Class: 9th

Subject: Computer

Unit 5: Software System

Multiple Choice Questions (MCQs)

1. 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

2. Which software is used to enhance system performance and security?

(a) Operating system

(**b**) Utility software ✅

(c) Application software

(d) Device drivers

3. 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

4. Which of the following is an example of application software?

(a) Microsoft Word ✅

(b) BIOS

(c) Disk Cleanup

(d) Device Manager

5. What is the main purpose of a spreadsheet software?

(a) To edit text documents

(**b**) To organize and analyze data ✅

(c) To create visual content

(d) To enhance system security

6. 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.

7. Which type of software would you use to design a logo?

(a) Operating system

(b) Spreadsheet software

(c) Graphic design software ✅

(d) Utility software

8. 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

9. 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

10. 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

Important MCQs:

1. What is the main role of software in a computer system?

(a) To build hardware parts

(b) To decorate the screen

(c) To tell the computer what to do and how to do it ✅

(d) To store electricity

2. Which of the following is an example of system software?

(a) Microsoft Word

(b) VLC Media Player

(c) Google Chrome

(d) Microsoft Windows ✅

3. What type of software is used to perform specific user tasks?

(a) System software

(b) Application software ✅

(c) Device drivers

(d) Utility programs

4. Which of the following is a utility program?

(a) Firefox

(b) Disk Cleanup ✅

(c) Microsoft Excel

(d) Printer driver

5. What is a key difference between system software and application software?

(a) System software is installed by users, application software is pre-installed

(b) System software performs specific tasks, application software manages hardware

