Unit 4 – Web Applications and Security

SESSION 1 : WORKING WITH ACCESSIBILITY OPTIONS

Assessment

Fill in the blanks
1. The option in Microsoft Windows XP used for helping users with physical disabilities and to reduce repetitive strain is ***Sticky Keys***.
2. Sound Sentry is designed to help users with ***auditory*** impairments.
3. The High Contrast option in Microsoft Windows XP is designed to assist people with ***vision*** impairments.
4. ***Serial Keys*** is designed to assist people that have difficulty using a keyboard or a mouse.

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SESSION 2 : NETWORKING FUNDAMENTALS

ASSESSMENT

I. Fill in the blanks:
1. The acronym for LAN is ***Local Area Network***.
2. Three types of Wired Internet Connectivity are ***Dial Up***, ***DSL & Cable Internet Access***.
3. Three types of Wireless Internet Connectivity are ***3G***, ***WiMAX & Wi-Fi***.

II. Answer the following:

1. Define networking?

Answer: Network is a group of devices linked to one another.
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. Give any three advantages of networking.

Answer: Advantages of Networking are : (a) Sharing Software and Hardware resources (b) Helps in communication (c) Breaks the barriers of distance, cost and time. (d) File transfer

3. Explain the term packet with reference to data transfer.

Answer: When data transfer from one computer to another using Network / Internet, data is divided into the smaller segments, called packets.
Each packet is sent from sender computer to receiver computer either using the same route of different route. At the destination these packets are reassembled into their original form.

4. Explain Wifi and its significance.

Answer: Wi-fi stands for wireless fidelity. 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.

Significance of Wi-Fi :

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

(b) Wi-Fi can also be used where users require mobile connectivity.

5. Compare LAN with WAN.

Answer: 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.
WAN : A wide area network (WAN) is one which covers a broad area. Internet is the example of WAN.

6. Expand the following terms : DSL, ISP, Modem, WWW, LAN, MAN, WAN, P2P

Answer:

a. DSL – Digital Subscriber Line
b. ISP – Internet Service Provider
c. Modem – Modulator Demodulator
d. WWW – World Wide Web
e. LAN – Local Area Network
f. MAN – Metropolitan Area Network
g. WAN – Wide Area Network
h. P2P – Peer-to-Peer

7. Explain P2P Architecture and how it is different from Client Server Architecture?

Answer: In peer-to-peer network all computers have an equal status. There is no specifically designated server. The computers in P2P can switch their roles as and when required.

In client-server architecture, one computer is dedicated for providing services to other computer, called **Server** (Dedicated Server), while other computers works as client which access the services given by server.

SESSION 3: INTRODUCTION TO INSTANT MESSAGING

ASSESSMENT

1. Fill in the blanks:

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

b. _Microphones_ & _headsets_ or _speakers_ & Web Camera are required for audio and video conferencing.

2. List any five application based instant messaging software.

Answer: Google Talk, Yahoo! Messenger, Skype, Windows Live Messenger, Rediff Bol

3. What do you mean by instant messages?

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

4. Give any three key features of Instant Messaging.

Answer: Key Features of an instant messaging are as follows:

• 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).

ASSESSMENT

Answer the following:

1. State any 03 rules and etiquettes to be followed while chatting on the Internet.

Answer: There are some general rules and etiquettes to be followed while chatting:-

(i) Messages should be short and to the point.

(ii) Always introduce yourself by name if your screen name doesn't reflect it.

(iii) Always ask if the other person has time to chat first.

(iv) In a business environment, know exactly what you want to discuss.

(v) Type message in lowercase alphabets only

(vi) Give people time to respond.

(vii) It's important to properly end an IM conversation

2. What are the basic needs to use instant messaging (chat) software.

Answer: To use Instant messaging (chat) software :

(a) Install Instant Messaging Application Software / Web-based Instant messaging software can be used.

(b) Valid IM user id / email id

(c) Active Internet Connection

[For audio or video call]

(d) Microphone (e) Headphone / Speaker (f) Web Camera

SESSION 5: CREATING AND PUBLISHING WEB PAGES – BLOG

ASSESSMENT

1. What is a blog? Explain its use.

Answer: A blog is a discussion-style site used by non-technical or technical users for creating personal web pages.

Blogs are similar to an online personal diary and are simple to use.

You can use a blog to convey messages about events, announcements, news, reviews, etc.

Blogs are usually managed using a web browser and this requires an active internet connection.

2. List any 5 websites that provide blog service.

Answer: Popular websites that provide blog services are www.WordPress.com

www.blogger.com

www.blog.com

www.weebly.com

www.blogsome.com

3. Difference between web page and website.

Answer: **Webpage**: A webpage is a document that contains hypertext information like text, images, multimedia content, etc, and hyperlink.
Website: The website is a collection of webpages

4. What do you mean by publishing a post?

Answer: Publishing a post means creating a post (writing a title and content of the post) and submitting/publishing the post so that others can see it.

