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Course Code : CSE-413

Course Title : Micro processor

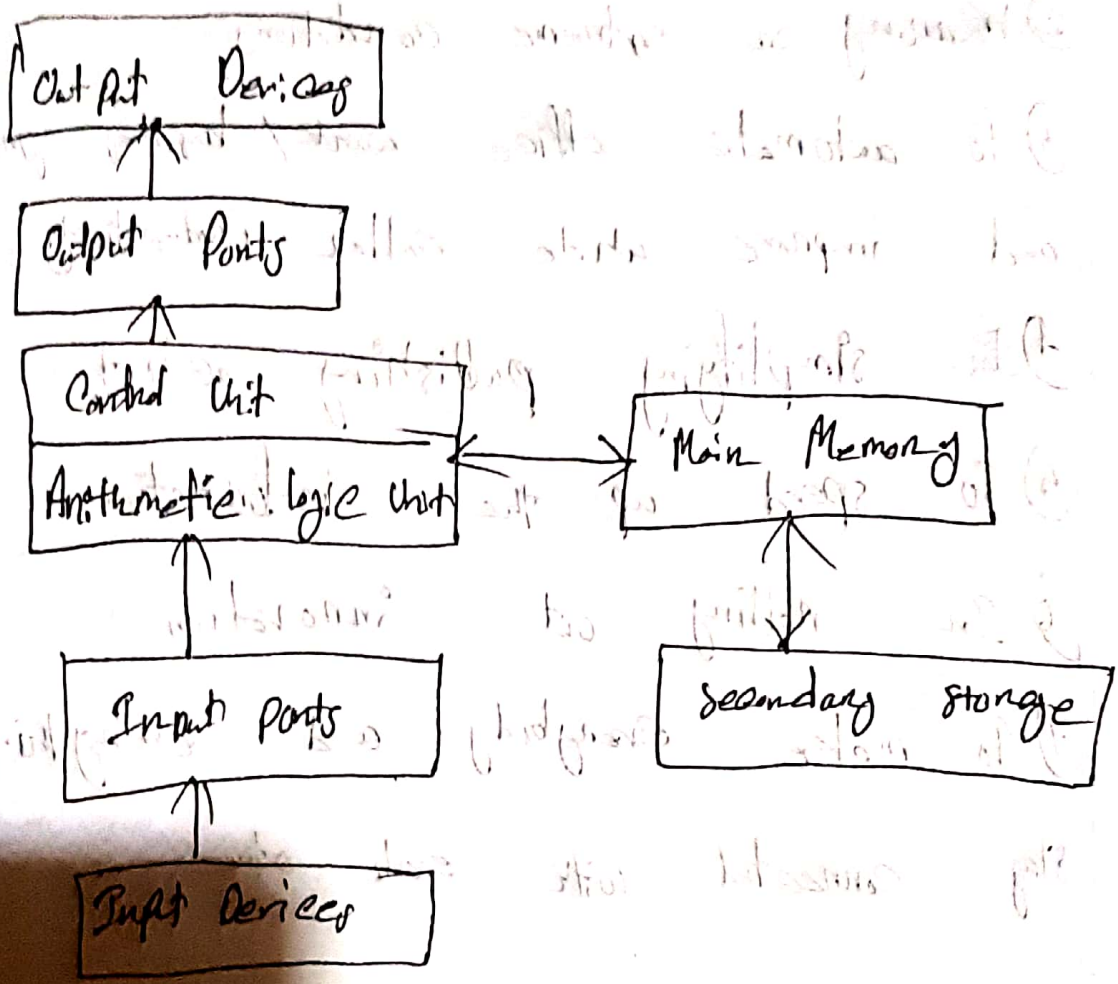
"Final Exam"

1

Ans to the Q.N. 1

(a)

