Computer Basics Assignment Solution

Question 1: What is a computer?

Answer 1:   A computer is a programmable electronic device that accepts raw data and as input and processes it with a set of instruction (a program) to produce the result as output.

- A computer is designed to execute applications and provides a variety of solutions through integrated hardware and software components. It works with the help of programs and represents the decimal numbers through a string of binary digits. It also has a memory that stores the data, programs, and result of processing. The components of a computer such as machinery that includes wires, transistors, circuits, hard disk are called hardware. Whereas, the programs and data are called software.

Question 2: What is RAM?

Answer 2: RAM (Random-access memory) is volatile memory. This means that information is kept in RAM while the computer is running, but it is erased when the machine is powered off.

- It is a hardware device generally located on the motherboard of a computer and acts as an internal memory of the CPU. It allows CPU store data, program, and program results when you switch on the computer. It is the read and write memory of a computer, which means the information can be written to it as well as read from it.
- RAM has no potential for storing permanent data due to its volatility. A hard drive can be compared to a person's long-term memory and RAM to their short-term memory. Short-term memory can only hold a limited number of facts in memory at any given time; however, it concentrates on immediate tasks. Facts kept in the brain's long-term memory can be used to replenish short-term memory.

Question 3: What is data stored in a computer?

Answer 3: Data stored in a computer refers to the information and instructions that are saved and kept in digital format within the computer's storage devices. This data can take various forms, including:

- **Text:** This includes documents, spreadsheets, and any form of written or typed information.

- **Images:** Digital photographs, graphics, and other visual data are stored in formats such as JPEG, PNG, or GIF.
- **Audio:** Music files, voice recordings, and other sound data are stored in formats like MP3, WAV, or FLAC.
- **Video:** Video files can be stored in formats like MP4, AVI, or MOV. These files contain moving images and often have accompanying audio.
- **Software:** Computer programs and applications are stored as data. This includes operating systems, word processors, video games, and more.
- **Databases:** Data stored in a structured manner, often used for organizing and retrieving information. These databases can contain customer records, inventory lists, and more.

Question 4: What is that input device used to type text and number on a document in the computer system?

Answer 4: The input device used to type text and numbers on a document in a computer system is called a "keyboard." A keyboard is a common and essential input device for computers and allows users to input alphanumeric characters, symbols, and various commands. Keyboards come in different layouts and designs, but most include a standard set of keys for letters, numbers, punctuation, and function keys.

- Keyboards are used for a wide range of tasks, including typing documents, entering data into spreadsheets, sending emails, programming, and interacting with various software applications. They are available in various forms, such as physical keyboards (wired or wireless) that connect to a computer via USB or Bluetooth, as well as virtual keyboards on touchscreens or virtual keyboard software on some devices.

Question 5: What are the output device?

Answer 5: An output device is any piece of computer hardware that converts information/Data into human perceptible form:

- **Monitor**
- **Printer**
- **Speaker**
- **Headphone**
- **Projector**
- **GPS device**
- **Optical mark reader**
- **3d painter**

Question 6: Which is the input device that allows a user to move the cursor or pointer on the screen?

Answer 6: The input device that allows a user to move the cursor or pointer on the screen are called **Pointing device**

- **Mouse:** A mouse is small handhold device that is moved across a flat surface to control the cursor on the screen
- **Track Pad:** A track pad is a flat touch-sensitive surface that is typically found on laptops. It is used to move cursor by sliding your fingers across it.
- **Track ball:** A track ball is a stationary pointing device that is rolled with the thumb to control the cursor on the screen
- **Joystick:** It is a pointing device that consists of a stick that can be moved in all directions. Joystick are often used for playing video games and controlling robots.
- **Light pen:** It is a pointing device that uses a light source to detect its position on the screen. Light pens are often used for drawing and edit images.

Question 7: Which language is directly understood by the computer without a translation program?

Answer 7: The language that is directly understood by the computer without a translation program is **Machine language**.

- Machine-low level programming language that is specific to a particular computer architecture. It consists of binary instructions which are strings of 0's and 1's. the computer's CPU (central processing unit), can directly execute machine language instructions.
- Machine language is very complex and difficult to program in directly that is why high-level language are used for most programming tasks. However, there are some cases where it is necessary to program in machine language such as when writing device or O.S
- Example: simple machine language instruction.
  - 10000000 00000000 00000001 00100011
  - This instruction tells the CPU to load the value 11 into register 1.

Question 8: What are the input devices?

Answer 8: An input device is a place of hardware a computer you to enter data into a computer system. Some common input devices are:

- **Keyboard**

- **Mouse**
- **Scanner**
- **Microphone**
- **Webcam**