options** button.

Unit 7: Database Development

SESSION 1: DATABASE CONCEPTS

Q1:- What is Database.
Ans:- A database is an organized collection of data.

Q2:- What is DBMS. Give some examples of dbms software.

Ans:- A database management system is a software package with computer programs that controls the creation, maintenance, and use of a database.

For example Oracle, IBM DB2, Microsoft SQL Server, Microsoft Access, PostgreSQL, MySQL, FoxPro, and SQLite.

Q3:- Differentiate between Flat File and Relational Database.
**   Or**
**   How many type data is organized.**
Ans:- Flat File: Data is stored in a single table. Usually suitable for less amount of data.
**   Relational Database**: Data is stored in multiple tables and the tables are linked using a common field. Relational is suitable for medium to large amount of data.

Q4:- What is Database Server.
Ans:-
- Database servers are dedicated computers that hold the actual databases and run only the DBMS and related software.
- Typically databases available on the database servers are accessed through command line or graphic user interface tools referred to as Frontends; database servers are referred to as Back-ends. Such type of data access is referred to as a client-server model.

Q5:- What is RDBMS.
Ans:-
- A relational database management system (RDBMS) is a database management system that is based on the relational model as introduced by E. F. Codd.
- In the relational model of a database, all data is represented in terms of tuples, grouped into relations.

SESSION 2: DATA STORAGE

Q1:- Define the following terms
    a. Table
    b. Columns or Fields
    c. Rows or Records

Ans:-   a) Table: A table is a collection of related data held in a table format within a database. It consists of columns, and rows.
    b) Column or Field is a set of data values of a particular simple type, one for each row of the table.
    c) Row also called a record or tuple represents a single, data item in a table.

Q2:- What are Data Types. Write down the different data types.
Ans:- Datatypes are used to identify which type of data (value) we are going to store in the database.

There are following data types available
- Numeric Types
- Alphanumeric Types
- Binary Types
- Date time
- Other Variable types

Q3:- List the data types used in a DBMS /RDBMS?
Ans:-There are following data types used in a DBMS/RDBMS
- Numeric Types
- Alphanumeric Types
- Binary Types
- Date time
- Other Variable types

Q4:- State the relationship and difference between a primary and foreign key?
Or
Define Primary key and foreign key
Ans:-
Primary Key A primary key is a unique value that identifies a row in a table. For example, Student Table contains columns such as Admno, Name, DOB , Address, Phone and Admno can be considered as Primary Key

Foreign Key: a **foreign key** is a field or a column that is used to establish a link between two tables. In simple words you can say that, a **foreign key** in one table used to point primary **key** in another table.

Q5:- List datatypes available in Numeric Datatype?
Ans:
Numeric Types:

Name	Data type	Description
BOOLEAN	Yes / No	Values as 0 or 1. Example: True or False, Yes or No.
TINYINT	Tiny Integer	Store integer range between 0 to 255
SMALLINT	Small Integer	Store integer range between -2^{15} to $+2^{15}-1$
INTEGER	Integer	Store integer range between -2^{31} to $+2^{31}-1$
BIGINT	Big Integer	Range between -2^{63} to $+2^{63}-1$
NUMERIC	Number	Maximum precision of $e^{(+/-)231}$
DECIMAL	Decimal	Maximum precision of $e^{(+/-)231}$
REAL	Real	2^{-1074} to $(2-2^{-52})* 2^{1023}$
FLOAT	Float	2^{-1074} to $(2-2^{-52})* 2^{1023}$
DOUBLE	Double	2^{-1074} to $(2-2^{-52})* 2^{1023}$

Q6:- List datatypes available in Alphaumeric Datatype.
Ans:-

Name	Data type	Description
LONGVARCHAR	Memo	Stores up to the max length or number indicated by user. It accepts any UTF 8 Character.
CHAR	Text (fix)	Stores exactly the length specified by user. Pads with trailing spaces for shorter strings. Accepts any UTF 8 Character.
VARCHAR	Text	Stores up to the specified length. No padding (Same as long var char)
VARCHAR_IGNORE CASE	Text	Stores up the specified length. Comparisons are not case sensitive but stores capitals as you type them.

Q7:- List datatypes available in Date Datatype?

Ans:-

Date time:

Name	Description	Format
Date	Stores month, day and year information	1/1/99 to 1/1/9999
Time	Stores hour, minute and second information	Seconds since 1/1/1970
Timestamp	Stores date and time information	

Q8:- Why do we use Binary datatypes. Explain?

Ans:- Binary data types are used for storing data in binary formats. Binary data types in a database can be using for storing photos, music files, etc.

Binary Types:

Name	Data type	Description
LONGVARBINARY	Image	Stores any array of bytes (images, sounds, etc.). No validation required.
BINARY	Binary (fix)	Stores any array of bytes. No validation required.
VARBINARY	Binary	Stores any array of bytes. No validation required.

SESSION 3: MANIPULATING DATA

Q1:- What is DDL and DML? Give one example of each.

Ans:-

Data Definition Language (DDL) A data definition language or data description language (DDL) is a standard for commands that define the different structures in a database. DDL statements create, modify, and remove database objects such as tables, indexes, and users.

Example CREATE, ALTER, and DROP.

Data Manipulation Language (DML)

A data manipulation language (DML) is a language that enables users to access and manipulate data in a database. The goal is to provide efficient human interaction with the system.

