5 CHAPTER

SOFTEWARE SYSTEM

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5.1 SOFTWARE

LONG QUESTION

Q. 3 Explain the types of software and their functions with examples.

Ans: **TYPES OF SOFTWARE AND THEIR FUNCTIONS**

Introduction

Software is essential for computers, serving as the intermediary between hardware and users. It is broadly classified into system software and application software, each serving unique purposes.

1. **System Software**
   - **Definition**
     System software manages the computer's hardware and provides a platform for running application software.
   - **Functions**
     Manages system resources like memory and CPU.
     Acts as a bridge between hardware and applications.
   - **Examples**
     Operating Systems: Manage hardware and software interactions (e.g., Microsoft Windows, macOS).
     Device Drivers: Facilitate communication between the operating system and hardware devices (e.g., printer drivers, graphics card drivers).
     Utility Programs: Perform maintenance tasks (e.g., antivirus software, disk cleanup tools).
2. **Application Software**
   - **Definition**
     Application software is designed for end-users to perform specific tasks.
   - **Functions**
     Helps users create, access, or manipulate information.
     Addresses user-specific needs like document creation, browsing, and entertainment.
   - **Examples**
     Word Processors: Create and edit text documents (e.g., Microsoft Word, Google Docs).
     Web Browsers: Access the internet (e.g., Google Chrome, Safari).
     Media Players: Play audio and video files (e.g., VLC Media Player).
     Key Differences Between System Software and Application Software

SHORT QUESTIONS

Q. 16 What is software, and why is it important?

Ans: **SOFTWARE, AND WHY IS IT IMPORTANT**

Software is a collection of programs and instructions that guide a computer on what tasks to perform and how to execute them. Without software, computers would be non-functional machines.

Q. 17 Differentiate between system software and application software.

Ans: **SYSTEM SOFTWARE AND APPLICATION SOFTWARE**

Purpose: System software manages computer hardware and runs application software, while application software helps users perform specific tasks.

Examples: System software includes operating systems and device drivers; application software includes word processors and web browsers.

Installation: System software is usually pre-installed, whereas application software is user-installed.

Q. 18 Give two examples each of system software and application software.

Ans: **SYSTEM SOFTWARE AND APPLICATION SOFTWARE**

System Software: Microsoft Windows, printer drivers.
Application Software: Microsoft Word, Google Chrome.

Q. 19 What is the role of utility programs in system software?

Ans: **ROLE OF UTILITY PROGRAMS IN SYSTEM SOFTWARE**

Utility programs like antivirus software, disk cleanup tools, and backup software help maintain and optimize the computer's performance by preventing malware, organizing files, and securing data.

Q. 20 Why is system software necessary for application software?

Ans: **SYSTEM SOFTWARE AND APPLICATION SOFTWARE**

System software provides the platform and manages resources required for application software to function. Without system software, application software cannot run.

MULTIPLE CHOICE QUESTIONS

- **What is software?**
  (A) A physical component (B) A collection of programs and instructions
  (C) A type of hardware (D) None of the above
- **What acts as a bridge between hardware and user applications?**
  (A) Application software (B) Device drivers
  (C) System software (D) Media players
- **Which is an example of system software?**
  (A) Google Chrome (B) Microsoft Word
  (C) Microsoft Windows (D) VLC Media Player
- **Which software helps users perform specific tasks?**
  (A) System software (B) Application software
  (C) Device drivers (D) Utility programs
- **What type of software is antivirus software?**
  (A) Operating system (B) Device driver
  (C) Utility program (D) Web browser
- **What is an example of a word processor?**
  (A) Microsoft Word (B) Google Chrome
  (C) VLC Media Player (D) Windows OS
- **Which of the following is a web browser?**
  (A) Google Docs (B) Safari
  (C) Disk cleanup tools (D) Minecraft
- **What is typically pre-installed on a computer?**
  (A) Word processors (B) System software
  (C) Media players (D) Games
- **Which of these is an example of a device driver?**
  (A) Printer driver (B) Microsoft Word
  (C) VLC Media Player (D) Fortnite
- **What is the main purpose of system software?**
  (A) To manage hardware and allow application software to run
  (B) To create documents
  (C) To browse the internet
  (D) To play media files

5.2 INTRODUCTION TO SYSTEM SOFTWARE

LONG QUESTION

44. Explain the key functions of an operating system with detailed examples.

Ans: Introduction

An operating system (OS) is the backbone of a computer system, managing hardware, running applications, and providing a user interface. Its efficient functioning ensures that users can interact with the system seamlessly.

