Ch- Web Applications
Session-1 Working with Accessibility Options

1 What do you mean by accessibility options?
Answer: The options that help to use computer accessibility and used as assistive technology is called working with accessibility options. These options are available in the control panel or ease of access option which are customized settings for the mouse, keyboard, sounds, display etc. that helps to operate computers easily for a person with disability.

2 Name the types of impairment that directly affected to usage of electronic devices specially computers.
Answer: These impairments are:
Cognitive impairments & learning disabilities – Example, dyslexia, attention deficit hyperactivity disorder (ADHD) or autism
Visual impairments – Example, low-vision, complete or partial blindness, and colour blindness
Hearing impairments – Example, deafness or problem with hearing
Motor or dexterity impairments – Example, paralysis, cerebral palsy, or carpal tunnel syndrome and repetitive strain injury

3. Define the terms: Sticky Key, Filter Key & Toggle Key,
Answer: Sticky Keys - It is used to reduce the burden of pressing multiple keys. It allows users to press and release a modifier key. The modifier keys are like ctrl, shift, alt or window key. It is just like an on/off switch.
Shortcut: Press Shift Key 5 times.

Filter Key - When you activate filter keys your repeated keystrokes will be ignored. This feature helps the hand tremor people to make typing easier
Shortcut: Press right Shift key for 8 seconds

Toggle Keys- This feature is designed for the people who are having vision impairments or cognitive disabilities. When these keys are enabled, a sound of beep is coming when any lock key such as caps lock, num lock or scroll lock is pressed by the user.

Mouse Keys – User can use keyboards to control the mouse activities.
High Contrast – Apply the colours, fonts, background. It is used to assist people having vision impairments.

Sound Sentry – It helps people with auditory impairments. It will produces the a visual warning like animation such as flash, blinking and produce the sound.

Cursor Options: It provides different option for mouse cursors.

4 What is Magnifier? How it is useful?

Answer: It is a special feature that make s part or the entire screen bigger so that the user can see words and images better. It is used for people with vision issue.

5 What is Narrator? How it is useful?

Answer: It is a screen reading app which read out aloud the text on the screen.It is useful for the people who are blind and having very low vision as they can hear the text on screen in audio form.

6 Name the options with their uses.

Answer:

- Narrator and Magnifier - Useful for people with low vision.
- Sound Volume and closed captions. – Useful for for people with hearing loss.
- Presentation tools, Messaging tools, text-to-speech- Useful for people with speech impairment.
- Sticky Key, Filter Key, Toggle Key – Useful for people with mobility issue.

Session-2 Networking Fundamentals

1. What is Computer Network?

Answer: 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.

2. What is P2P architecture?

Answer: Networks in which all computers have an equal status are called **peer-to-peer networks**. In peer-to-peer networks, there is no specifically designated server. Generally in such a network, each terminal has an equally competent CPU.

3. What is Client-Server architecture?

Answer: Networks in which certain computers have special dedicated tasks, providing services to other computers (in the network) are called client-server networks.

4. Define: Server and Client

Answer: **Server:** The computer(s) which provide services are called servers. The services provided by a server are – user authentication, file storage, internet access, hardware sharing, etc.

Client: The computer that uses services provided by servers are called clients. Users work on the client computers.

5. What is a Stand-alone Computer?

Answer: A computer that is not connected to a network is known as a Standalone computer.

6. What is Workstation / Node / Host?

Answer: A computer connected to a network is known as workstation / node / host.

7. What are the advantages of networking?

Answer: Benefits / Advantages of Networking :

(i) It breaks the barriers of distance, cost, and time.

(ii) It is very cost-effective as compared to telephone networks.

(iii) It enhances communication.

(iv) It allows to share all types of data viz text, audio, video, image, etc.

8. How many types of networks are on the basis of distance?

Answer: On the basis of distance or geographical spread, there are three types of networks :

(a) Local Area Network (LAN),

(b) Metropolitan Area Network (MAN),

(c) Wide Area Network (WAN)

9. What is LAN?

Answer: A local area network (LAN) is one that connects computers and devices in a limited geographical area up to 1 KM such as a home, school, computer laboratory, office building, or closely positioned group of buildings.

