COMPUTER SCIENCE

Unit no 05:   Software System

Short Answer Questions:

Define system software and provide two examples.

System software is a type of computer software designed to run and manage the hardware and basic system operations of a computer. It acts as a bridge between the computer hardware and application software, ensuring all components work together effectively. The software used to control, monitor or facilitate the use of computer is called "System Software".

Examples:

1. Operating System
2. Device Drivers

Explain the primary functions of an Operating System.

The following tasks can be considered as the primary functions of an Operating System:

1. Manages hardware resources
2. Load and execute programs
3. Detect hardware failures
4. Display message to fix hardware failure issues
5. Controls the operations of input/output and storage devices.

What is Utility software and why is it important?

Utility software: Utility software is a type of **system software** designed to help manage, maintain, and optimize a computer's performance. It provides tools that perform specific tasks to keep the system running smoothly and efficiently.

Importance:

1. Improve System Performance

2. Enhances Security

3. Prevents Data Loss

4. Maintains System Health

5. Supports System Efficiency

Describe the role of Device Drivers in a computer system?

Device Drivers: Device drivers are system software. They play a critical role in a computer system by acting as a translator between hardware devices and the operating system. Without drivers, the operating system would not be able to communicate with hardware components effectively. When a user attaches a device such as printer or scanner to their computer, they should install their driver also to make it operational. Device drivers are provided by device manufacturers.

Differentiate between system software and application software with examples.

System Software vs Application Software

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System Software	Application Software
Runs the computer and controls hardware.	Help you do specific tasks on the computer.
Works in the background.	Used directly by the user.
System software makes the computer work.	Application software helps *you* do work on the computer.
Example: Windows, macOS, Android	Example: MS Word, Chrome, PowerPoint

What are the main functions of Spreadsheet software?

Spreadsheet software is used to organize, analyze, and store data in **tabular form** using rows and columns. It is widely used in offices, schools, businesses, and personal tasks.

Main Functions of Spreadsheet Software:

1. **Data Entry and Storage**

   o   Enter and store numbers, text, and dates in a structured format.

2. **Mathematical Calculations**

   o   Perform calculations using formulas and functions (e.g., SUM, AVERAGE, IF).

3. **Data Analysis**

   o   Analyze large sets of data using sorting, filtering, and charts.

Examples of Spreadsheet Software:

- Microsoft Excel

- Google Sheets

How can Graphic design software be used in the field of education?

Graphic design software can be used in education to create visually appealing information such as infographics, presentations, e-books, and interactive learning resources. It helps to explain complex ideas and make learning more engaging and visually appealing to kids.

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

Data backup means keeping a copy of your important files in case they are lost or damaged.

Why Backups Are Important:
- Protects against **accidental deletion**
- Helps recover data after a **virus attack**
- Saves files if your device **crashes or breaks**

How to Perform a Backup:
1. **Copy files to a USB drive or external hard drive**
2. **Use cloud storage** like Google Drive or OneDrive
3. **Use backup software** that saves your data automatically