

## Interrupts -

Interrupts are the signals generated by the external devices to request the microprocessor to perform a task. There are 5 interrupt signals - TRAP, RST 7.5, RST 6.5, RST 5.5, INTR.

## Types of interrupts -

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

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.

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 modes 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 alternation in the content.

(i) Immediate addressing mode-

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

(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 operand.

(iv) Indirect addressing mode-

In this mode, the data to be operated is available inside a memory location & that memory location is indirectly specified by register pair.

(v) Implicit addressing mode-

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