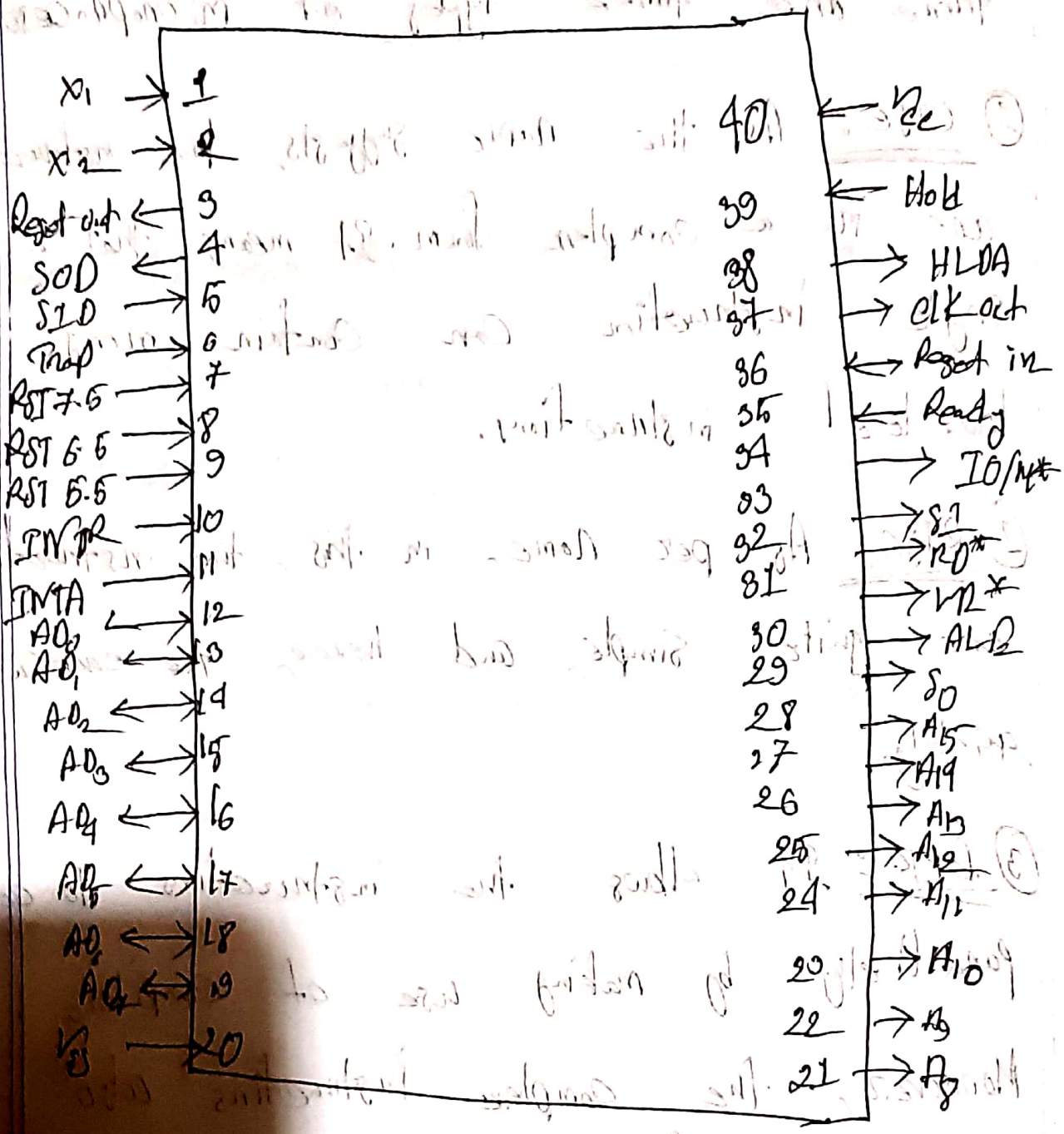
Block digram of a basic microcomputer:-



Features of microprocessor

1) To monitor and control operations of industrial devices by measuring key parameters like temperature, pressure, speed.
2) Running on extreme conditions.
3) To automate office work / business processes and improve white collar productivity.
4) In simplifying publishing activity.
5) To speed up the information.
6) In rolling out innovation.
7) To make everybody and everything stay connected with each other.

(b)



Q:- Pin diagram of 8085

(c)

There are three types of microprocessors.

① CISC:- As the name suggests, the instructions are in a complex form. It means that a single instruction can contain many low-level instructions.

