Ahsanullah University of Science & Technology

Department of Computer Science and Engineering

Course No : CSE 2214

Course Title : Assembly Language Programming Sessional

Assignment no : 01

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Submitted To : **Ms.Tahsin Aziz & Md.Siam Ansary**

Submitted By:

Name : Mahin Opu

Id : 17.02.04.006

Year : 2nd

Group : A1

Section : A

Semester : 2nd

Question No: 01

Question: Draw the diagram of Intel 8086 Microprocessor organization.

Answer:

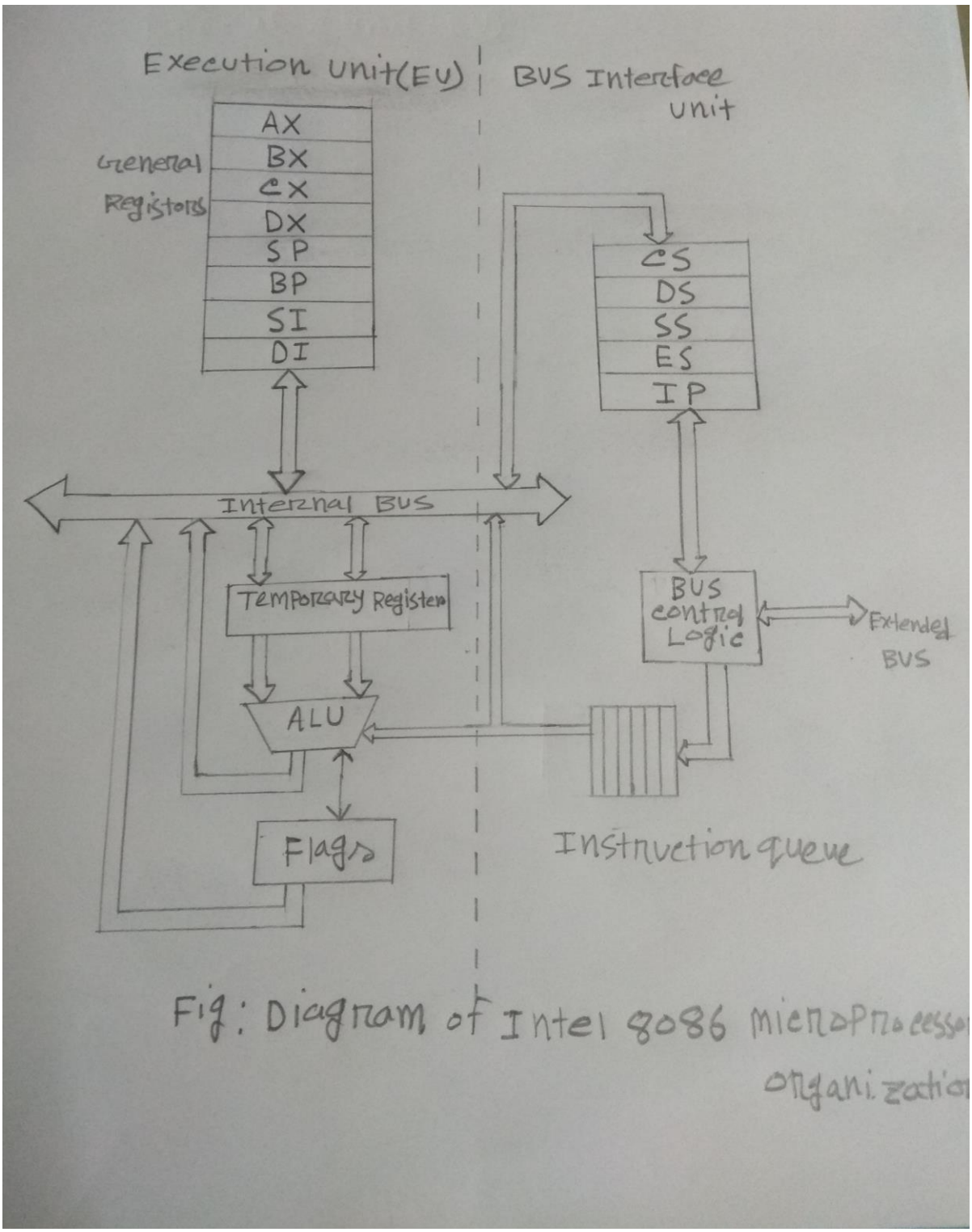

Fig: Diagram of Intel 8086 microprocessor organization

Question No: 02

Question: Consider a machine language instruction that moves a copy of the contents of register AX in the CPU to a memory word. What happens during the fetch cycle and execution cycle.

Answer: The main job of the CPU is to execute programs using the **fetch-decode-execute cycle** (also known as the **instruction cycle**). This cycle begins as soon as we turn on a computer. The CPU performs following steps to execute machine instruction:

Fetch :

A fetch is simply the retrieval of an item from memory. Every instruction cycle starts with a fetch.

Actually fetch the instruction (contents of AX) from the memory.

Execution:

The execute cycle is executed to decode the instruction and to perform the work instructed by the instruction. It stores the result in memory(if needed).

Question No: 03

Question: Discuss data bus, address bus and control bus.

Answer:

Data Bus :

Data bus helps to send and receive data**.** It is also called memory bus.it is bidirectional**.**

The width of the data bus determines the data transferring rate.

Address Bus:

The address bus helps to identify the particular location in the memory. The address bus is **unidirectional** . The width of the address bus determines the amount of memory the system can address.

Control Bus :

It carries **control** signals from the processor to other components. The **control bus** also Carries the clock's pulses. Control bus is bidirectional.