(111-255) WK 17

20 WEDNESDAY • APRIL

S	M	T	W	T	F	S
		1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30	31		

MAR 116

Section - 5

Q1 Explain the function of ALE HLDA INTR READY In 8086. Explain the data addressing mode in 8086.

Ans⇒1 ALE ⇒ The Meaning of ALE is address latch enable. This is a special pin of 8086/8088 processor. When processor transfer address on AD0 - AD015, it makes ALE pin high to suggest the multiplexed lines contain address on it.

HLDA ⇒ It is available at pin 31 of the chip. All the I/O or interrupt requests are made through this line to the Microprocessor and the Microprocessor acknowledge the device through the HLDA pin (It stands for hold Acknowledgement signal and is available at Pin 30.

INTR ⇒ INTR Pin (Pin number 18) in intel 8086 microprocessor is for interrupt. It is an interrupt request signal, which is sampled during the last clock cycle of each instruction to determine if the processor considered this as an interrupt or not.

M	T	W	T	F	S	S
30	31					1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29

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READY ⇒ This is the acknowledgment from the memory or slow device that they have completed the data transfer. The signal made available by the devices is synchronized by the 8284A clock generator to provide ready input to the microprocessor the signal is active high (1).

INTR : Interrupt Request.

Data Addressing Mode in 8086.

The way of specifying data to be operated by an instruction is known as addressing modes. This specifies that the given data is an immediate data or an Address. It also specifies whether the given operand is register or register pair.

Types of addressing modes:-

(i) Register Mode.
(ii) Immediate Mode.
(iii) Displacement or Direct Mode.
(iv) Register indirect Mode.
(v) Based indexed Mode.
(vi) Indexed mode.
(vii) Based mode
(viii) Based indexed displacement mode
(ix) String Mode.
(x) I/O Mode
(xi) Relative Mode.