(c) System software manages hardware; application software performs user tasks ✅

(d) Both are used to play games

6. What is the primary purpose of system software?

(a) To browse websites

(b) To create presentations

(c) To manage computer hardware and support application software ✅

(d) To edit images

7. Which of the following is an example of an operating system?

(a) VLC Media Player

(b) Microsoft Word

(c) Windows ✅

(d) Google Chrome

8. What role does the operating system play in a computer system?

(a) It cleans the disk only

(b) It performs calculations

(c) It manages hardware and software resources ✅

(d) It creates videos

9. Which operating system is open-source and used on both servers and desktops?

(a) Windows

(b) macOS

(c) Android

(**d**) Linux ✅

10. What is an example of a graphical user interface (GUI) operating system?

(a) DOS

(b) Linux CLI

(**c**) Windows ✅

(d) Command Prompt

11. What is a key feature of a command-line interface (CLI)?

(a) Uses icons and windows

(**b**) Requires typing text commands ✅

(c) Offers touch screen controls

(d) Allows only one application at a time

12. Which operating system is commonly used in smartphones and developed by Google?

(a) Windows

(b) Android ✅

(c) iOS

(d) Linux

13. What does the OS do when multiple applications are open at the same time?

(a) Shuts down some apps

(b) Pauses all apps

(c) Manages resources so all run smoothly ✅

(d) Deletes unused apps

14. What is the function of utility programs?

(a) To play games

(b) To perform tasks like disk cleanup and antivirus scanning ✅

(c) To create spreadsheets

(d) To write documents

15. Which of the following provides a command-line interface (CLI)?

(a) macOS

(b) Windows

(c) DOS ✅

(d) Android

16. What is the main purpose of Disk Cleanup?

(a) To increase screen brightness

(b) To remove viruses

(c) To scan and remove unnecessary files to free up space ✅

(d) To compress files

17. Which utility program scans files for viruses and malware?

(a) Disk Cleanup

(b) Antivirus Software ✅

(c) File Compression Tool

(d) Backup Software

18. What is the function of Backup Software?

(**a**) To recover deleted files ✅

(b) To slow down applications

(c) To delete system files

(d) To design presentations

19. When you want to send a large folder of images via email, which utility tool is most useful?

(a) Antivirus Software

(**b**) File Compression Tool ✅

(c) Backup Software

(d) Disk Cleanup

20. What is the function of a Device Driver?

(a) To store user data

(**b**) To allow communication between hardware and operating system ✅

(c) To delete temporary files

(d) To scan for malware

21. Which type of software is used for creating, editing, and formatting documents?

(a) Spreadsheet Software

(b) Word Processing Software ✅

(c) Backup Software

(d) Graphic Design Software

22. Which of the following is an example of Spreadsheet Software?

(a) Microsoft Word

(b) Adobe Illustrator

(c) Microsoft Excel ✅

(d) LibreOffice Writer

23. Google Docs allows real-time collaboration and is categorized as:

(a) Word Processing Software ✅

(b) Antivirus Software

(c) Graphic Design Software

(d) Spreadsheet Software

24. What is the primary purpose of Graphic Design Software?

(a) Writing essays

(b) Data calculations

(c) Creating and editing visual content ✅

(d) Scanning for viruses

25. Which of the following is a free and open-source graphic design program?

(a) CorelDRAW

(b) Adobe Photoshop

(c) Canva

(d) GIMP ✅

Exercise Short Questions:

1. Define system software and provide two examples.

System software is a type of software that

manages and controls computer hardware so that application software can function properly.

Examples:

1. Operating System (e.g., Windows)
2. Device Drivers

2. Explain the primary functions of an operating system.

Operating system performs key tasks such as:

- Managing hardware and software resources
- Providing user interface
- Running applications
- Managing files and memory

3. What is utility software and why is it important?

Utility software is a type of system software that performs specific tasks to maintain the computer system's performance.

Importance: It helps in tasks like virus scanning, file management, disk cleanup, and data backup.

4. Describe the role of device drivers in a computer system.

Device drivers act as translators between the operating system and hardware devices. They allow the computer to communicate and operate devices like printers, keyboards, and graphics cards.

5. Differentiate between system software and application software with examples.

- **System Software** controls the hardware (e.g., Windows OS, drivers).
- **Application Software** helps users perform specific tasks (e.g., MS Word, Excel).

6. What are the main functions of spreadsheet software?

Spreadsheet software is used to:

- Organize and store data in tabular form
- Perform calculations using formulas
- Create charts and graphs for data analysis

7. How can graphic design software be used in the field of education?

Graphic design software can be used to:

- Create educational posters and diagrams
- Design presentations and infographics
- Make interactive learning materials

8. What is the significance of data backups and how can they be performed?

- **Significance**: Data backups prevent data loss due to hardware failure or accidental deletion.
- **How**: Backups can be done using external drives, cloud storage, or backup software.

Important Short Questions:

1. What is software and why is it important in a computer system?

Answer:

Software is a collection of programs and instructions that tell a computer what to do. Without software, a computer cannot function or perform any task.

2. What is system software? Give two examples.

Answer:

System software manages hardware and provides a platform for application software.

Examples: Operating System, Device Drivers

3. Define application software with two examples.

Answer:

Application software is used to perform specific tasks for the user.

Examples: Microsoft Word, Google Chrome

4. Mention two differences between system software and application software.

Answer:

System software manages hardware; application software performs user tasks.

System software is pre-installed; application software is user-installed.

5. What is the role of device drivers in a computer?

Answer:

Device drivers allow communication between the operating system and hardware devices, ensuring they work properly.

6. What is system software?

Answer:

System software is essential for the operation of a computer and acts as an intermediary between hardware and user applications.

7. What is an operating system?

Answer:

An operating system is a type of system software that manages hardware and software and allows applications to run efficiently.

8. Name any two popular operating systems.

Answer:

Windows and **macOS**.

9. What is the role of the operating system in managing hardware resources?

Answer:

The OS allocates CPU time, memory, and access to devices like printers so applications run smoothly without conflict.

10. What is a Graphical User Interface (GUI)? Give one example.

Answer:

A GUI allows users to interact with the computer using windows, icons, and menus.

