

(E) Interrupts & Externally Initiated signals -

Interrupts are the signals generated by external devices to request the microprocessor to perform a task.

There are five interrupt signals -

INTR, RST-7.5, RST 6.5, RST 5.5, TRAP

There are three externally initiated signals -

RESET, READY, HOLD.

Types of interrupt-

- (a) Vector interrupt
- (b) Non-vector interrupt
- (c) Maskable interrupt
- (d) Non-maskable interrupt
- (e) Software interrupt
- (f) Hardware interrupt.

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The microprocessor acknowledges interrupt request by INTA.

To respond to HOLD request, it has one signal called HLDA.

INTR \Rightarrow It is an interrupt request signal.

INTA \Rightarrow It is an interrupt acknowledgment sent by the microprocessor after INTR is received.

RST \Rightarrow These pins are maskable interrupts (restart)

that transfer the program control to specific memory locations. They have higher priorities than the INTR & INTA. Among these three, priority is -
RST 7.5 > RST 6.5 > RST 5.5.

TRAP → TRAP is a non-maskable interrupt & doesn't allow or stopped by a program. It has highest priority.

Addressing mode in 8085

These are the instructions used to transfer the data from one register to another from memory to register & from register to memory without any alteration the control.

(i) Immediate addressing mode -

In this mode 8 or 16 bit data is provided in the instruction.

(ii) Register addressing mode -

In this mode data is provided through the registers.

(iii) Direct addressing mode -

In this mode, the data to be operated is available inside a memory location & is directly specified as operands.

(iv) Implicit addressing mode -

In this mode the operand is hidden & the data to be operated is available in the instruction itself.