10. What are the advantages of LAN?

Answer: Advantages of LANs are : (i) Allow sharing of resources, i.e. hardware and software. (ii) Offers very high speeds (iii) sharing of peripherals like printers, scanners, etc.

11. What is MAN?

Answer: MAN stands for Metropolitan Area Networks. MAN is the network spread over a city. The purpose of MANs is to share hardware and software resources sharing. for example cable TV networks.

12. What is WAN?

Answer: A Wide Area Network (WAN) is a group of computers spread across countries. WAN is an interconnection of several smaller LANs, to form a big network. The WAN link computers to facilitate a fast and efficient exchange of information at lesser costs and higher speeds.

13. How many types of networks are on the basis of component role?

Answer: There are two types of networks on the basis of component roles. These are (i) Client-Server networks, (ii) Peer-to-Peer Networks

14. What is a dedicated server?

Answer: A computer that works as the server is only called a dedicated server. For example, mail server, file server, print server, etc. The server in a client-server network is a dedicated server.

15. What is the non-dedicated server?

Answer: A computer that does not work as sever only, can work as a client called a non-dedicated server. The server in a peer-to-peer network is a non-dedicated server.

16. What is Internet?

Answer: 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.

17. What are the advantages of the Internet?

Answer: The Internet is one of the most useful technologies of modern times which help us in our daily, personal and professional life.

Advantages of the Internet are:-

(i) Internet is widely used by students, educational institutes; scientists, and professionals to gather information for research and general information.

(ii) Businesses use the Internet to access complex databases such as a financial databases.

(iii) The Internet is the largest encyclopedia for all age groups.

(iv) The Internet helps in maintaining contact with friends and relatives who live across different locations via Internet chatting systems and email software.

(v) Internet is also becoming a major source of entertainment for the general public.

Session-3 & 4 Introduction to Instant Messaging & Gtalk

1Q: What is Instant Messaging?
Answer: Instant messaging refers to conversation through the chat software. Sending a message to anyone and we are getting immediate response.It is available 24 x 7.

2 Q: What are instant messaging advantages and disadvantages?
Answer: Instant messaging offers following advantages:
1. Provides rapid transmission of a text message from sender to receiver
2. Provides the facility of file transfers, audio chat or voice chat, video calling, and conferencing, sharing screens or desktop etc.
3. Widely used for personal and commercial use
4. It offers real-time conversations, the user will get a response from the recipient immediately, live interaction
5. Some applications provides offline messaging

Instant messaging has some disadvantages:
1. Requires internet (Offline messengers are an exception)
2. Need to have an account
3. The potential risk of data privacy
4. No time for review or draft any message
5. Free applications display some irritating ads with links and pop-ups
6. Anyone can send you message after getting your user id or number

3 Q : Write the key features of instant messaging software are:
Answer:
1. Text messages can be sent individually or using broadcast or in the groups
2. Audio calling, audio conferencing, video conferencing and video calling
3. Contacts and File transfers such as documents like audio, video, docs, PDFs, PPTs etc.
4. Offers to save message history for future reference or use

Some of the very popular software are:
1. WhatsApp or WhatsApp Web
2. Facebook Messenger
3. Google Hangout
4. Skype
5. Windows live messenger
Basically instant messaging offers to types of services: **application based and web based**

4 Q What are the General rules and etiquettes to be followed while chatting?

Answer:

1. In chatting your message should be short, simple and concise.
2. Introduce yourself if your account doesn't reveal your name.
3. Ask the other person about the time that he has for chatting or not.
4. Convey the exact message what you want to convey
5. Don't type your entire message in capital letter, as it is considered as shouting and aggressive in chatting terms
6. Wait for their reply then send another message
7. If you are doing an important chat, avoid to do chatting with others at the same time
8. Always say thank you or end your chat conversation with proper messages

Session-5 & 6 Creating & publishing Blog and its types

1Q What is a blog?

Answer: A blog is a website that allows to write and publish different articles and posts to share the knowledge and information on the internet. Through a blog, you can create an online community and discuss some topics, news, reviews, knowledgeable information with them.

2.Q How to create a blog?

Answer: The information which you want to share through the blog, it should be text, images and other media files. These are known as content. So there are many CMS (Content Management System) tools and websites to share them through various interfaces. Some popular CMS websites are: WordPress, Blogger,Wix

> ➢ You can use any of this to create your own blog.