1. Managing Hardware Resources

The OS allocates CPU time, memory, and peripheral devices like printers and keyboards. It ensures that multiple applications can run without conflicts.

- **Example:** While browsing the internet and listening to music simultaneously, the OS distributes resources to both applications, ensuring smooth multitasking.

2. Providing a User Interface

The OS offers two main types of user interfaces:

Graphical User Interface (GUI): Allows interaction through icons, windows, and menus, making it user-friendly.

- **Example:** Using Windows, users can drag and drop files or click on icons to open programs.

  Command-Line Interface (CLI): Requires typing text commands, offering flexibility and precision.

  In Linux, users can type commands to move files or configure system settings.

3. Running Applications

The OS loads applications into memory, allocates resources, and ensures efficient execution without interference.

- **Example:** Opening Microsoft Word while running an antivirus scan. The OS ensures both processes run efficiently by managing resource allocation.

4. Ensuring Security and Stability

The OS prevents unauthorized access and ensures stable operation by isolating processes.

- **Example:** If a game crashes, the OS prevents it from affecting other running applications.

5. Maintenance and Updates

Regular OS updates enhance functionality, security, and performance. Maintenance tasks like disk cleanup and virus scans keep the system optimized.

- **Example:** Updating Windows to the latest version ensures compatibility with new applications and enhanced security.

Q.2 Explain utility programs, their functionalities, and their real-life applications with examples.

1. Utility Programs: An Overview

Utility programs are essential components of system software designed to enhance a computer system's functionality. They play a critical role in ensuring the smooth operation and efficient management of hardware, software, and data. These tools perform specialized tasks that help maintain and optimize the computer system.

2. Common Utility Programs

Several utility programs contribute to the efficient functioning of a computer. Key examples include:

2.1 Disk Cleanup

- **Functionality**:

  Disk Cleanup scans the hard drive for temporary files, cached files, and other

unnecessary items that can be safely deleted. This process helps free up disk space and optimize system performance.

- **Real-life Scenario**:
  Over time, your computer may accumulate unnecessary files, causing it to run slower. Running Disk Cleanup identifies and removes these files, reclaiming storage space and potentially improving system speed.

2.2 Antivirus Software

- **Functionality**:
  Antivirus software scans files and incoming data for known viruses and malware signatures. It also offers real-time protection to prevent virus attacks and ensures system security.
- **Real-life Scenario**:
  You receive an email attachment from an unknown sender and suspect it might contain malware. Before opening the attachment, you use antivirus software to scan for potential threats, safeguarding your computer from harm.

2.3 Backup Software

- **Functionality**:
  Backup software schedules and manages backups of important files and folders. It supports full system backups or selective file backups to external drives, cloud storage, or network locations.
- **Real-life Scenario**:
  After accidentally deleting an important presentation file, you use backup software to recover the latest saved version from the backup storage. This minimizes disruption and prevents data loss.

Q. 3 Discuss the functionalities and applications of file compression tools and device drivers. Include their working mechanisms and real-life scenarios to illustrate their importance.

1. File Compression Tools

File compression tools are utility programs designed to reduce the size of one or more files by creating an archive format, such as ZIP or RAR, while preserving the data's integrity.

1.1 Functionality of File Compression Tools

- Compress multiple files into a single, smaller archive format.
- Provide options for encryption and password protection for added security.
- Help save storage space and reduce the time required for file transfer.

1.2 Real-life Scenario

Suppose you need to send a large folder containing high-resolution photos via email, but the file size exceeds the attachment limit. Using a file compression tool, you can create a ZIP archive of the folder. This reduces the overall file size, making it easier and quicker to upload and send via email.

2. Device Drivers

Device drivers are specialized software programs that facilitate communication between the computer's operating system and hardware devices. Without drivers, hardware components cannot function properly.

2.1 How Device Drivers Work

1. **Installation**: When a new device is connected to a computer, a driver must often be installed to enable functionality.
2. **Communication**: The driver translates the general instructions from the operating system into specific commands that the hardware device can understand.
3. **Operation**: Once installed, the driver ensures seamless interaction between the device and the computer, enabling smooth operation.

2.2 Examples of Device Drivers

- **Printer Driver**: Allows the computer to send accurate signals to the printer for tasks like printing documents.

