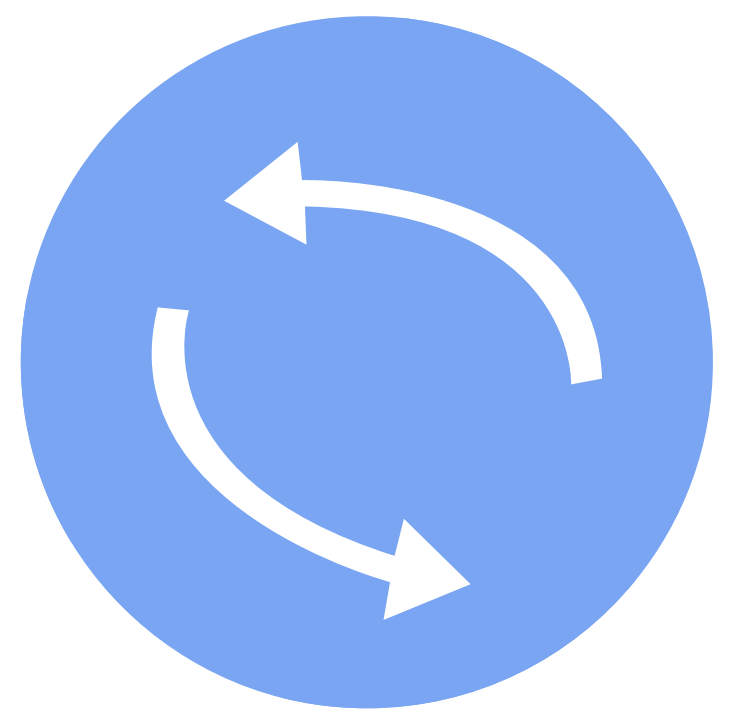


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BCS-011

SOLVED MOST
REPEATED
QUESTIONS



Curated List of 30 Questions
that are seen to be repeated
frequently in the examinations.

By FarLearner.com

BCS-011 Most Repeated Questions

1 . What are Operating Systems? Explain various services offered by an operating system.

Found in Dec 2022 (2 b), Dec 2024 (1 d), June 2023 (1 c), June 2024 (3 a)

[FarLearner.com](https://farlearner.com)

An Operating System (OS) is system software that acts as an interface between the user and the computer hardware. It manages hardware resources and provides a platform for application programs to run. Without an operating system, a computer cannot function properly. Examples include Windows, Linux, and macOS.

The operating system provides several important services to users and programs:

- **Process Management:** It creates, schedules, and manages processes, ensuring that the CPU is used efficiently.
- **Memory Management:** It allocates and deallocates memory to programs and keeps track of memory usage.
- **File System Management:** It organizes, stores, retrieves, and manages files and directories on storage devices.
- **Device Management:** It controls input and output devices such as printers, keyboards, and disks through device drivers.

[FarLearner.com](https://farlearner.com)

BCS-011 Most Repeated Questions

- Security and Access Control: It protects data and resources by managing user accounts and permissions.
- User Interface: It provides a graphical or command-line interface for user interaction. FarLearner.com

Thus, the operating system ensures smooth communication between hardware, software, and users.

2 . What is Social Networking? Explain its advantages and disadvantages.

Found in Dec 2023 (1 i), Dec 2024 (1 a), June 2022 (4 d ii)

Social networking refers to the use of internet-based platforms that allow people to create profiles, connect with others, share information, and communicate online. Examples include Facebook, Instagram, and LinkedIn. These platforms help users interact through messages, posts, photos, and videos.

Advantages:

Social networking enables instant communication, global connectivity, information sharing, business promotion, and online learning. It helps maintain relationships and build professional networks.

Disadvantages:

It may lead to privacy issues, cyberbullying, addiction, misinformation, and reduced face-to-face interaction. Excessive use can also affect mental health and productivity.