Example: Microsoft Windows.

11. What is a Command-Line Interface (CLI)? Give one example.

Answer:

A CLI requires users to type commands to perform tasks.

Example: Linux or DOS.

12. How does the operating system help in running applications?

Answer:

The OS loads applications into memory, allocates resources, and manages their execution without interference.

13. What are utility programs?

Answer:

Utility programs are system software tools that perform specific tasks like improving performance and protecting data.

14. What is the function of Disk Cleanup utility?

Answer:

Disk Cleanup deletes temporary and unnecessary files to free up disk space and improve system performance.

15. What is the role of backup software?

Answer:

Backup software creates copies of files and folders

to prevent data loss in case of accidental deletion or failure.

16. What are file compression tools and how do they help in real life?

Answer:

File compression tools reduce the size of files by creating an archive (like ZIP or RAR) to make storage and transfer easier. For example, compressing a large folder of photos to send via email faster.

17. What is the role of device drivers in a computer system? Explain with an example.

Answer:

Device drivers act as translators between the computer and hardware devices, enabling them to communicate and work properly. For example, a printer driver helps the computer send correct signals to the printer for printing documents.

18. What is application software?

Application software is a program designed to help

users perform specific tasks like writing documents, managing data, or creating graphics.

19. Name any four types of commonly used application software.

Word processing software, spreadsheet software, graphic design software, and web browsers.

20. What is word processing software? Give two examples.

Word processing software is used to create, edit, and format text documents. **Examples** include Microsoft Word and Google Docs.

21. List three key features of Microsoft Word.

1. Text formatting
2. Spell and grammar check
3. Inserting images and tables

22. How does Google Docs differ from traditional word processors?

Google Docs is web-based and allows multiple users to edit documents simultaneously online.

23. What is spreadsheet software used for? Give two examples.

Spreadsheet software is used for organizing, analyzing, and storing data in tables. **Examples** are Microsoft Excel and Google Sheets.

24. Mention two main features of Microsoft Excel.

Performing complex calculations using formulas

Creating charts and graphs

25. What is graphic design software?

Graphic design software is used to create and edit visual content like images, drawings, and illustrations.

26. Name two graphic design software used for vector graphics.

Adobe Illustrator and CorelDRAW.

27. Give an example of a free and open-source graphic design software.

GIMP (GNU Image Manipulation Program).

Important Long Questions:

🌟 **Q1. Discuss the importance of system software in a computing system.**

System software is a crucial part of any computing system because it acts as a bridge between the hardware and the user's applications. Without system software, hardware components such as the CPU, memory, and input/output devices would not be able to work together or communicate effectively.

Importance of System Software:

Resource Management: System software manages hardware resources such as the processor, memory, disk drives, and peripheral devices. It ensures that multiple programs can run simultaneously without conflict by allocating the right amount of resources to each.

Hardware Abstraction: It hides the complex details of hardware operations from users and application programs, providing a simple and consistent

interface. This allows application software to run on various hardware without needing to know the specifics of each device.

User Interface: System software provides the user interface through which users interact with the computer. This can be graphical (GUI) or command-line (CLI), making computing easier and more accessible.

Running Applications: It loads, runs, and manages applications, ensuring they operate efficiently and securely.

System Stability and Security: It controls system access and protects data and resources from unauthorized use, maintaining the overall stability of the system.

In short, system software is essential for the smooth and efficient operation of a computer system. Without it, users would find it nearly impossible to control hardware or run applications.

🌟 **Q2. Describe the roles of operating systems, utility software, and device drivers, providing**

examples of each.

System software is divided into three main types: operating systems, utility software, and device drivers. Each plays a unique and vital role in computer functioning.

Operating System (OS):

The OS manages all hardware and software on a computer. It acts as an intermediary between the user applications and the hardware. The OS handles resource allocation, provides user interfaces, and manages file systems and security.

- **Example**: Windows, macOS, Linux, Android, and iOS.

