Ques.1 Study of internal 8085 (Microprocessor).

1. Word length -

The total memory location required to feed the instruction in memory is called instruction word size. the memory location of 8085 micro processor can accommodate 8-bits of data to store 16-bits data they are stored in two consecutive memory location (i.e. 2 byte).

According to this instruction word size in 8085 microprocessor there are three type of instruction -

1- Byte instruction
2 - Byte instruction
3 - Byte instruction

1- Byte instruction :- They include opcode and operands in the same byte operands are internal register and code into the instruction.
Instruction require one memory location to store the single by in the memory

Instruction having the only register or
register pair as the operand is
1- Byte Instruction. Instruction in the
absence of operand are also 1 Byte
Instruction.

Example - 1.   MOV B, A (copy the content
of accumulator in register B.
Opcode — MOV
operands — B, A.

2.   Add the content of accumulator
to the contents of register B.
ADD B
opcode — ADD
operand — B

2-Byte instruction — 1st Byte specifis opcode
and 2nd Byte specifies operand. instruction
require two memory location to store
in the memory.

Example —
1.   Load the Hexadecimal data 32H in
the accumulator.
MVI   A, 32H
opcode   MVI
operand   A, 32H.

3 - Byte instruction :- Three - byte instruction is type of instruction in which first 8 bits indicates the opcode and the next byte specify the 16 bit address the low -order address is represented in second byte and the high -order address is represented in the third Byte -

Example -

   Load contents of memory 2050H in the accumulator.

      LDA   2050H
   opcode -   LDA
   Operand -   2050 H

Aslo word length its depends upon the width of internal data bus, register ALU etc. An 8-bit microprocessor can process 8-bit data at a time the word length ranges from 4 to 64 bits depending upon the microComputer

2. Memory Addressing capacity :- 8085 has 8 bit data bus and 16 bit address bus thus it capable of 64kB of memory.

3. Intel 8085 history :-
The intel 8085 (" eighty - eighty - five") is
an 8-bit micro processor produced by
intel and introduced in march 1976
It is a software - binary compatible with
more famous intel 8080with only two
minor instruction added to support its
added interrupt and serial
input/output features However it
requires less support circutry, allowing
simpler and less expensive
microcomputer system to be built.
The "5" in the part number highlighted
the fact that the 8085 use a
single +5 - volt (v) power supply by
using depletion mode transistor.
rather than requiring the +5, -5v and +12v
supplies needed by the 8080.