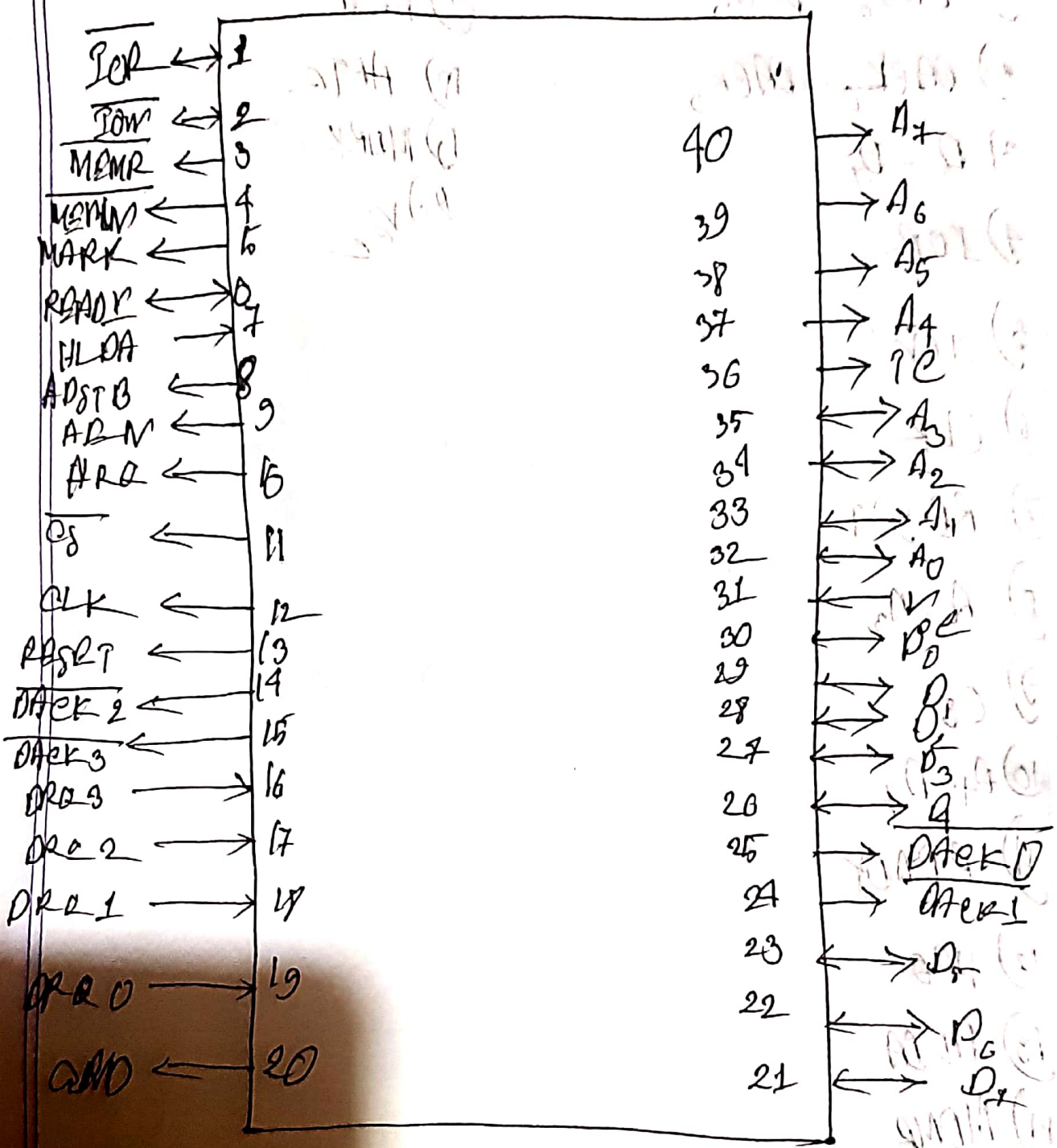
② RISC:- As per name, in this, the instructions are quite simple, and hence, the execute quickly.

③ EPIC:- It allows the instructions to compute parallelly by making use of compilers. Moreover, the complex instructions also process in fewer clock frequencies.

Ans to the Q No 2 (a)

Initially, when any device has to send data between the device and the memory, the device has to send DMA request to DMA controller. The DMA controller sends Hold request to the CPU and waits for the CPU to the HLDA. These are the main functions of DMA. We can see that it is a very easy process. Anyone can do this process very frequently.

(b)



8257 Pin Description.

Architecture:

3) DRQ_0 - DRQ_3
4) $DACK_0$ - $DACK_3$
5) D_0 - D_7
6) IOR
7) IOW
8) CLK
9) RESET
10) A_0 - A_3
11) CS
12) A_4 - A_7
13) READY
14) HRQ
15) HLDA
16) MEMR
17) MEMW
18) AEN
19) ALE
20) MARK
21) Vcc

Ans to the Q No 3

(a)

Shift.

Rotaten Instruction set:

1) SHR: Shift Right
2) SAR: Shift Arithmetic Right.
3) SHL: Shift Left
4) SAL: Shift Arithmetic Left.
5) ~~ROL: Rotate Left.~~
6) ~~ROR: Rotate Right.~~
7) ~~RCL: Rotate Carry Left~~
8) ~~RCR: Ride Carry Right~~

Rotate Instruction Set:

1) Rd:- Rotate Left.
2) RR: Rotate Carry Right
3) RCR: Rotate Carry Right

Branch Instruction:

1) 8086 types of branch instructions-

1.1 - Unconditional Branch Instructions.

1.2 - Conditional Branch Instructions

1.3 - List of 8086 Conditional Branch Instructions.

2) 8086 Microprocessor Assembly

3) 8086 check Carry flag Assembly.

4) 8086 JO Branch Instruction

5) 8086 JNP Branch Instruction

6) 8086 JNS Branch Instruction.

(d)

Memory: Memory is the faculty of the mind by which data or information is encoded, stored, and retrieved when needed.

I/O interface: An interface is a shared ~~boundary~~ boundary across which two or more separate components of a computer system exchange information.