- **Graphics Card Driver**: Ensures that the computer correctly displays images and videos on the screen.

2.3 Real-life Analogy

A device driver can be compared to a TV remote control:

- **TV (Device)**: Capable of performing actions like changing channels or adjusting volume, but requires specific instructions.
- **Remote Control (Driver)**: Sends accurate signals to the TV to perform these actions.
- **You (Computer)**: Decide what to watch or adjust and use the remote to communicate with the TV.

SHORT QUESTIONS

Q.1 What is the primary role of system software?

Ans:

PRIMARY ROLE OF SYSTEM SOFTWARE

System software acts as an intermediary between computer hardware and user applications, ensuring that the hardware components work efficiently and providing a stable environment for application software to run. Without it, users would be unable to interact with the hardware effectively.

Q.2 What is an operating system (OS)?

Ans:

OPERATING SYSTEM (OS)

An OS is a type of system software that manages all hardware and software on a computer. It ensures different applications and users do not interfere with each other and provides a stable interface for hardware and software communication.

Q.3 What are some examples of operating systems?

Ans: Examples include:

Windows: Popular for personal computers.
macOS: Used on Apple's Mac computers.
Linux: An open-source OS used for servers and desktops.
Android: For smartphones and tablets.
iOS: For Apple devices like iPhones and iPads.

Q.4 How does the OS manage hardware resources?

Ans:

HARDWARE RESOURCES

The OS allocates CPU time, memory, and other resources to various applications. It ensures efficient multitasking, such as running a music player and web browser without performance issues.

Q.5 What is the difference between GUI and CLI?

Ans:

DIFFERENCE BETWEEN GUI AND CLI

GUI (Graphical User Interface): Uses icons, menus, and visual elements, making it user-friendly (e.g., Windows, macOS).
CLI (Command-Line Interface): Requires text commands for tasks, offering more flexibility but being less intuitive for beginners (e.g., Linux).

Q.6 Why is regular OS maintenance necessary?

Ans:

REGULAR OS MAINTENANCE OF OS

Regular updates, disk cleanup, and virus scans ensure the OS runs efficiently, remains secure, and prevents performance issues.

Q.7 What is the purpose of utility programs?

Ans:

PURPOSE OF UTILITY PROGRAMS

Utility programs enhance system functionality by performing tasks like disk cleanup, antivirus protection, file compression, and data backup, ensuring smooth system operation.

Q.8 Explain the role of disk cleanup.

Ans:

ROLE OF DISK CLEANUP

Disk cleanup scans for and removes unnecessary files, such as temporary and cached data, freeing up storage space and improving system performance.

Q.9 What does antivirus software do?

Ans:

ANTIVIRUS SOFTWARE

Antivirus software scans for and removes malware and viruses. It also provides real-time protection against potential threats, safeguarding the system from malicious attacks.

Q.10 What are file compression tools?

Ans:

FILE COMPRESSION TOOLS

File compression tools reduce the size of files or folders, making storage and transfer more efficient. For example, creating a ZIP archive for sending large folders via email.

Q.11 What is the function of backup software?

Ans:

FUNCTION OF BACKUP SOFTWARE

Backup software creates copies of important files and folders, allowing recovery in case of accidental deletion, data corruption, or system failure.

Q.12 What are device drivers?

Ans:

DEVICE DRIVERS

Device drivers are system software that facilitates communication between hardware devices (e.g., printers, graphics cards) and the operating system, ensuring proper functionality.

Q.13 Why are device drivers compared to a TV remote?

Ans:

DEVICE DRIVERS COMPARED TO A TV REMOTE

A device driver acts like a TV remote, translating user commands into actions for the device. The remote sends signals to the TV, while drivers translate computer instructions for hardware devices.

Q.14 What is an example of using a printer driver?

Ans:

EXAMPLE OF USING A PRINTER DRIVER

A printer driver ensures that the computer sends the correct signals to the printer, enabling it to print documents accurately.

Q.15 How do utility programs help optimize system performance?

Ans:

UTILITY PROGRAMS AND SYSTEM PERFORMANCE

Utility programs perform specific tasks like cleaning disks, scanning for viruses, compressing files, and creating backups, ensuring that the system operates efficiently and securely.

MULTIPLE CHOICE QUESTIONS

Q.14 What is the main role of system software?