Online Blogging Websites: www.blogger.com, www.wordpress.com, www.weebly.com

Offline Blogging Application: Qumana, Windows Live Writer, Blogdesk

Session 7 & 8 : Online Transactions & Shopping

1Q What do you mean by Online Transactions? Give Example.

Answer: The online transaction provides a facility of transfer money through the internet and avail the shopping facility.

There are various methods, protocols, security measures used to perform these all Online Transaction Process (OLTP). The following are few examples of online transactions:

1. Withdraw money from ATM
2. Bill payments using debit/credit cards
3. NEFT/RTGS fund transfer
4. Generating Challan
5. Online DD Generation

2Q: Write some of the benefits of Online Transactions

Answer: Online transaction offers certain benefits to us. These are:

1. **Fast Transaction Speed:** Online transactions are very fast compared to manual transaction. In manual transaction a person has to visit the bank and the bank official makes an entry in register then process it which time taking process.
2. **Convenience:** Online transactions are more convenient than physical transaction as a person need to visit any bank or branch to do the transactions.
3. **Save time:** Online transactions save our time to visit bank and stand there in queue and filling up forms and other formalities in the bank.
4. **Anytime-Anywhere:** If you visit a bank you have to follow the bank schedules, but in online transactions you can do that anytime-anywhere.
5. **Low risk of theft:** In online transactions process there is low risk of theft involved.

Q What do you mean by Online Shopping? Write its benefits.

Answer: Online shopping is a process of buying the required material from the e-commerce websites or apps like amazon, flipkart, snapdeal, etc. Customers can place the order using internet through mobile apps or websites and pay the money using one of the following methods:

1. Debit/Credit Cards
2. Net Banking
3. Pay on Delivery
4. UPI payments

The online shopping offers following benefits:

1. A customer doesn't have the time to visit the market
2. Sometimes you will get the item at a cheap rate compared to the market price
3. Sometimes the product or services is not available in your local market, you will get it from online shipping easily
4. Review of the product will help to make the decision to buy the product or not
5. Sometimes lucrative offers give benefits with some discounts and others
6. Very convenient service at our doorstep
7. You can give your feedback for the improvement of product
8. You can return the product if you are not satisfied
9. You can cancel you order anytime

Session- 9 & 10 Internet Security

1 Q Name some of the online threats.

Answer:

1. Phishing: Phishing is an activity that demands your sensitive data like bank details, username or passwords, credit card details, and other details through email attachments or links. The

links redirect you to such a fake website that looks too similar to the bank's website and asks to enter data.

2. Email Spoofing: Email spoofing is an activity of an email from a source that is fake and used for phishing emails and spam emails to run a campaign. The main goal of email spoofing is that recipient opens a message and click on the links provided in that email.
3. Chat Spoofing: It similar to email spoofing on the chat platform.
4. Eavesdropping: Eavesdropping is a process like listening online. In this technique, a third party is observing the communication happening between you and your partner. The hackers may attempt to take out your data from a website directly.
5. Denial of Services: The DoS attack refers to an attack from a large number of computers to a single target and tries to prevent the device from properly functioning.
6. Password Attack: Password attacks are a common security threat that is aimed to guess your password or steal your password using different tricks such as dictionary attacks (common words and numbers), brute force attack (uses a program to generate similar kind of passwords), Man-in-the-middle attack (Impersonates an app or website to capture passwords), Keylogger attack (Tracks the keystrokes for a user to collect their password), Social engineering attack(Uses phishing techniques or personal interaction to get passwords).
7. Viruses: Viruses are malicious program or harmful program which can damage the computer system, memory and replicate themselves. To read more about virus
   Best Practices for security

2 Q : Write the points can be taken into consideration while assigning a strong password:

1. Do not use simple passwords like your favourite colour, bike number, hero, date of birth, mobile number, repetition password, common dictionary words, letter or number sequence, usernames, relative or pet names etc.
2. Change your password frequently
3. Keep the password length up to 12-24 characters
4. Use capital and lower-case letters
5. Avoid using similar passwords for different websites
6. Avoid using something which is publicly known
7. Use random password generators