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Dept : B.Sc in CSE

Course title : Computer Organization and Assembly Language

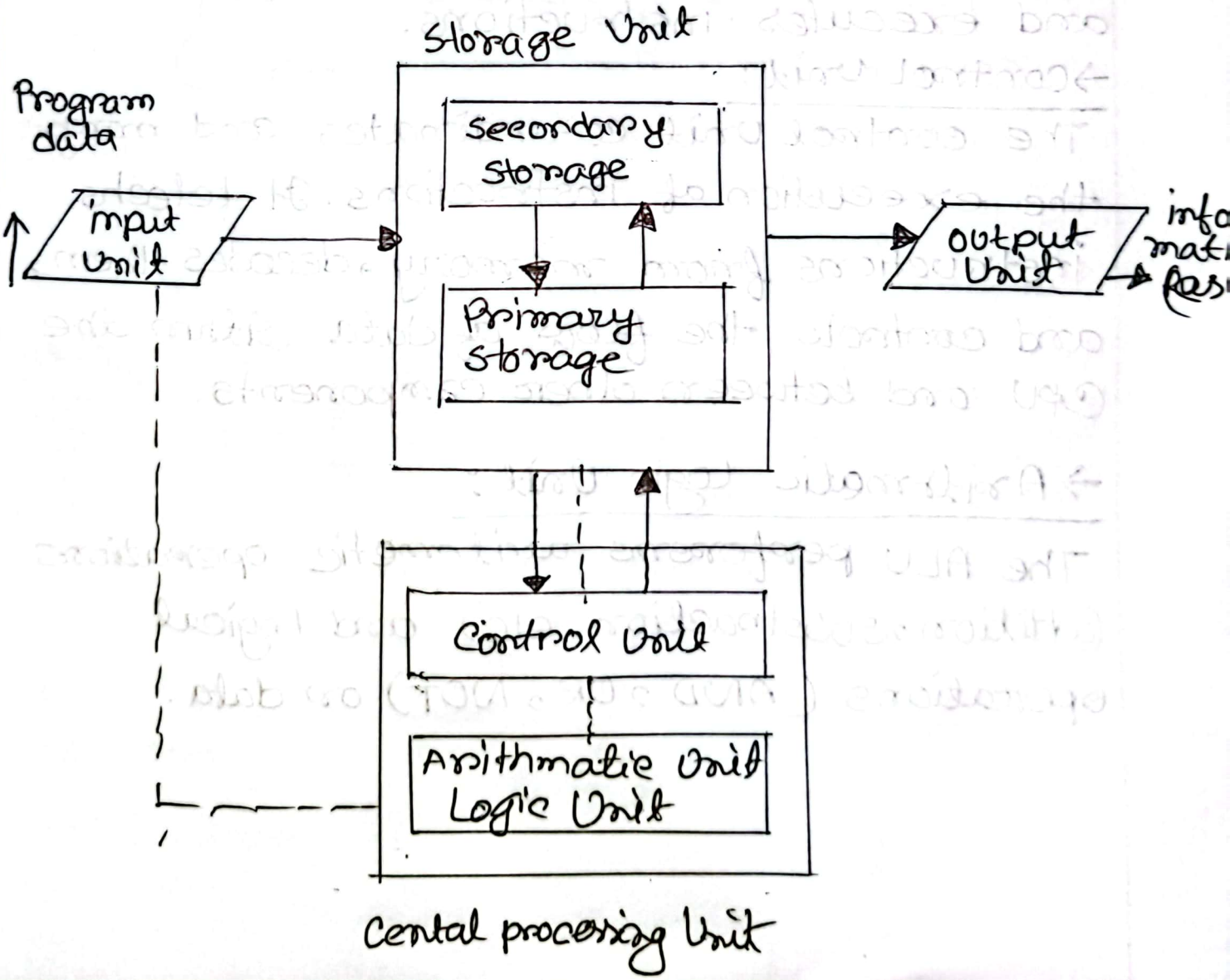
Course code : CSE - 233

CamScanner

Ans to the Qus NO: 01

Ans: Computer: A computer is an electronic device that process data, performs calculations, and executes instructions to carry out various tasks. It consists of hardware components and software programs that work together to perform these operations. Computers can handle a wide range of applications, from simple calculations to complex simulations and data analysis.

Here's a basic organizational diagram of a comput



→ Input / Output :

This component deals with the interaction between the computer and the external world. It handles input device (keyboard and mouses and output devices (monitors, printer)

→ Memory : It includes both main memory (RAM) and secondary storage (hard drives, solid - state drives).

→ Central processing Unit (CPU) : The CPU is the "brain" of a computer that performs calculations and executes instructions.

→ Control Unit :

The control Unit co-ordinates and manages the execution of instructions. It fetches instructions from memory, decodes them, and controls the flow of data within the CPU and between other components.

→ Arithmetic Logic Unit :

The ALU performs arithmetic operations (addition, substraction, etc) and logical operations (AND, OR, NOT) on data.

Ans to the Qus No: 03

Ans: Translator: A translator is a programming language processor that modefies a computerc program from one language to Another. It takes a program written in the sourcee program and modefies it into a Machine program. It can find and delete the error during translation.

Different types of translations:

(i) Compilers.
(ii) Interpreter.
(iii) Assemblers.

