SS1 - OPERATING SYSTEMS

Meaning of an Operating System

An Operating System (OS) is a system software that controls and manages all the activities of a computer. It acts as a link between the computer user and the computer hardware.

Functions of an Operating System

An operating system performs many important functions. They include:

1. Starting the Computer: The operating system helps the computer to start when it is switched on. This process is called booting.

2. Managing Files and Folders: It helps users to create, save, open, copy, move and delete files and folders.

3. Managing Memory: It controls how the computer uses its memory while different programs are running.

4. Managing Hardware Devices: It controls computer devices such as the keyboard, mouse, printer, monitor and speakers.

5. Running Application Programs: It allows application software such as Microsoft Word, Excel and PowerPoint to work.

6. Providing User Interface: It provides a way for users to communicate with the computer through icons, menus, windows and commands.

7. Providing Security: It helps protect the computer from unauthorized users through passwords and other security features.

8. Managing Tasks: It allows users to perform different activities on the computer, such as listening to music while typing a document.

Types of Operating Systems

There are different types of operating systems. The major types include:

1. Single-User Operating System: This is an operating system designed to allow one user to use the computer at a time. Example: MS-DOS

2. Multi-User Operating System: This is an operating system that allows more than one user to access the same computer system at the same time. Examples: UNIX**,** Linux (in multi-user environments).

3. Multitasking Operating System: This is an operating system that allows a computer to run more than one program or task at the same time. Examples: Windows 11**,** macOS**,** Linux**,**Android
Example: You can listen to music while typing a document on your computer.

4. Mobile Operating System: This is an operating system designed to work on mobile devices such as smartphones and tablets. Examples: Android**,** iOS

Examples of Popular Operating Systems

A. Microsoft Windows: Windows is an operating system developed by Microsoft. It is commonly used on desktop and laptop computers.

B. Linux: Linux is an operating system that is widely used on computers, servers and other electronic devices.

C. macOS: macOS is an operating system developed by Apple for Mac computers.

D. Android: Android is a mobile operating system used by many smartphone manufacturers, including Samsung, Tecno, Infinix and Google.

E. Ios: iOS is the mobile operating system developed by Apple for iPhones.

Differences Between Computer and Mobile Operating Systems

Computer Operating System	Mobile Operating System
Designed mainly for desktops and laptops.	Designed for smartphones and tablets.
Usually controlled with a keyboard and mouse.	Usually controlled with a touchscreen.

Examples: Windows and macOS.	Examples: Android and iOS.
Used for typing, programming and office work.	Used for calls, messaging, browsing and mobile applications.

Advantages of an Operating System

1. It makes computers easy to use.
2. It helps users organise files and folders.
3. It allows application programs to run.
4. It manages computer hardware.
5. It helps protect information.
6. It allows users to perform many tasks.
7. It helps manage computer resources efficiently.

TICKET OUT

Answer the following questions in your exercise books.

1. What is an operating system?
2. Mention five examples of operating systems.
3. State six functions of an operating system.