For Example Insert, Update, Delete and Select

Q2:- Define the types of DML.

Ans:- There are two types of DML:

- **Procedural:** The user specifies what data is needed and how to get it
- **Nonprocedural:** The user only specifies what data is needed. This is easier for the user but

may not generate code as efficient as that produced by procedural languages.

SESSION 4: CREATING A DATABASE OBJECT

Q1:- What is the file extension for databases created using OpenOffice.Org Base?
Ans:- .odb

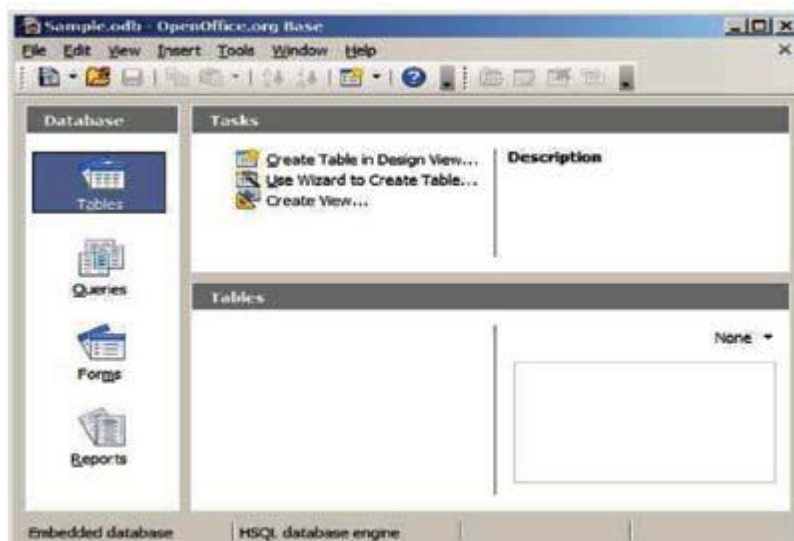**Q2:- List any three file formats that can be managed using OpenOffice.Org Base?**
Ans:- .odt, .ods, .odp
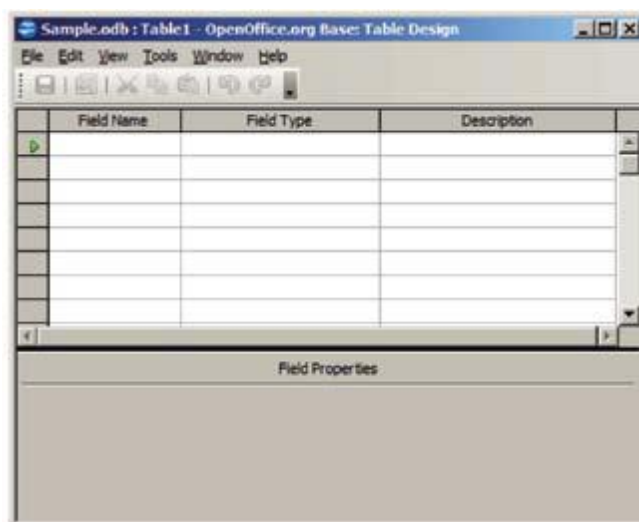
SESSION 5: CREATING A TABLE

Q1:- Write down the steps to create Table in DBMS.
Ans:-
After creating the database, we see a window as shown below.

Click on *Create Table in Design View…* option available under Tasks and a *Table Design* window appears as shown below.

Specify the field name and data type of the field to be created by selecting the appropriate type available under Field type dropdown list.

SESSION 6: BUILDING FORMS

Q1:- What is Form in DBMS.
Ans:- A form provides the user a systematic way of storing information into the database. It is an interface in a user specified layout that lets users to view, enter, and change data directly in database objects such as tables.

SESSION 7: CREATE AND MANAGE QUERIES

Q1:- Write down the SQL Queries for the following table- EMPLOYEE

FIELD	TYPE	KEY
ID	Integer	PRIMARY KEY
NAME	Varchar(20)	
AGE	Integer	
ADDRESS	Varchar(25)	

a) Write the SQL command to create above table.
b) Write the SQL command for inserting the following values in the given table.

ID	NAME	AGE	ADDRESS
1	ABHIRAM	22	ALLAHABAD
2	ALKA	20	GHAZIABAD
3	DISHA	21	VARANASI
4	ESHA	21	DELHI
5	MANMEET	23	JALANDHAR

c) Modify the AGE by increasing from 20 to 25 for ID 2.
d) Delete the record of ID 4.
e) Display all the records in descending order of AGE.

Ans:- a) Create table Employee
(Id integer primary key,
Name varchar(20),
Age integer,
Address Varchar(25)
);

b) Insert into Employee values (1,"Abhiram",22,"Allahabad");
Insert into Employee values (2,"Alka",20,"Ghaziabad");

Insert into Employee values (3,"Disha",21,"Varanasi");
Insert into Employee values (4,"Esha",21,"Delhi");
Insert into Employee values (5,"Manmeet",23,"Jalandhar");

c) Update Employee set age=25 where ID=2;

d) Delete from Employee where ID=4;

e) Select * from Employee order by age desc;

SESSION 8: DESIGN REPORTS

Q1:- What is Report in DBMS.
Ans:- A report is used to generate the overall work outcome in a clear format.