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**COURSE CODE: COM 311**

**COURSE TITLE: COMPUTER APPRECIATION & APPLICATION**

**QUESTION 1a:** Define a Computer and Explain Its Four Major Functions

A computer is an electronic device that accepts raw data as input, processes that data using a set of instructions (programs), stores the data for future use, and finally produces meaningful information as output. It is widely used in different fields such as education, business, healthcare, and agriculture due to its speed, accuracy, and reliability.

**Four Major Functions of a Computer**

1. Input Function

This is the process of entering data and instructions into the computer. Input devices are used to feed data into the system.

Examples: Keyboard, mouse, scanner, microphone.

For instance, when a user types on a keyboard, the computer receives that information as input.

2. Processing Function

Processing involves manipulating or transforming the input data into meaningful information. This is carried out by the Central Processing Unit (CPU), which performs calculations and logical operations.

For example, when you calculate the total cost of items using a computer, the CPU processes the numbers entered.

3. Output Function

Output is the result of processed data. After processing, the computer presents the information to the user through output devices.

Examples: Monitor, printer, speakers.

For example, the result of a calculation displayed on the screen is output.

4. Storage Function

Storage refers to saving data and information for future use. This allows users to retrieve data whenever needed.

Examples: Hard disk, USB flash drive, memory card.

For instance, saving a document ensures it can be accessed later.

**QUESTION 1b:** Describe the Basic Components of a Computer System with Examples

A computer system consists of several interconnected components that work together to perform tasks.

1. Input Devices

These are devices used to enter data into the computer.
Examples: Keyboard, mouse, scanner, joystick.

2. Central Processing Unit (CPU)

The CPU is the brain of the computer. It processes data and controls all operations. It consists of the Arithmetic Logic Unit (ALU) and Control Unit (CU).
Examples: Intel processors, AMD processors.

3. Output Devices

These devices display or produce the results of processed data.
Examples: Monitor, printer, speakers, projector.

4. Storage Devices

These are used to store data either temporarily or permanently.
Examples: Hard disk drive (HDD), solid-state drive (SSD), flash drive, CD/DVD.

**QUESTION 2a:** Differentiate Between Hardware and Software

- Hardware refers to the physical components of a computer system that can be seen and touched.

Examples: Keyboard, monitor, mouse, motherboard.

- Software refers to the programs, instructions, and data that tell the computer what to do. It cannot be physically touched.

Examples: Operating systems, applications, and utilities.

In summary, hardware is the body of the computer, while software is the brain that controls it.

**QUESTION 2b:** Explain the Two Main Types of Software with Example

1. System Software

System software manages and controls the computer hardware and provides a platform for running application software.
Examples: Windows, Linux, macOS.
It ensures that all parts of the computer work together efficiently.

2. Application Software

Application software is designed to perform specific tasks for users.
Examples: Microsoft Word (word processing), Microsoft Excel (spreadsheets), Google Chrome (web browsing).
These programs help users complete everyday tasks such as typing documents, browsing the

internet, and managing data.

**QUESTION 3a:** Explain the Concept of Booting

Booting is the process of starting or restarting a computer system. It involves loading the operating system from storage into the computer ' s memory (RAM) so that the computer can begin functioning and accept user commands.

There are two types of booting:

- Cold booting: Starting the computer from a powered-off state.
- Warm booting: Restarting the computer without turning off the power.

**QUESTION 3b**: Describe the Step-by-Step Booting Process

1. The power button is pressed, supplying electricity to the system.
2. The BIOS (Basic Input/Output System) or UEFI firmware starts running.
3. POST (Power-On Self-Test) checks hardware components such as RAM and keyboard.
4. The system searches for a bootable device (hard drive, SSD, etc.).
5. The operating system is loaded into RAM.
6. The login screen appears, allowing the user to access the system.

**QUESTION4a**: Define File Management

File management is the process of organizing, storing, retrieving, and maintaining files and folders in a computer system. It helps users keep their data in an orderly manner, making it easy to locate and use when needed.

**QUESTION 4b:** Explain Five Common File Operations and Their Importance

1. Creating Files

This involves making new files to store information.
Importance: Allows users to save new data.

2. Opening Files

This means accessing existing files to view or edit them.
Importance: Enables modification and review of stored data.

3. Saving Files

This stores changes made to a file.
Importance: Prevents loss of important information.

4. Deleting Files

This removes unwanted or unnecessary files.
Importance: Frees up storage space and improves system performance.

5. Renaming Files

This involves changing the name of a file.
Importance: Helps in organizing and identifying files easily.

**QUESTION 5a:** Discuss the Applications of Computers in Healthcare or Animal Health Services

Computers play a vital role in improving healthcare and animal health services.

- Patient Records Management: Stores and manages patient or animal health records digitally.

- Diagnosis Support: Helps doctors and veterinarians analyze diseases using software tools.

- Laboratory Testing: Assists in analyzing test samples quickly and accurately.

- Telemedicine: Enables remote consultation and treatment through internet communication.

- Animal Tracking: Helps monitor livestock health, movement, and productivity using digital systems.

These applications improve efficiency, accuracy, and accessibility of healthcare services.

**QUESTION 5b:** Highlight Four Common Computer Problems and Their Solutions

1. Slow Performance
- Cause: Too many files or insufficient memory.
- Solution: Delete unnecessary files, upgrade RAM, or run disk cleanup.

2. Virus Infection
- Cause: Downloading unsafe files or visiting malicious websites.
- Solution: Install and regularly update antivirus software.

3. System Crash
- Cause: Software errors or hardware failure.
- Solution: Restart the system or reinstall the operating system.

4. Hardware Failure
- Cause: Physical damage or wear and tear.
- Solution: Repair or replace faulty components.