

4

Govt. Engineering College of Jhalawar  
B.Tech I year II Sem  
Civil Engineering, Section-A

Subject: Computer Programming II

Subject Teacher: Rashika Agrawal.

Model Test Paper-I with Solution

Q.1 What is software? Explain the different types of software?

Solution: Software: Computer software or simply software is that part of a computer system that consists of encoded information or computer instruction.

There are two main types of computer software:

- 1) System software
- 2) Application software

1) System software: System software is a type of computer program that is designed to run a computer's hardware and application programs.

It is the interface between the hardware and use application.

Example: The operating systems, compilers, loaders, debugger.

Rash

System software are machine dependent.

## 2) Application Software :

Unlike system software an application program performs a particular function for the user.

Example → Browser, games, word-processor, PDF reader etc.

Q-2 :- What is System Software? Explain the function performed by system software?

Solution : System Software : System software is also known as system package. This software is not used to solve specific problems. They are general software written to assist user/Programmer for the use of computer system.

The Following Function performed by System software are :

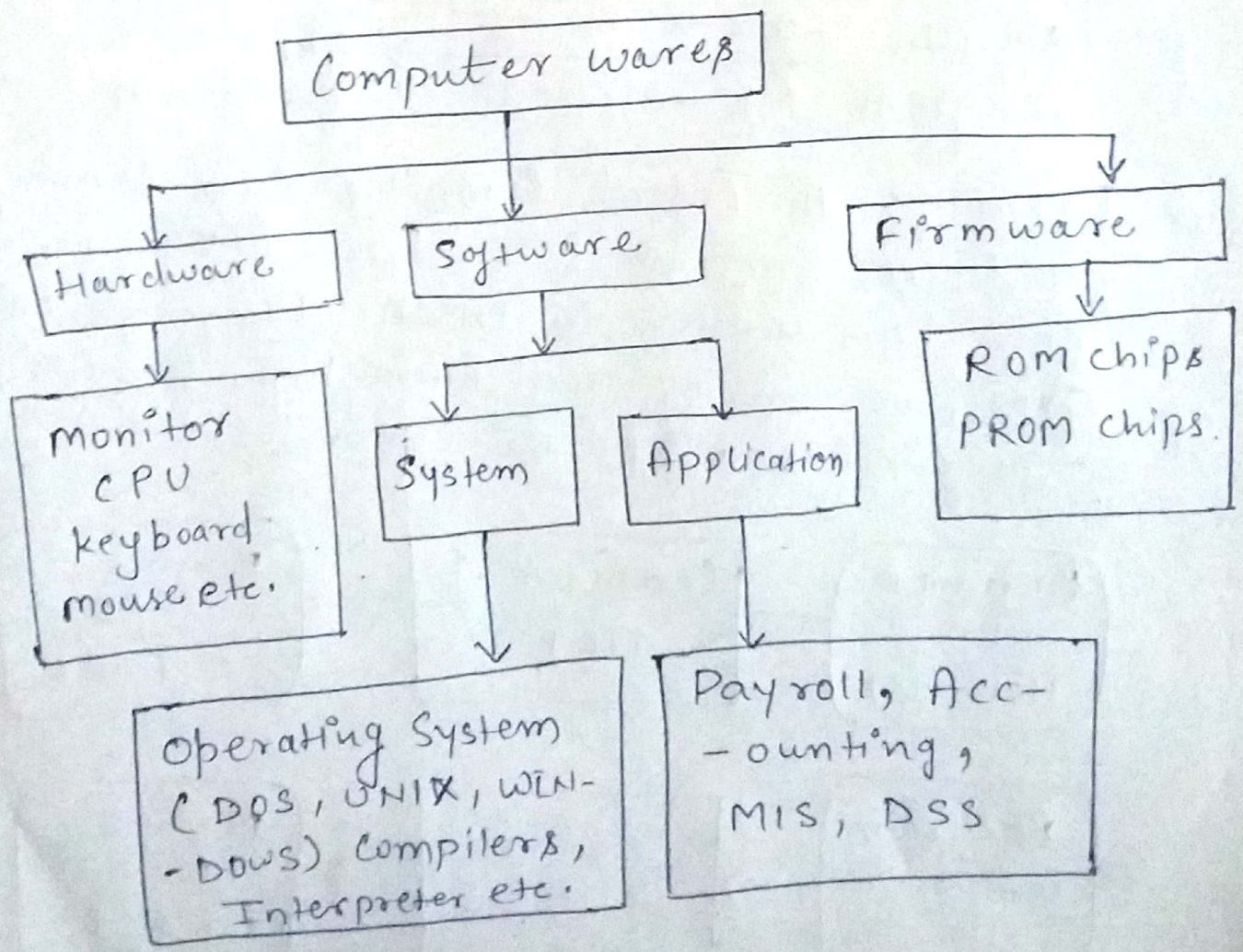
- (1) Controlling all the operations performed by computer such as - movement of data from input to output and output to input.
- (2) Execution of application programs.
- (3) Support in developing the application programs.
- (4) Communication with the peripheral devices
- (5) Scheduling of the jobs.