[FarLearner.com](https://farlearner.com)

3. Explain the three-tier client-server architecture with the help of a diagram.

Found in Dec 2023 (3 a), June 2022 (3 a), June 2023 (4 b)

The three-tier client-server architecture is a model that divides an application into three separate layers to improve performance, security, and scalability. These layers are:

Presentation Layer (Client Tier):

This is the user interface where users interact with the system through a web browser or application.

Application Layer (Business Logic Tier):

This layer processes user requests, applies business rules, and communicates between the client and database.

Data Layer:

This layer

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4 . What are perverse software? Explain any four perverse softwares and how can users counter and control such softwares in their systems?

Found in Dec 2024 (5 b), June 2023 (5 b) [FarLearner.com](https://www.farlearner.com)

Perverse software, commonly known as malicious software or malware, refers to harmful programs designed to damage, disrupt, or gain unauthorized access to computer systems. These programs threaten data security and system performance.

Four types of perverse software are:

- Virus: A program that attaches itself to files and spreads when the file is executed. It can corrupt or delete data.

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Users can counter such software by installing reliable antivirus software, enabling firewalls, updating operating systems regularly, avoiding suspicious links and downloads, and backing up important data. These measures help protect systems from malware attacks.

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5 . Differentiate between Subroutines and Functions in the context of programming languages with the help of examples.

Found in Dec 2020 (4 d), Dec 2022 (1 d i), June 2020 (3 c), June 2022 (5 e)

In programming languages, subroutine and function are reusable blocks of code designed to perform specific tasks. They help in organizing programs into smaller, manageable parts and reduce repetition.

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6 . Explain the role of RAM in a computer system. Why does a computer need RAM even if it has a large capacity hard disk?

Found in Dec 2020 (1 c), June 2020 (1 b), June 2021 (1 b), June 2024 (1 a)

[FarLearner.com](https://farlearner.com)

Main memory plays a vital role in the functioning of a computer. It is the primary storage area where data, instructions, and programs currently in use are stored temporarily. When a user runs a program, the operating system loads it from secondary storage (like a hard disk) into main memory so that the CPU can access it quickly. Since the processor can directly access main memory, it ensures faster processing and smooth execution of tasks.

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7 . Explain the role of the following networking devices:
(i) Network Interface Card (ii) Gateway (iii) Hub (iv) Router .

Found in Dec 2020 (1 g), Dec 2024 (4 b), June 2020 (2 c),
June 2024 (4 a) [FarLearner.com](https://farlearner.com)

(i) Network Interface Card (NIC):

A Network Interface Card is a hardware component that connects a computer to a network. It provides a physical interface for wired or wireless communication. The NIC converts data into signals suitable for transmission over the network and assigns a unique MAC address to the device.

(ii) Gateway:

A gateway is a network device that connects two different networks using different communication protocols. It acts as a translator, enabling communication between networks with different architectures, such as a local network and the internet.

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8 . Explain the von Neumann Architecture of a computer with the help of a diagram.

Found in June 2020 (4 c), June 2022 (1 c)

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Von Neumann architecture is a computer design model where data and instructions are stored in the same memory. It consists of five main components: Input Unit, Output Unit, Memory Unit, Control Unit, and Arithmetic Logic Unit (ALU).

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9 . Explain the characteristics of Local Area Networks (LAN). How are LANs different from Wide Area Networks (WANs)?

Found in Dec 2020 (3 a), Dec 2023 (4 a), June 2022 (4 b)

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A Local Area Network (LAN) is a network that connects computers and devices within a limited geographical area such as a home, office, school, or building.

The main components of a LAN include:

- Computers and Workstations – Devices used by users to access and share resources.

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10 . What are ports and why are they needed? Explain parallel ports and serial ports.

Found in Dec 2022 (1 e), Dec 2024 (1 e), June 2022 (2 c)

[FarLearner.com](https://farlearner.com)

Communication ports are physical interfaces on a computer that allow it to connect and communicate with external devices such as printers, keyboards, mice, modems, and storage devices. They act as connection points through which data is transmitted between the computer and peripheral devices. Communication ports are needed to enable data exchange, device control, and smooth functioning of hardware components.

There are two main types of communication ports: parallel ports and serial ports.

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