



CLASS - 10TH  
SUB - IT  
WEB APPLICATION AND SECURITY  
(Notes)

### Session 1: Working with Accessibility Options

#### Key Topics:

1. Accessibility Options: Features designed to assist users with physical or sensory impairments.
  - Examples: Narrator, Magnifier, On-Screen Keyboard.
2. Ease of Access Center:
  - Found in the Control Panel.
  - Provides tools like High Contrast, Sticky Keys, and Filter Keys.
3. Common Features:
  - Magnifier: Enlarges screen content.
  - Narrator: Reads out screen text for visually impaired users.
  - Sticky Keys: Allows pressing one key at a time for key combinations.
  - Filter Keys: Ignores repeated keystrokes for users with tremors.
4. Importance:
  - Enhances usability for all users.
  - Promotes digital inclusion.

### Session 2: Networking Fundamentals

#### 1. Computer Network

A collection of interconnected devices sharing resources and information.

#### 2. Types of Networks :

- Personal Area Network (PAN): Small area, like around a person (e.g., Bluetooth).
- Local Area Network (LAN): Limited to a building or campus.
- Metropolitan Area Network (MAN): Covers a city or large area.
- Wide Area Network (WAN): Connects devices over long distances, like the Internet.

#### 3. MAC (Media Access Control) Address

- A unique physical address of a network device.
- Helps identify devices in a network.

#### 4. Advantages of Computer Networks

- Easy resource sharing (e.g., printers).
- Centralized data storage and access.
- Enhances communication through emails and instant messaging.

#### 5. Disadvantages of Computer Networks

- Security risks like hacking.
- Network failure can disrupt operations.

#### 6. Network Architecture

- Peer-to-Peer (P2P): All devices have equal roles; no central server.
- Client-Server: Centralized server manages resources and devices.

#### 7. Packet Switching

- Data is broken into packets for transmission.
- Efficient and reliable method for transferring data over a network.

#### 8. Network Components

- Router: Connects different networks.
- Switch: Connects devices within a network.
- Modem: Converts digital data to analog for transmission.

#### 9. Types of Internet Connections

- Dial-up: Slow, uses telephone lines.
- DSL: Faster, uses telephone lines.
- Fiber-optic: High speed, uses light signals.
- Wi-Fi: Wireless connection.

### **Session 3: Introduction to Instant Messaging**

#### **Instant Messaging (IM)**

- Real-time communication over the Internet.
- Allows users to send text, images, videos, and voice messages instantly.

#### **Features of IM**

- Real-time text communication.
- File sharing (documents, images, videos).
- Group chats and video calls.
- Status updates and availability indicators.

## Requirements for IM

- Hardware: Computer, smartphone, or tablet.
- Software: IM applications like WhatsApp, Telegram, Google Chat, etc.
- Internet connection: Essential for real-time communication.

## H.W

- Write Popular Instant Messaging Applications
- Advantages of IM
- Disadvantages of IM

## Session-5 Creating & Publishing Web Pages – Blog

- **Blogger:** A platform for creating and publishing blogs.
- **Online Blogs:** WordPress, Blogger, Medium.
- **Offline Blogs:** Windows Live Writer, BlogDesk, Qumana

## Advantages of Offline Blogging

- Write without the internet.
- Save drafts locally.
- Faster editing and uploading later.

## WYSIWYG Editor:

"What You See Is What You Get" editor, making content creation easy with a visual interface.

**Benefits:** Convenient offline access, better editing tools, and faster uploads once online.

## Keep Passwords Strong:

- Use a mix of letters, numbers, and symbols.
- Avoid using personal information.
- Change passwords regularly.

## Online Transactions

No Compulsive Shopping: Online shopping platforms should avoid pressuring users to buy unnecessary items.

## Session 6: Internet Security

- **Purpose:** To protect data and systems from cyber threats like malware and hacking.

### Spoofing vs. Phishing:

- **Spoofing:** Impersonating a website or person.
- **Phishing:** Trick users to reveal personal details via fake messages.

- **Best Practices:** Use strong passwords, two-factor authentication, avoid suspicious links.
- **Cache:** Temporary storage to speed up web browsing.
- **Cookies:** Small files stored by websites to save user preferences.

## Session 9: Maintain Workplace Safety /

### Fire Safety Rules

- Keep exits clear.
- Use fire extinguishers correctly.
- Practice fire drills regularly.

- **Slips & Trips:** Common causes include wet floors, clutter, and poor lighting.
- **Prevention:** Keep floors clean, use warning signs, and ensure proper footwear.
- **Electrical Safety:** Handle electrical equipment carefully, avoid overloaded sockets.

- **First Aid:** Immediate help given to an injured person.
  - **Primary Goal:** Preserve life and prevent the situation from worsening.
  - **Benefits of Training:** Reduces recovery time, improves safety awareness.
  - **Drills in Training:** CPR, wound dressing, emergency evacuation.

- **Organizations:** Red Cross, OSHA (Occupational Safety and Health Administration).
- **Natural Hazards:** Earthquakes, floods, etc.
- **Signs and Symbols:** Indicate warnings like biohazards, fire exits, or toxic materials.