(6) Allocation and reallocation of the storage space.

(7) Deciding the job priority.

Q-3 :- What is Firmware? Draw the diagram of Computer ware system?

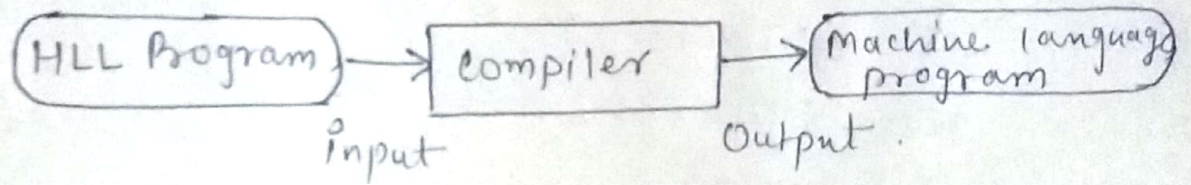
Solution : Firmware : In technological advancement software are also available on ROM chips or DVDs. These chips are hardware and the material stored on it is software so they are neither hardware nor software, therefore these are called firmware.



Rash

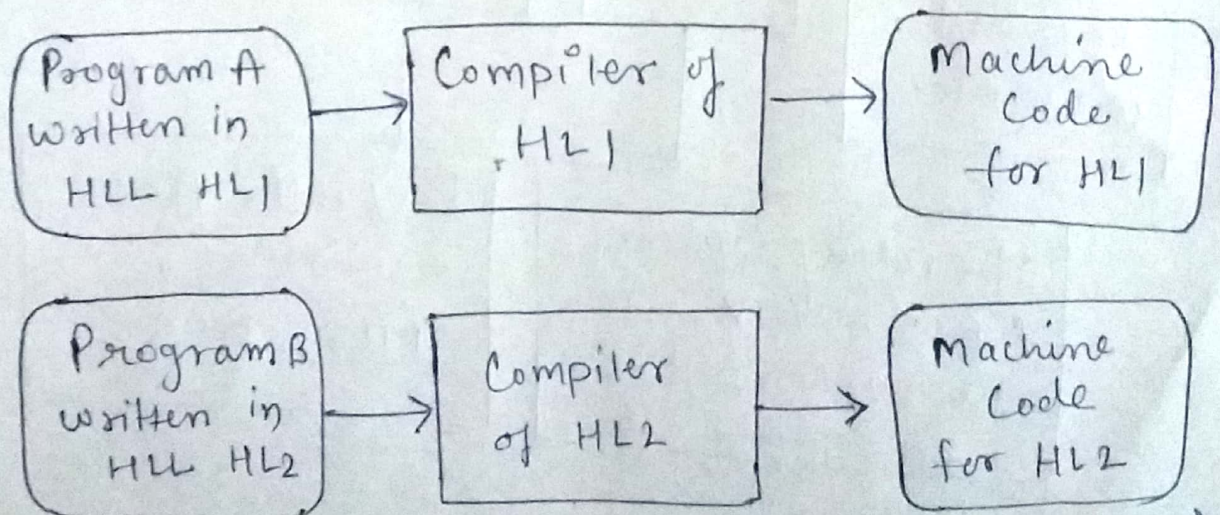
Q-4:- What is Compiler? Explain Compilation Process?

Solution: Compiler: A compiler is a translator that compiles and translates the high level language program into machine language. A program written in a high level language is called source program. When this program is converted into machine code it is called object program.



Source Program  $\xrightarrow{\text{one to many translation}}$  Object Program

Example: A Pascal compiler can convert a source program into object program, we have been written in PASCAL language only. Thus, we can say that each high level language has a separate compiler.



Compilation Process

Last

Q-5: What is Loader? Describe Loader function and its types? 5

Solution: Loader: A Loader is also system software. It is used for loading, relocating and linking the programs. The four major functions performed by Loader are as follows:

- (1) Memory Allocation: It assigns the appropriate memory space to a program at the time of loading.
- (2) Program relocation: To execute the program properly from its memory space, at its load time.
- (3) Loading: Transferring the program into the assigned memory space.
- (4) Linking: Linking the programs to one another.

Types of Loader :->

- (i) Absolute Loader -> It is a primitive type of loader that executes only the loading function. The loader simply accepts the machine language code produced by the assembler and places it into main memory at the location specified by the assembler. (last)

(ii) Boot strap Loader → when the computer is booted or started it is executed automatically. Its main function is to load the operating system and transfer the control to it.

(iii) Relocatable Loader → The main function of relocatable loader is loading and relocating of the program.

End