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SESSION 6: USING OFFLINE BLOG EDITORS

ASSESSMENT

Answer the following:

1. Explain the purpose of an offline blog editor.

Answer: The offline blog editor allows you to create blogs using a blog application without an active internet connection on your local computer. You can publish that blog whenever an internet connection is available.

This offline blog editor is very useful when you are facing a slow internet connection.

2. List any five offline blog editors.

Answer: Offline blog editors are:-
- Windows Live Writer (Windows)
- BlogDesk (Windows)
- Qumana (Windows & Mac)
- MarsEdit (Mac)
- Ecto (Mac)
- BlogJet (Windows)
- Bits (Mac)
- Microsoft Word (Windows & Mac)

SESSION 7: ONLINE TRANSACTIONS

ASSESSMENT

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1. Explain the purpose of Online transactions.

Answer: Online transactions have made transactions very convenient and simplified. It deals with the transfer of money over the internet.
Online transactions help in (i) purchasing items without visiting the store. (ii) booking of tickets without going to the booking counter (iii) Filling out the application form and depositing fee, etc.

2. List any five websites that allow online transactions.

Answer: amanzon.in, flipkart.com, irctc.co.in, ebay.in, redbus.com, etc. (You may write any five)

3. List any three payment tools to use for online transactions.
Answer: Credit card, Debit Card, net-banking, wallet, cash on delivery, upi, google pay, phone pay, etc.

4. Give any two benefits of online transactions.
Answer: Saving of time, Saving money, easy to use, offers EMI facility easily, etc.

SESSION 8: INTERNET SECURITY

ASSESSMENT

1. Explain the purpose of Internet Security.
Answer: Internet security is a branch of computer security specifically related to the Internet, often involving browser security but also network security.

Its main objective and purpose is to establish rules and measures to use against attacks over the Internet.

2. Explain different kinds of online threats.
Answer: Different kinds of online threats are (a) Phishing, (b) Email spoofing (c) Chat spoofing (d) Denial of Service (e) Malware

3. Explain the need to clear data stored in browsers.
Answer: When you visit websites, it tries to store some information on your computer, known as cookies.

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 on a website, etc. they could also be tracked by unauthorized users and possibly gain access to your personal information.

That's why it is required to clear browser cookies frequently.

4. Explain any five tips to manage strong passwords.
Answer: General guidelines for managing strong passwords:-
(i) Keep the length of the password at least 12-14 characters if permitted.
(ii) Avoid keeping passwords based on repetition, dictionary words, letter or number sequences, usernames, relative or pet names, etc.
(iii) Including numbers, and symbols in passwords if allowed.
(iv) Use capital and lower-case letters.

(v) Avoid using the same password for multiple sites or purposes.

(vi) Avoid using something that the public or workmates know you strongly like or dislike.

(vii) Use random password generators if possible..

5. Explain any four best practices to secure data.

Answer: Four best practices to secure data are –

(a) Use encryption software: Use encryption software to protect data from unauthorized users.

(b) Keeping username and password private: Never save your username and password on a shared computer. Avoid saving username and password when the browser asks you to save.

(c) Registering with websites: Always read the privacy statement or policy whenever you register with a website, to check how they will share your data.

(d) Don't share personal information: Do not share your personal information on any website, this can be used by unauthorized users to send you fake or unwanted emails.

6. Explain use of Antivirus and Anti Spyware.

Answer: Computers are prone to attacks from software known as Malware that could harm your computer.

Malware track browsing behavior or transmit personal data from your computer; programs such as keyloggers could be installed on your computer track and transmit every key that is pressed on a keyboard (keystrokes) to unauthorized users.

Antivirus and Antispyware programs also offer real-time protection by monitoring your computer for any changes by malware software. Keep your Antivirus and Antispyware software always up to date, this can help in protecting your computer from recent threats.

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SESSION 9: MAINTAIN WORKPLACE SAFETY

ASSESSMENT

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1. Enlist any three basic safety rules to follow at the workplace.
Answer: Three basic safety rules to follow at the workplace are
(a) Fire safety, (b) Falls and slips, (c) Electrical safety, (d) Use of first aid.

2. Give any two basic safety rules for ensuring Falls and Slips safety.
Answer: Basic safety rules for ensuring Falls and Slips safety are :
(i) Keep the moving area clean and clutter-free.

(ii) Workplace must be properly ventilated to receive light.

(iii) Wear non-slippery footwear.

(iv) Floors must be clean and dry

(v) Oil spills, and dust must be immediately cleaned.

3. Give any two electrical safety rules in any organization.
Answer: Electrical safety rules in any organization are:-
(i) Electrical equipment used should be approved by a recognized organization.

(ii) Workers should be trained to handle the electric equipment safely.

(iii) Damaged and hazardous electrical equipment should be immediately replaced.

(iv) All old and workout and frayed switches and wires should be changed.

