Section-5

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

Soln

READY:

It is available at pin 22. It is an acknowledge-ment signal from I/O device that data is transferred. It is an active high signal. When it is high, it indicates that the device is ready to transfer data. when it is low, it indicates wait state.

INTR:

It is available at pin 18. 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.

ALE:

It stands for address enable and is available at pin 25. A positive puls is generated each time the process begins any option. This signal indicates the.

availability of a valid address on the address/data line.

HLDA:

It stands for Hold acknowledge signal and is available at pin30. This signal acknowledge the HOLD signal.

Addressing mode in 8086.

Immediate:

- In this type of addressing, immediate data is a part of instruction and appears in the form of successive byte or bytes.

Direct:

- In the direct addressing mode, a 16-bit memory address (offset) is directly specified in the instruction as part of it.

Register:

- All the register, except IP, may be used in this mode.

Register indirect:

- In this mode the offset address of data is in either BX or SI or DI register.
- The default segment is either DS or ES.

Implied:

- In this mode, instruction itself will specify the data to be operated by the instruction.