Role:

- Manages hardware resources like CPU and memory
- Provides a user interface (GUI or CLI)
- Runs and manages applications

Utility Software:

Utility programs are specialized tools designed to perform specific tasks to maintain and optimize the computer system. They help keep the system running smoothly by handling tasks like cleaning unnecessary files, protecting against viruses, and backing up important data.

- **Examples**:
  - Disk Cleanup (removes temporary files)
  - Antivirus software (protects from malware)
  - Backup software (saves copies of important data)

Role:

- Improve system performance
- Protect the system from threats
- Help recover lost or corrupted data

Device Drivers:

Device drivers are programs that help the operating system communicate with hardware devices. They translate general commands from the OS into

device-specific instructions, enabling devices like printers, graphics cards, and keyboards to function correctly.

- **Examples**:
  - Printer drivers
  - Graphics card drivers
  - Keyboard and mouse drivers

Role:

- Facilitate communication between OS and hardware devices
- Ensure hardware operates as intended
- Provide necessary instructions for hardware operation

Together, these components ensure the computer works efficiently, securely, and user-friendly.

🌟 Q3. Explain the differences between system software and application software.

System software and application software are two main types of software that serve different

purposes in a computer system. The key differences between them are as follows:

1. Purpose:

System software is designed to manage and control the computer hardware and provide a platform for running application software. It ensures that the computer system operates efficiently. In contrast, application software is created to help users perform specific tasks, such as creating documents, browsing the internet, or editing photos.

2. Functionality:

System software performs essential functions like managing memory, controlling input/output devices, and maintaining file systems. It works in the background to keep the computer running smoothly. Application software, however, provides tools and features that allow users to complete particular tasks directly.

3. User Interaction:

Users interact indirectly with system software, mostly through the operating system's interface or commands. Application software is designed for direct user interaction, offering user-friendly interfaces to make tasks easier.

4. Dependency:

Application software depends on system software to function, as it needs the operating system and hardware management to run. System software can operate independently without requiring any application software.

- **5. Examples:**

Common examples of system software include operating systems like Windows, macOS, and Linux; utility programs like antivirus software; and device drivers for hardware components. Examples of application software include Microsoft Word, Google Chrome, Adobe Photoshop, and media players.

6. Scope of Operation:

System software operates at a low level close to the hardware, managing core processes and resources. Application software works at a higher level, focusing on specific tasks and user needs.

🌟 **Q4. Describe the process of using utility software to optimize system performance and maintain security. Provide detailed steps and examples of common utility tools.**

Utility software plays a vital role in enhancing system performance and ensuring security. These specialized programs help maintain, optimize, and protect a computer by performing specific tasks. The process typically involves the following steps:

Step 1: Disk Cleanup

- **Purpose**: Removes unnecessary files such as temporary files, cache, and recycle bin contents to free up disk space.
- **Process**: Run the Disk Cleanup tool, select the files to delete, and confirm the action. This helps improve system speed and responsiveness.

- **Example**: Windows Disk Cleanup.

Step 2: Disk Defragmentation

- Purpose: Reorganizes fragmented data on the hard drive to allow faster file access.
- Process: Run the Disk Defragmenter utility which rearranges fragmented files into contiguous blocks. This reduces the time needed for data retrieval.

- **Example**: Windows Defragment and Optimize Drives.

Step 3: Antivirus and Anti-malware Scanning

Purpose: Detects and removes malicious software such as viruses, spyware, and ransomware to protect the system.

Process: Run a full system scan using antivirus software, quarantine or delete detected threats, and enable real-time protection for ongoing security.

- **Example**: Norton Antivirus, McAfee, Windows Defender.

Step 4: Backup and Recovery

- **Purpose**: Creates copies of important files to prevent data loss in case of system failure.
- **Process**: Schedule automatic backups of critical data to external drives or cloud storage. Recovery tools can restore files from backups when needed.