(A) To create documents
(B) To act as an intermediary between hardware and applications
(C) To manage user data
(D) To play media files

Q.15 What does an operating system primarily manage?

(A) Internet browsing (B) Hardware resources
(C) File compression (D) Email services

Q.16 Which of the following is NOT an operating system?

(A) Windows (B) Linux
(C) Antivirus (D) macOS

Q.17 What does the OS allocate to applications for smooth functioning?

(A) CPU time and memory (B) Graphics cards
(C) Compressed files (D) Antivirus scans

Q.18 Which OS is specifically designed for smartphones?

(A) Windows (B) Android
(C) macOS (D) Linux

Q.19 What type of user interface uses visual elements like icons and menus?

(A) CLI (B) GUI
(C) Antivirus (D) Device driver

Q.20 Which user interface requires typing text commands?
(A) GUI (B) CLI
(C) Taskbar (D) Dashboard

Q.21 What is the role of utility programs?
(A) Compressing files (B) Managing hardware
(C) Enhancing system functionality (D) Displaying images

Q.22 What does disk cleanup do?
(A) Scans for viruses (B) Deletes unnecessary files
(C) Compresses files (D) Creates backups

Q.23 Which tool reduces file size for storage and transfer?
(A) Disk cleanup (B) File compression tools
(C) Device drivers (D) Antivirus software

Q.24 Which OS is open-source?
(A) Windows (B) macOS
(C) Linux (D) iOS

Q.25 What ensures that hardware and devices communicate properly?
(A) Device drivers (B) Antivirus software
(C) Disk cleanup (D) GUI

Q.26 Which utility program helps recover lost files?
(A) Disk cleanup (B) Backup software
(C) File compression tools (D) CLI

Q.27 Which OS is known for its smooth performance on iPhones?
(A) Android (B) iOS
(C) Linux (D) Windows

Q.28 What does antivirus software scan for?
(A) Unnecessary files (B) Viruses and malware
(C) Compressed files (D) Hardware drivers

Q.29 What type of device driver ensures proper image and video display?
(A) Printer driver (B) Graphics card driver
(C) Keyboard driver (D) Network driver

Q.30 What is the purpose of backup software?
(A) To delete files (B) To create file archives
(C) To store copies of data (D) To scan for malware

Q.31 Which of these is a real-life example of file compression?
(A) Scanning emails (B) Sendi7ng ZIP files
(C) Updating the OS (D) Running antivirus scans

Q.32 What does a printer driver facilitate?
(A) Compressing files for printing
(B) Communication between the computer and printer
(C) File recovery
(D) Antivirus protection

Q.33 What is the real-life analogy for a device driver?
(A) A TV remote control (B) A compressed file
(C) A backup system (D) An antivirus scan

5.3 APPLICATION SOFTWARE

LONG QUESTION

Q. 1 Explain word processing software and spreadsheet software as types of application software, their functionalities, and examples.

1. Application Software Overview

Application software is a category of programs designed to perform specific tasks for users, leveraging the operating system and hardware to meet diverse user needs. Two common types of application software are word processing software and spreadsheet software.

2. Word Processing Software

2.1 Functionality

Word processing software is used for creating, editing, formatting, and printing text-based documents such as letters, reports, and essays. These tools provide advanced features to enhance document quality and usability, including text formatting, spell check, and grammar check.

2.2 Examples of Word Processing Software

1. **Microsoft Word**: Offers extensive text formatting options, grammar check, and the ability to insert images and tables.
2. **Google Docs**: A web-based tool that allows real-time collaboration, enabling multiple users to edit a document simultaneously.
3. **Apple Pages**: Provides templates and design tools for creating professional-quality documents, integrating seamlessly with other Apple products.
4. **LibreOffice Writer**: A free and open-source alternative with features comparable to Microsoft Word, available on multiple operating systems.

3. Spreadsheet Software

3.1 Functionality

Spreadsheet software organizes data in rows and columns, enabling users to perform calculations, analyze data, and create visual representations such as charts. This software is essential for budgeting, financial analysis, and statistical evaluation.

3.2 Examples of Spreadsheet Software

1. **Microsoft Excel**: Known for its powerful calculation formulas, pivot tables, and diverse charting options.
2. **Google Sheets**: A collaborative, web-based tool that integrates with other Google services and allows multiple users to edit simultaneously.
3. **Apple Numbers**: Offers strong visualization tools and templates for creating visually appealing spreadsheets.
4. **LibreOffice Calc**: An open-source alternative with features similar to Microsoft Excel, catering to users who prefer free software options.