(v) Heat emanating equipment should be kept away from the electrical equipment.

(vi) Take care that the outlets/ circuits should not be overloaded.

(vii) Switch off and unplug the electrical appliances before cleaning or relocating them.

4. Explain any two first aid rules.
Answer: First aid rules are:-
(i) Assure the injured to remain calm and not panic

(ii) Keep them warm if they are under shock

(iii) Do not move the victim in case of back/neck injury

5. What do you mean by occupational hazards?
Answer: An occupational hazard is the illness one may acquire due to his occupation.

Like people working in a chemical factory may get affected due to the presence of certain chemicals.

6. List any three types of occupational hazards.

Answer: Some types of occupational hazards are :

Physical hazards, chemical hazards, biological hazards, behavioral hazards, radiological hazards, ergonomic hazards, etc.

SESSION 10: PREVENT ACCIDENTS AND EMERGENCIES

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ASSESSMENT

1. Explain the terms accident and emergency.

Answer: Accident: An accident is an unplanned event that may happen all of a sudden and may lead to unwanted or unprecedented results/outcomes. It can be defined as an unfortunate incident that occurs unintentionally causing hazardous results or injury or unwanted results.

Emergency: Any unexpected situation that needs immediate attention and action.

An emergency situation might pose a sudden risk to life, property health, etc., and needs intervention to prevent deteriorating results/ hazards.

An emergency must be handled immediately to prevent further losses and minimize the loss. One must be alert to notice any kind of emergency.

2. Enlist any four types of accidents.

Answer: Types of Accidents:

Accidents may be of the following types :

- Accidents at the workplace: Slips and fall accidents, fire
- Industrial disease/illness
- Road traffic accidents
- Clinical Accidents
- Sports-related accidents

3. Give any three situations of emergency that require evacuation.

Answer: Types of emergencies that require evacuation are:

(i) Fire (ii) Explosion (iii) Floods (iv) Earthquake (v) Hurricane (vi) Tornado (vii) Toxic material release (viii) Civil disturbance (ix) Workplace violence

4. Give any two ways to handle accidents.

Answer: Accidents must be handled carefully. The accident should be handled compassionately without assigning blame to others.

- Every organization must follow SOP for accident handling
- Safety measures must be placed to prevent workplace accidents
- Immediately call the medical team for any injury
- Stay alert
- Pay attention to and follow emergency drills

SESSION 11: PROTECT HEALTH AND SAFETY AT WORK

ASSESSMENT

1. An organization can face some ***health hazards*** that could put the lives of the employees in danger.

2. Hazards can be of different types depending on the **and the** ***environment*** in which the employees work.

3. Organization must have a designated ***assembly point*** for emergencies

4. List any three types of hazards.

Answer: (i) Physical (ii) Chemical (iii) Biological
(iv) Mechanical

5. Give a checklist for workstations to minimize the hazards.

Answer: Checklist for Workstations

The workstation should:

(i) provide sufficient space for the user to alter position comfortably.
(ii) provide adequate lighting.
(iii) have windows fitted with adjustable coverings to alter the sunlight level.
(iv) be spacious enough when a workstation is shared by more than one person.

6. Explain the term ' Evacuation Policy'.

Answer: Evacuation is the process of emptying a place in case of an emergency, or disaster. Every organization must have an evacuation policy.

An evacuation policy is a policy that tells us **how to evacuate the place in case of any emergency or disaster.**

All the Team Leaders are responsible for informing about the policy to their employees about it. Proper.

7. Explain Buddy System to implement evacuation efficiently in case of emergency.

Answer: A **'buddy system'** for individuals with **special needs or disabilities** must be designated.

This system ensures that differently-abled are assisted and guided out of the premises or the impacted area properly.

If you are a buddy to someone, ensure that your buddy is safe at the assembly point with you.

8. Explain the terms Floor Plans and Assembly /areas.

Answer: Floor plans with evacuation routes in work areas. Ensure that you understand these so you can use them in time of need.

9. Describe the importance of periodic evacuation drills.

Answer: Periodic evacuation drills helps in executing the evacuation of a place properly and safely in case of an emergency, or **disaster.**

In organization/workplace periodic evacuation drills should be conducted.

Ensure that you pay attention during these drills.

You need to save your life and you can be helpful in saving someone else's life too.

10. Explain the importance of a healthy lifestyle.

Answer: A healthy lifestyle helps to keep and improve people's health and well-being.

Healthy living has a lasting impact on an individual which ultimately yields a healthy environment at home as well as at the workplace. a happy and healthy worker will always perform best of his ability.

'A healthy body has a healthy mind' – a very popular saying is true.

11. Give any four points of a healthy lifestyle.

Answer: A healthy lifestyle includes :
- healthy eating habits
- physical activities

- stress management
- healthy mind
- sound sleep
- goal setting

A healthy lifestyle takes needs practice, commitment, and sincere efforts.