Examples of translator:

→ **Compiler:**

Microsoft visual studio,
GNU Compiler collection,
common business Oriented language.

→ **Interpreter:**

OCaml,
List processing (LISP),
Python.

→ **Assembler:**

PAP, MAP, SOAP.

High level language convert to machine code:

A high level language to machine code can be done by Interpreter coding. A translator, in software programming terms is a general terms that could refer to a compiler, assembler or interpreter, Any-thing that convert higher level Code into Another high level code (basic, C, C++, fortran, Java) or lower level that the processor can understand) such as assembly language.

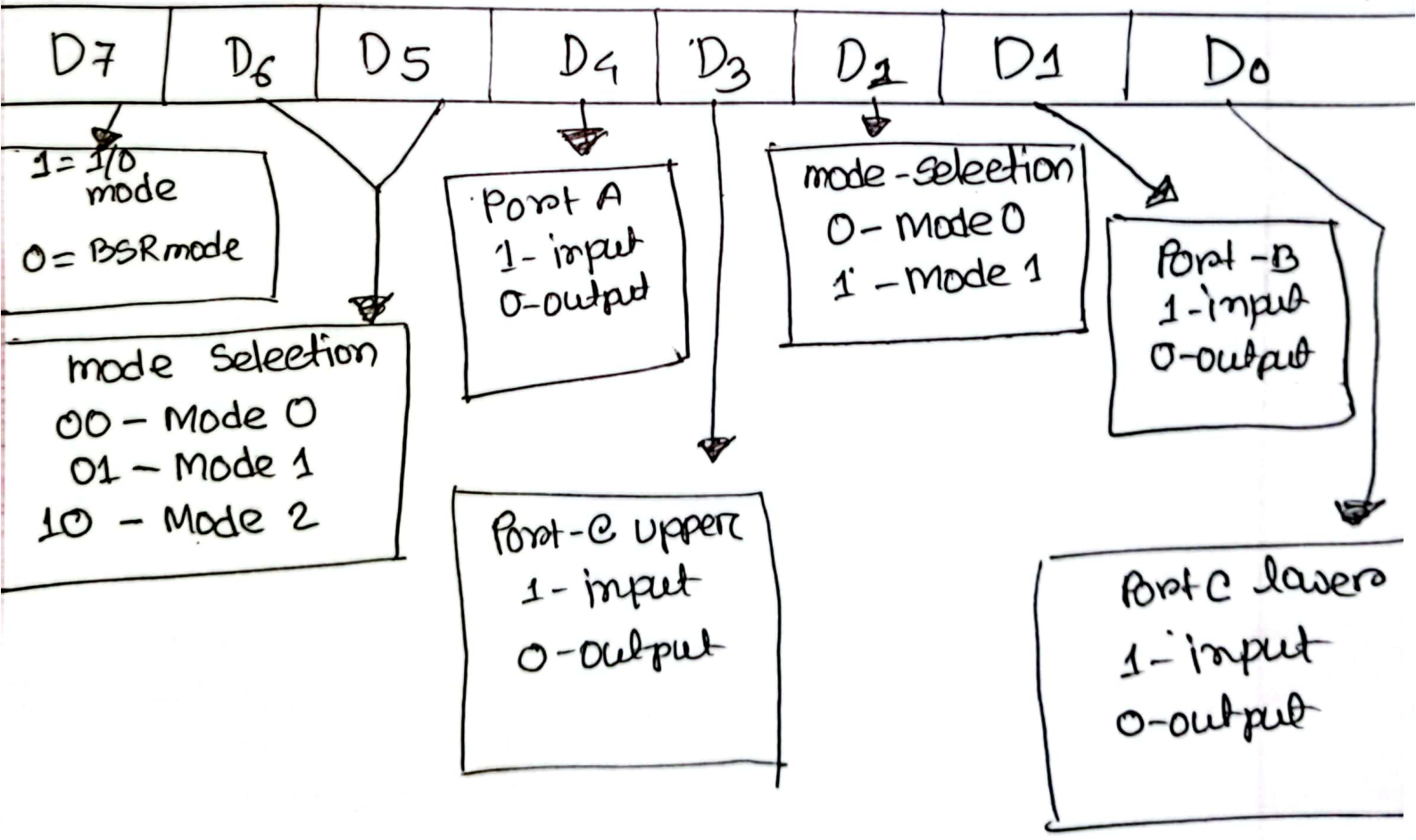
Interpreter: An interpreter translates code like a compiler but reads that code and immediately Executes. on that code and therefore is initially faster than a compiler.

Compiler: A compiler is a computer program that translate a program with in a high-level language to machine language of computer.

Ans to the Qus No: 04

Ans: The 8-bit code word "10010101" represents a control word for the 8255 programmable peripheral interface (PPI). In the context of the 8255 chip, this control word is used to configure the modes of operation for its three I/O ports (Port A, Port B, and Port C). Each bit in the control word has a specific meaning that determines the mode or functionality of the corresponding port. Here's a breakdown of a the control word "10010101

Control word Format



in this specific control word, Port A is configured in mode 1, Port B is configured in mode 0, and Port C is configured in mode 1. keep in mind that the exact interpretation of these modes and the functionalities they represent would depend on the specific application and requirements for the 8255 chip's operation.