Q.2 Describe graphic design software as a type of application software, its functionalities, and examples.

1. Application Software Overview

Graphic design software is a specialized type of application software designed to help users create, edit, and manage visual content. It is widely used in industries such as advertising, publishing, and web design.

Graphic Design Software

Functionality

Graphic design software offers tools for various creative tasks, including photo editing, drawing, painting, and illustration. These programs are essential for creating professional visual content and are often used by designers and artists.

Examples of Graphic Design Software

Adobe Photoshop: A powerful tool for photo editing, digital painting, and creating graphic designs.

1. **Adobe Illustrator**: Specializes in vector graphics, making it ideal for logos, illustrations, and scalable designs.
2. **CorelDRAW**: Known for its user-friendly interface and robust feature set, suitable for creating professional layouts and graphics.
3. **GIMP (GNU Image Manipulation Program)**: A free, open-source tool that offers features similar to Adobe Photoshop, catering to users seeking cost-effective solutions.

4. **Canva**: A web-based platform with a simple interface, offering templates and design elements for beginners and professionals alike.

SHORT QUESTIONS

Q.1 What is Plug and Play (PnP)?

Ans:

PLUG AND PLAY (PNP)

Plug and Play (PnP) allows devices to automatically configure themselves when connected to a computer, simplifying installation and use.

Q.2 What should you do when installing a new device?

Ans:

INSTALLING A NEW DEVICE

Always check for the latest driver updates to ensure compatibility and optimal performance.

Q.3 What was the first operating system?

Ans:

FIRST OPERATING SYSTEM

The first operating system, GM-NAA I/O, was created in the 1950s for IBM computers.

Q.4 Define application software.

Ans:

APPLICATION SOFTWAREOT

Application software consists of programs designed to perform specific tasks such as writing documents, analyzing data, or creating visuals.

Q.5 What is word processing software used for?

Ans:

USES OF WORD PROCESSING SOFTWARE

Word processing software is used for creating, editing, and formatting text-based documents like letters and reports.

Q.6 Name some examples of word processors.

Ans:

EXAMPLES OF WORD PROCESSORS

Examples include Microsoft Word, Google Docs, Apple Pages, and LibreOffice Writer.

Q.7 What is unique about Google Docs?

Ans:

GOOGLE DOCS

Google Docs supports real-time collaboration, allowing multiple users to edit documents simultaneously.

Q.8 What are the functions of spreadsheet software?

Ans:

FUNCTIONS OF SPREADSHEET SOFTWARE

Spreadsheet software organizes, analyzes, and stores data in tabular form, performs calculations, and creates charts.

Q.9 List some popular spreadsheet programs.

Ans:

POPULAR SPREADSHEET PROGRAMS

Examples include Microsoft Excel, Google Sheets, Apple Numbers, and LibreOffice Calc.

Q.10 How does AI enhance spreadsheet software?

Ans:

AI AND SPREADSHEET SOFTWARE

AI features like Excel's Ideas and Google Sheets' Explore provide insights, suggest formulas, and create charts automatically.

Q.11 What is graphic design software?

Ans:

GRAPHIC DESIGN SOFTWARE

Graphic design software helps create, edit, and manage visual content, including illustrations, photos, and logos.

Q.12 Name some graphic design tools.

Ans:

GRAPHIC DESIGN TOOLS

Examples include Adobe Photoshop, Adobe Illustrator, CorelDRAW, GIMP, and Canva.

Q.13 What is Adobe Photoshop best known for?

Ans:

ADOBE PHOTOSHOP BEST KNOWN

Adobe Photoshop is best for photo editing and digital painting.

Q.14 What is GIMP, and why is it significant?

Ans:

GIMP, AND WHY IS IT SIGNIFICANT

GIMP is a free, open-source graphic design tool offering features similar to Adobe Photoshop, ideal for users preferring open-source software.

Q.15 What is the role of AI in graphic design software?

Ans:

ROLE OF AI IN GRAPHIC DESIGN SOFTWARE

AI tools like Adobe Sensei automate tasks, suggest design elements, and enhance images, making work more efficient.

