



5.
  - a) Write an ALP using 8086 instructions to count the numbers of zeros in a given 8-bit number and store the result in memory location 'Res'.
  - b) Explain the hardware interrupt inputs NMI, INTR and INTA (active low signal) using timing diagram.
6.
  - a) Write a program to separate out positive and negative numbers from a given series of 16-bit hexadecimal numbers.
  - b) What are various operators used in 8086 microprocessor?
7.
  - a) With suitable diagram, explain how the Priority Interrupt controller 8259 can be interfaced with 8086 in cascade mode.
  - b) Explain register organization of 8086 and explain typical application of each register.
8. Draw the pin schematic of DMA controller and describe the series of actions that a DMA controller will perform after it receives a request from a peripheral device to transfer data from the peripheral device to memory.

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