

## 8085 and 8086 Microprocessor Viva Questions & Answers

### 8085 Viva Questions - Set 1

**Q: Why is 8085 called an 8-bit microprocessor?**

A: Because it can process 8-bit data at a time - its ALU, accumulator, and data bus are 8-bit.

**Q: How many address lines does 8085 have?**

A: 16 address lines (A0-A15), allowing it to access 64KB of memory.

**Q: What is the function of the ALE pin?**

A: ALE (Address Latch Enable) is used to separate the address from the multiplexed address/data bus (AD0-AD7).

**Q: What is the use of the accumulator?**

A: It is an 8-bit register used to store one operand and the result of arithmetic and logic operations.

**Q: What is the difference between a microprocessor and a microcontroller?**

A: A microprocessor is just the CPU (no memory or I/O), while a microcontroller includes CPU, memory, and I/O ports on a single chip.

**Q: Name the general-purpose registers in 8085.**

A: B, C, D, E, H, and L - each is 8-bit. Some can form 16-bit pairs like BC, DE, HL.

**Q: What are the flag registers in 8085?**

A: 5 flags: Sign (S), Zero (Z), Auxiliary Carry (AC), Parity (P), Carry (CY).

**Q: What is the function of the program counter?**

A: It holds the address of the next instruction to be executed.

**Q: What is the size of the instruction queue in 8085?**

A: 8085 doesn't have a prefetch queue; only 8086 has one.

**Q: What is the use of the stack pointer?**

A: It is a 16-bit register that points to the top of the stack in memory.

**Q: Difference between LDA and LDAX?**

A: LDA addr: Loads accumulator from a direct memory address.

LDAX rp: Loads accumulator from memory location pointed by a register pair.

**Q: What is the function of SIM and RIM instructions?**

A: SIM: Set Interrupt Mask, used to mask/unmask interrupts.

RIM: Read Interrupt Mask, used to check the status of interrupts and serial input.

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**Q: How is memory mapped in 8085?**

A: Uses 16-bit addressing for both memory and I/O (memory-mapped) or 8-bit for I/O-mapped devices.

**Q: What is the difference between IN and OUT instructions?**

A: IN: Reads data from an I/O port.

OUT: Sends data to an I/O port.

**Q: What is a TRAP?**

A: TRAP is the highest priority, non-maskable interrupt in 8085.