MULTIPLE CHOICE QUESTIONS

Q.32 What does a Plug and Play (PnP) device do?
(A) Requires manual configuration (B) Automatically configures itself
(C) Needs special software to work (D) Only works on macOS

Q.33 What was the first operating system called?
(A) Windows (B) Android
(C) GM-NAA I/O (D) Unix

Q.34 What is the purpose of word processing software?
(A) Analyzing data (B) Editing visual content
(C) Creating and editing documents (D) Managing databases

Q.35 Which word processor is web-based and supports real-time collaboration?
(A) Microsoft Word (B) Google Docs
(C) Apple Pages (D) LibreOffice Writer

Q.36 Which feature is common to Microsoft Word and LibreOffice Writer?
(A) Open-source design (B) Real-time collaboration
(C) Text formatting and spell check (D) Exclusive to macOS

Q.37 What type of software is used for organizing and analyzing data in tabular form?
(A) Word processing software (B) Spreadsheet software
(C) Graphic design software (D) Antivirus software

Q.38 Which spreadsheet program is open-source and free?
(A) Microsoft Excel (B) Google Sheets
(C) Apple Numbers (D) LibreOffice Calc

Q.39 What feature does AI provide in spreadsheet software?
(A) Real-time collaboration (B) Automatic insights and chart creation
(C) Enhanced visual content (D) Spell check and grammar suggestions

Q.40 Which graphic design software is best for photo editing?
(A) Adobe Illustrator (B) CorelDRAW
(C) Adobe Photoshop (D) Google Docs

Q.41 Which program is an open-source alternative to Adobe Photoshop?
(A) Canva (B) GIMP
(C) CorelDRAW (D) Apple Pages

Q.42 What does Canva specialize in?
(A) Complex vector graphics (B) Real-time collaboration
(C) Templates and beginner-friendly design (D) Advanced statistical analysis

Q.43 What type of content is created with Adobe Illustrator?
(A) Photos (B) Text documents
(C) Vector graphics (D) Tabular data

Q.44 Which spreadsheet tool integrates with Google services?
(A) Microsoft Excel (B) Apple Numbers
(C) Google Sheets (D) LibreOffice Calc

Q.45 What is the advantage of AI in graphic design tools?
(A) Enhancing images and automating repetitive tasks
(B) Editing text documents
(C) Analyzing financial data
(D) Optimizing hardware drivers

Q.46 What is a feature of Apple Numbers?
(A) Collaboration with multiple users (B) Strong visualization tools
(C) Built-in photo editing (D) Advanced grammar check

SUMMARY

- Software systems include all the programs and applications that enable us to perform specific tasks on a computer.
- The primary objective of software as a system is to manage hardware resources and provide a platform for applications to run smoothly.
- System software manages the hardware and basic system operations, while application software helps users perform specific tasks.
- The main functions of system software include managing hardware resources, providing a user interface, and running applications.
- Utility software enhances system performance and ensures security and maintenance, and device drivers, which facilitate communication between hardware devices and the operating system.
- In business, application software streamlines operations, improves productivity, and enhances communication.
- In education, application software enhances the learning experience, improves administrative efficiency, and facilitates communication between teachers, students, and parents.

EXERCISE

MULTIPLE CHOICE QUESTIONS

26. What is the primary function of an operating system?
(A) To create documents
(B) To manage hardware resources and provide a user interface
(C) To perform calculations
(D) To design graphics

27. Which software is used to enhance system performance and security?
(A) Operating system (B) Utility software
(C) Application software (D) Device drivers

28. What role do device drivers play in a computer system?
(A) Manage files
(B) Facilitate communication between hardware devices and the operating system
(C) Create presentations
(D) Enhance graphics performance

29. Which of the following is an example of application software?
(A) Microsoft Word (B) BIOS
(C) To create visual content (D) To enhance system security

30. What is the main purpose of spreadsheet software?
(C) Disk Cleanup (D) Device Manager
(A) To edit text documents (B) To organize and analyze data

31. How does utility software differ from application software?
(A) Utility software manages hardware, while application software performs specific tasks for users.
(B) Utility software creates documents, while application software manages hardware.
(C) Utility software performs specific tasks for users, while application software manages hardware.
(D) Utility software is free, while application software is paid.