🔹 **Example**: Windows Backup and Restore, Acronis True Image.

Step 5: System Updates and Patch Management

- **Purpose**: Keeps software and the operating system up to date with security patches and performance improvements.
- **Process**: Regularly check for updates, download and install them to fix vulnerabilities and bugs.

🔹 **Example**: Windows Update, macOS Software Update.

These utility tools collectively optimize system speed, enhance security, and ensure data integrity,

resulting in a reliable and efficient computing experience.

🌟 **Q5. Explain how to install, update, and troubleshoot device drivers for hardware components.**

Device drivers are essential software that allows the operating system to communicate with hardware devices such as printers, graphics cards, and keyboards. Managing drivers involves installation, updates, and troubleshooting.

Installing Device Drivers:

When a new hardware device is connected, the system often detects it automatically and attempts to install the appropriate driver.

If automatic installation fails, the user can manually install the driver by:

1. Downloading the latest driver software from the hardware manufacturer's website.

2. Running the installer or using the Device Manager to browse and select the driver file.

3. Following on-screen prompts to complete the installation.

Updating Device Drivers:

Drivers may need to be updated to fix bugs, add features, or ensure compatibility with newer operating systems.

To update:

1. Open Device Manager (Windows) or System Preferences (macOS).
2. Locate the device and select “Update driver.”
3. Choose to search automatically online or manually select a downloaded driver.
4. Follow prompts to complete the update.

Alternatively, manufacturers often release driver update utilities for automatic updates.

Troubleshooting Device Drivers:

Common issues include hardware not working, driver conflicts, or system crashes. Troubleshooting steps include:

1. Restarting the computer to reset the device.

2. Checking for hardware connections and compatibility.

3. Using Device Manager to roll back to a previous driver if the latest update causes problems.

4. Reinstalling the driver after uninstalling the problematic version.

5. Checking for error codes and consulting manufacturer support.

- Using diagnostic tools and system logs can help identify driver-related issues.
- By properly managing device drivers, users ensure that hardware functions correctly and the system remains stable.

🌟 **Q6. Discuss the main functions of commonly used application software, such as word processing, spreadsheet, presentation, and graphic design applications.**

Application software provides users with tools to

perform specific tasks efficiently. Here are the main functions of some commonly used types:

Word Processing Software:

- Used for creating, editing, formatting, and printing text documents.
- Supports features like spell check, grammar check, inserting images and tables, and document templates.

🔹 **Examples** include Microsoft Word and Google Docs.

Common tasks: writing letters, reports, essays, and resumes.

Spreadsheet Software:

- Organizes data in rows and columns, allowing calculations using formulas and functions.
- Enables data analysis, chart creation, budgeting, and financial modeling.

🔹 **Examples** include Microsoft Excel and Google Sheets.

Common tasks: managing budgets, performing statistical analysis, and tracking data.

Presentation Software:

- Allows creation of slide-based presentations with text, images, animations, and multimedia.
- Supports tools for designing visually appealing slides and delivering presentations.

🔹 **Examples** include Microsoft PowerPoint and Google Slides.

Common tasks: preparing lectures, business presentations, and project proposals.

Graphic Design Software:

- Used for creating and editing visual content like images, illustrations, and layouts.
- Offers tools for drawing, photo editing, vector graphics, and digital painting.

🔹 **Examples** include Adobe Photoshop, CorelDRAW, and Canva.

Common tasks: designing logos, editing photos,

creating marketing materials, and producing digital artwork.

These application programs leverage the **operating system** and **hardware** to provide users with specialized **functionalities** that meet diverse needs, improving productivity and creativity.

Note:

This chapter is designed to provide a solid foundation of knowledge, with the goal of deepening understanding and encouraging further exploration of the subject. The content has been carefully selected to support effective learning and inspire students to engage with the topic more deeply.

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Purpose: To contribute to education by offering

insightful, valuable content that enhances learning and understanding.

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