**Class 8 Ch-1**

**Operating System and GUI**

**A. Tick the correct option**

1. **-----------------is the interface between the user and the hardware.**  
   ✅ **a. Operating system**  
   **Explanation:** The operating system (OS) acts as an intermediary between the user and the computer hardware, managing resources and providing a user interface.
2. **Which of the following helps other software to run on the computer?**  
   ✅ **c. Operating system**  
   **Explanation:** The OS provides essential services that allow other software, such as application programs, to function properly.
3. **The other name for a CUI is-------------**  
   ✅ **c. CLI**  
   **Explanation:** CUI (Character User Interface) is also known as CLI (Command Line Interface), where users interact with the system through text-based commands.
4. **Which of the following is located on the right side of the taskbar?**  
   ✅ **b. Notification area**
5. **----------------- button minimizes all the currently opened program windows to view the desktop.**  
   ✅ **b. Peek**

**B. Fill in the blanks**

1. Operating system works as the **Manager** for a computer.
2. Windows is an example of **Graphical** user interface.
3. CUI uses **Text** based commands to operate the working of a computer.
4. A **Single-user** operating system allows only one user to use the computer at a time.
5. The **Search** bar helps you to find any application you want to find.

**C. Write T for true and F for false**

1. ✅ **T** – A computer system is made of hardware and software.
2. ✅ **T** – Operating system manages devices connected with the computer.
3. ❌ **F** – CLU is not another name for CUI (It should be CLI).
4. ❌ **F** – GUI uses graphical elements, not text-based commands.
5. ❌ **F** – Multi-user OS does not necessarily require multiple processors; it allows multiple users.

**D. Answer the following**

1. **Explain the functions of an operating system in detail.**
   * An operating system (OS) manages hardware and software resources, provides a user interface, manages files, controls system security, and handles process scheduling.
2. **Define the types of operating systems along with examples.**
   * **Single-user OS** (e.g., Windows, macOS)
   * **Multi-user OS** (e.g., UNIX, Linux)
   * **Real-time OS** (e.g., VxWorks, QNX)
   * **Embedded OS** (e.g., Android, iOS)
   * **Distributed OS** (e.g., Amoeba, Plan 9)
3. **Write advantages and disadvantages of CUI and GUI.**
   * **CUI (Command Line Interface)**  
     ✅ *Advantages:* Faster, requires fewer resources, provides better control  
     ❌ *Disadvantages:* Difficult for beginners, requires memorization of commands
   * **GUI (Graphical User Interface)**  
     ✅ *Advantages:* Easy to use, visually intuitive, no command memorization required  
     ❌ *Disadvantages:* Requires more memory, slower than CUI
4. **Define desktop along with all its components.**
   * A desktop is the main screen of a graphical operating system where users interact with icons, windows, and applications.
   * **Components:** Icons, Taskbar, Start Menu, Wallpaper, Notification Area, and Windows.
5. **Write a comparison of GUI across different platforms.**
   * **Windows:** User-friendly, Start menu, taskbar-based navigation
   * **macOS:** Elegant UI, dock for applications, better integration with Apple devices
   * **Linux (Ubuntu/KDE):** Highly customizable, various desktop environments (GNOME, KDE)
   * **Android/iOS:** Touch-based navigation, mobile-optimized interface

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