

NAME

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ID

14150

Program

B-tech

Subject

Micro processor

Date =

20/8/2020

①

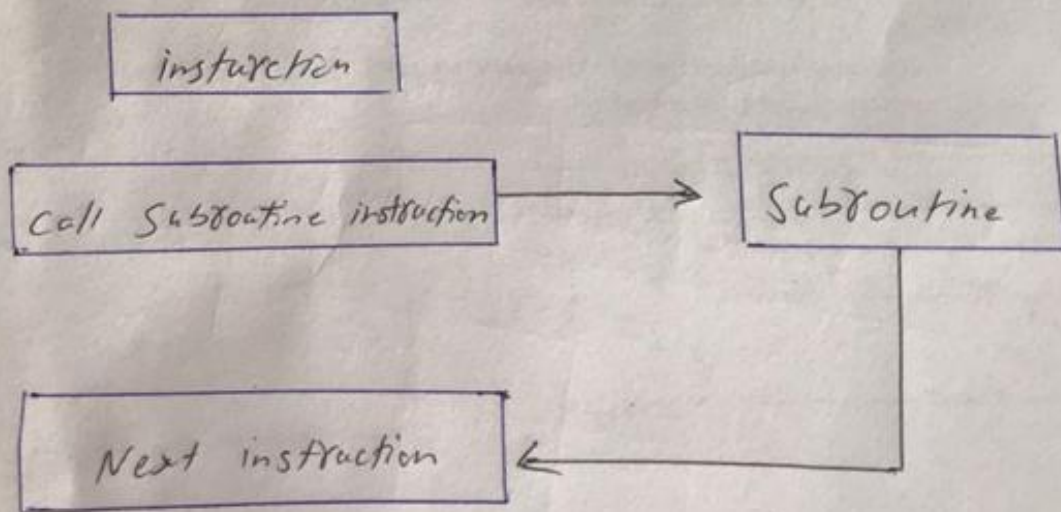
Q = 1

Part # (A)

Explain subroutine

In computer programming a subroutine is a sequence of program instructions that perform a specific task, packaged as a unit. This unit can then be used in programs wherever that particular task should be performed.

Example



Q-1

Part # (B)

Types of segments

There are 4 Types of segments exists in memory

(1) code segment → for storing program.

(2) Data segment → For storing Data.

(3) Stack Segment → For storing Temporary Data

(4) Extra segment → For storing extra Data in addition to data in DS.

① Code segment (CS):

It is that portion of memory which contains the program code -

Fetch → Decode → Execute.

② Stack segment :-

It is the portion of the RAM used for temporary storage of data.

(3)

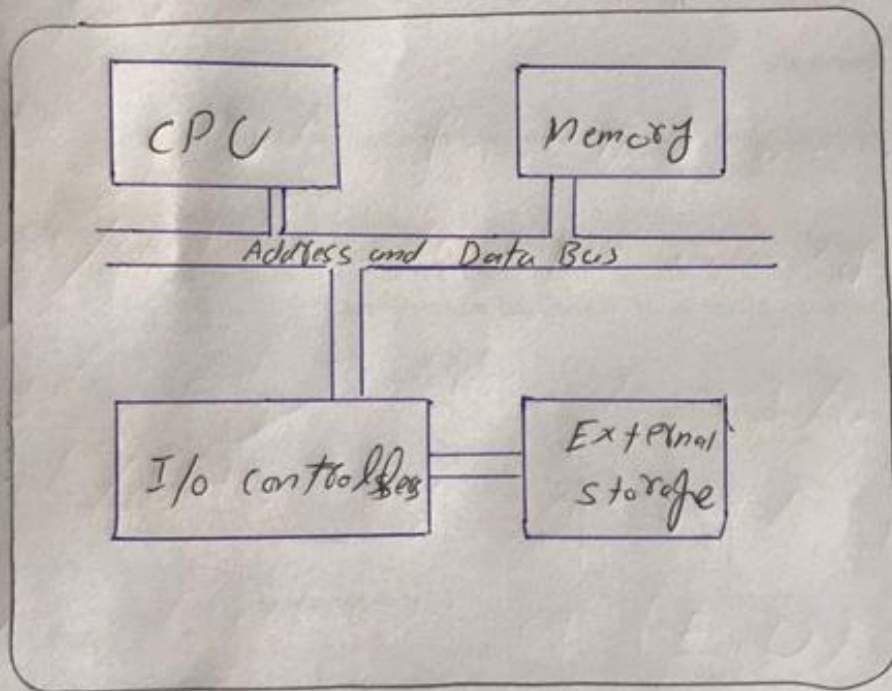
Q-2

Part # (A)

Microcomputer Bus Architecture:-

↳ The computer built from the micro-processor is called ~~to~~ microcomputer -

Bus Architecture



Basic Digital Computer architecture

Q = 2
Part # (B)

④ Function of (BIU) :-

BIU connects the 8086/8088 to the outside world - its functions are

- 1:- send out addresses from memory locations -
- 2:- Fetch instruction from the memory -
- 3:- Reads/writes data to memory -
- 4:- send out addresses to I/O ports -
- 5:- Reads/writes data to I/O ports -

④ Function of (EU) :-

- 1:- Tells BIU the addresses from where to data & instructions.
- 2 Decode & execute the instructions.

(5)

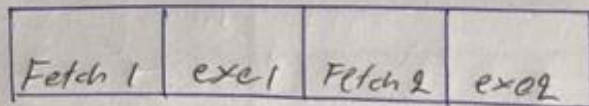
Q=3

Part (A)

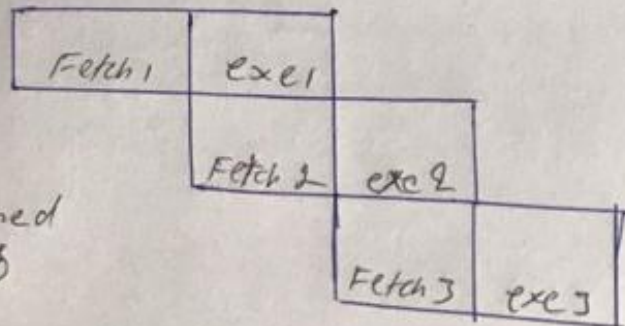
Instruction Pipelining.

- In ~~each~~ process one instruction is fetched, decode & executed. After that the same process occur for the second instruction & so on.
- Fetching of the next instruction, while the current instruction executed is called Pipelining.
- This saves the time & increase processing speed.

Nonpipelined 8085



Pipelined
8086



Pipelined in 8086 microprocessor

(6)

Q-3
Part (B)

Explain address mapping

- on maps of houses, we give particular location of a room, washrooms, kitchens.
- Like wise allocating a unique address to any register ~~to~~ or device on the address space is called address mapping.

