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| **SESSION** | **AUGUST 2023** |
| **PROGRAM** | **BCA** |
| **SEMESTER** | **I** |
| **course CODE & NAME** | **DCA1101** |
| **CREDITS** | **4** |
| **nUMBER OF ASSIGNMENTS & Marks** | **02**  **30** |

**SET-I**

**1. (a) Define the term ‘Computer’?**

**(b) Explain the organization of computer?**

**Ans 1.**

**(a) Computer**

A computer is an electronic device that manipulates information, or data, to perform arithmetic or logical operations. It has the capability to store, retrieve, and process data. Based on the given instructions or programs, it can convert raw data into meaningful information. Computers can be designed to do almost anything with information, from simple tasks like calculating arithmetic operations to complex operations like rendering graphics or simulating natural phenomena.

**(b) Organization of computer**

The organization of a computer can be understood by breaking it down into its primary

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**2. Discuss the different classifications of computer?**

**Ans 2.**

Computers have evolved significantly over the years, leading to a wide array of types based on size, functionality, and purpose. Here are some of the primary classifications of computers:

**1. Based on Size and Power:**

**Supercomputers:** These are the most powerful computers in terms of processing speed and computational capability. Supercomputers are often used for complex simulations, such as

**3. Explain Random Access Memory and Read Only Memory along with their types?**

**Ans 3.**

**1. RANDOM ACCESS MEMORY (RAM):**

RAM is a type of volatile computer memory, meaning the data stored in RAM is lost when the computer is turned off. RAM is the primary memory used by the computer to store data that is currently being processed or accessed. The "random access" term means that data can be read from or written to any address in memory with almost the same speed, regardless of its location.

**Types of RAM:**

**Dynamic RAM (DRAM):** This is the most common type of RAM used in personal computers. DRAM stores each bit of data in a separate capacitor within an integrated circuit. However, the

**SET-II**

**4. (a) Define Software Testing?**

**(b) Explain software testing strategy in detail?**

**Ans 4.**

**(a) Software Testing**

Software Testing is the process of evaluating and verifying that a software product or application meets specified requirements and identifies any defects or discrepancies in its functionality, performance, or usability. The primary objective is to ensure the quality of the software, detecting errors or bugs, and ensuring that the software behaves as intended.

**(b) Software testing strategy**

A software testing strategy provides a systematic approach to the testing process, ensuring that

**5. (a) What is Operating System?**

**(b) Discuss the different components of Operating System?**

**Ans 5.**

**(a) Operating System**

An operating system (OS) is a collection of software that acts as an intermediary between computer users and the computer hardware. It provides a user interface and controls the computer hardware so that software applications can function.

The operating system is a vital component of the system software in a computer system. Applications like web browsers, MS Office, and games use an OS by making requests for services through a defined application programming interface (API). In addition, users interact

**6. (a) Explain OSI Reference model?**

**(b) How is data transmission done in OSI model?**

**Ans 6.**

**(a) OSI Reference Model Explanation (200 words)**

The OSI (Open Systems Interconnection) Reference Model is a conceptual framework used to understand and standardize the functions of a telecommunication or computing system. It divides the communication process into seven distinct layers, each responsible for a specific set of tasks. The main purpose of the OSI model is to facilitate interoperability between diverse communication systems by providing a standard set of protocols. The seven layers are:

* **Physical Layer:** Concerned with the physical connection between devices. It specifies