

ID: 2116080021

NAME: Ghulam Farhanul  
Bashar.

Mid Term assessment  
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Program BSc in CSE

Course code CSE 413.

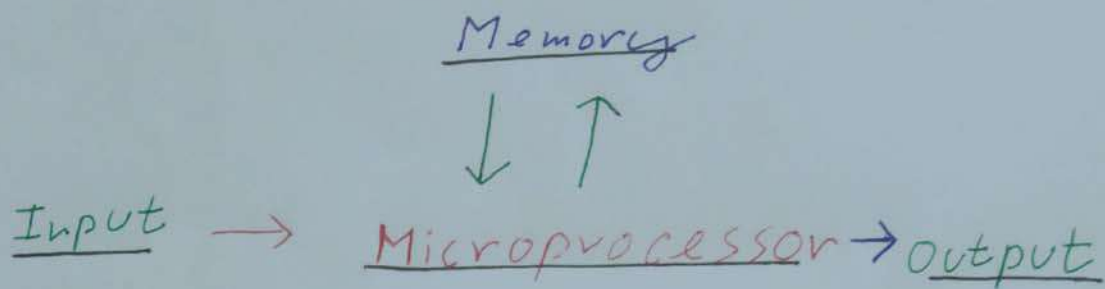
Course title Microprocessor and  
Interfacing.

Dept of CSE/CSIT

Victoria University

Bangladesh

Ans 1) a) Block diagram of a basic Micro computer.



Ans 2) a) Microprocessor has following features —

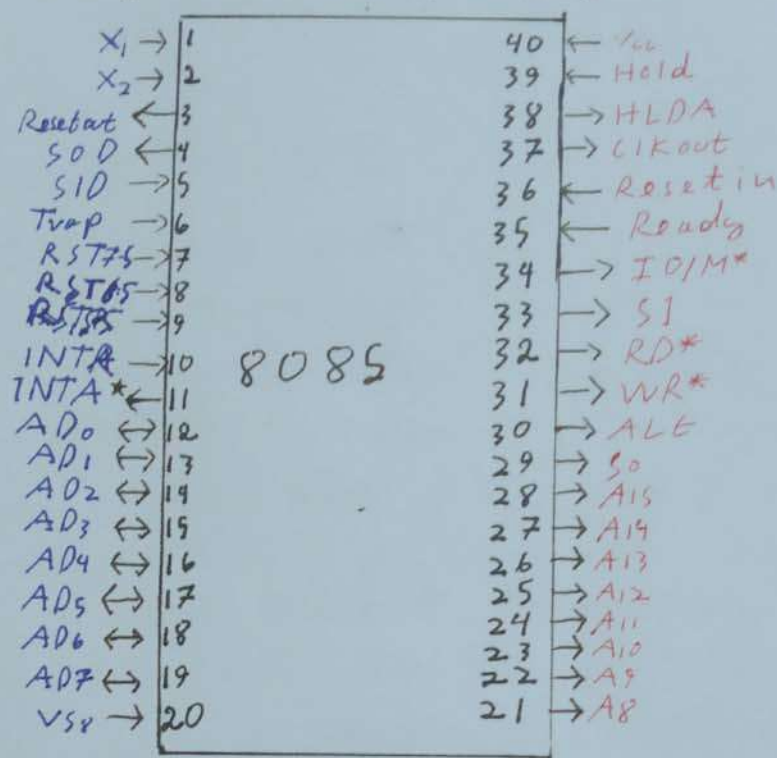
**Low cost:** Due to integrated circuit technology microprocessors are available at very low cost. Microprocessor reduce the cost of a computer system.

**High speed:** Due to technology involved in it the ~~micro~~ microprocessor can work at very high speed. It can execute millions of instructions per second.

**Versatility:** Microprocessors can be deployed for multiple purposes by simply configuring the software in them.

Ans 1) b)

8085 architecture



Ans 1) c) Bit manipulation instructions are used to perform operations where data bits are involved. It is the process of applying logical operations on a sequence of bits to achieve a required result. The purpose of these instruction sets is to improve the speed of bit manipulation.

Ans 2) a) Initially when any device has to send data between the device and the memory the device has to send DMA request (DRQ) to DMA controller. The DMA controller sends Hold request (HRQ) to the CPU

Ans 2) a) and waits for the CPU to assert the HLDA.

Ans 2) b) The 8257 works in two modes - slave mode and master mode. Similarly the processor also works in two modes - active mode and the hold mode. The processor is normally in active mode. In the active mode, the processor is the master of the computer system, including the 8257. Only when direct memory access transfer is required to be performed, the processor goes to hold state and gives up control of the system bus. In such a state the processor is logically disconnected from the rest of the computer system and the 8257 becomes the master for the rest of the computer system. The 8257 is in the slave mode when the processor is programming 8257 or when the processor is ~~reading~~ reading the content. At this point processor is in active mode and also master of the system including 8257. \* 8257 also control direct memory access.