32. Which type of software would you use to design a logo?
(A) Operating system (C) Graphic design software
(B) Spreadsheet software (D) Utility software

33. What is the function of system software?
(A) To facilitate communication between hardware and software
(B) To perform specific tasks for the user
(C) To create visual content
(D) To organize and analyze data

LAST
HOPE
STUDY

8) Why are operating system updates important?
(A) They increase screen brightness (B) They add more fonts
(C) They enhance security and fix bugs (D) They improve battery life

34. What is a common task you can perform using word processing software?
(A) Create and edit text documents (B) Manage hardware resources
(C) Enhance system performance (D) Organize and analyze data

SHORT QUESTIONS

Q. 6 Define system software and provide two examples.
Ans: System software is designed to manage the hardware and basic system operations of a computer. It acts as an intermediary between hardware and application software, ensuring smooth functionality.
Examples:
Operating Systems: e.g., Microsoft Windows, macOS.
Device Drivers: e.g., printer drivers, graphics card drivers.

Q. 7 Explain the primary functions of an operating system.
Ans: The primary functions of an operating system include:

Q. 8 Managing Hardware Resources: Allocates CPU, memory, and peripheral devices to applications without conflicts.
Ans: Providing a User Interface: Offers a Graphical User Interface (GUI) or Command-Line Interface (CLI) for user interaction.
Running Applications: Loads, allocates resources to, and manages multiple running applications efficiently.

Q. 9 What is utility software and why is it important?
Ans: Utility software consists of programs that maintain, secure, and enhance the performance of a computer.

Importance:
1. Improves performance through tasks like disk cleanup.
2. Protects against threats with antivirus tools.
3. Ensures reliability with backup software.

Q. 10 Describe the role of device drivers in a computer system.
Ans: Device drivers are specialized software that enable communication between the operating system and hardware devices.

Functions:
1. Acts as a translator for hardware-specific commands.
2. Facilitates the installation, communication, and operation of hardware like printers and graphics cards.

Q. 11 Differentiate between system software and application software with examples.
Ans: System Software: Manages system operations and hardware. Examples: Operating systems (Windows), utility software (antivirus).
Application Software: Helps users perform specific tasks. Examples: Microsoft Word for word processing, Google Chrome for browsing.

Q. 12 What are the main functions of spreadsheet software?
Ans: Spreadsheet software is used to organize, analyze, and visualize data.
Functions:
1. Data entry and management in tabular format.
2. Perform calculations using formulas.
3. Create charts and graphs for data visualization.

Q. 13 How can graphic design software be used in the field of education?
Ans: Graphic design software enhances the educational experience by:
1. Creating engaging visuals for teaching materials.
2. Facilitating interactive assignments, such as poster design.
3. Providing tools for creating illustrations and digital art for educational projects.

Q,9 What is the significance of data backups and how can they be performed?

Ans: Data backups ensure the safety of important files and allow recovery in case of data loss.

Methods of Backup:

1. External Storage: Backing up to USB drives or external hard drives.
2. Cloud Solutions: Using services like Google Drive for remote storage.

LONG QUESTIONS

1. **Discuss the importance of system software in a computing system.**
   See Topic 5.2
2. **Describe the roles of operating systems, utility software, and device drivers, providing examples of each.**
   See Topic 5.2
3. **Explain the differences between system software and application software.**
   See Topic 5.2 and 5.3
4. **Describe the process of using utility software to optimize system performance and maintain security. Provide detailed steps and examples of common utility tools.**
   See Topic 5.2
5. **Explain how to install, update, and troubleshoot device drivers for hardware components.**
   See Topic 5.2
6. **Discuss the main functions of commonly used application software, such as word processing, spreadsheet, presentation, and graphic design applications.**
   See Topic 5.3

ANSWER KEYS

TOPIC 5.1 SOFTWARE

1	B	**2**	C	**3**	C	**4**	B	**5**	C
6	A	**7**	B	**8**	B	**9**	A	**10**	A

TOPIC 5.2 INRODUCTION TO SYSTEM SOFTWARE

1	B	**2**	B	**3**	C	**4**	A	**5**	B
6	B	**7**	B	**8**	C	**9**	B	**10**	B
11	C	**12**	A	**13**	B	**14**	B	**15**	B
16	B	**17**	C	**18**	B	**19**	B	**20**	A

TOPIC 5.3

1	B	**2**	C	**3**	C	**4**	B	**5**	C
6	B	**7**	D	**8**	B	**9**	C	**10**	B
11	C	**12**	C	**13**	C	**14**	A	**15**	A

TEXTBOOK EXERCISE MCQs

1	B	**2**	B	**3**	B	**4**	A	**5**	B
6	A	**7**	C	**8**	A	**9**	C	**10**	A