CMPN

SEM IV

MP Question bank :

Module 3 : Memory and Peripherals Interfacing

1. Write short notes on 8259 PIC. [10 M]
2. Explain operating modes of PIC 8259. [10 M]
3. Give formats of initialisation command words (ICW's)of 8259 PIC. [10 M]
4. Explain the operation of three 8259 PIC in cascade mode. [10 M]
5. Draw and explain the block diagram of 8255 Programmable Peripheral Interface (PPI) with control word formats. [10 M]
6. Explain the I/O mode control word format of 8255 PPI. Discuss control word format for Bit Set Reset (BSR)mode of 8255 PPI. [10 M]
7. Write salient features of 8255. [5M]
8. Draw and explain the block diagram of 8257 DMA controller. [10M]
9. Explain need of DMA. [5M]
10. Explain different transfer modes of DMA. [5M]
11. Design 8086 based system for following specifications:
    a. 8086 in minimum mode with clock frequency 5MHZ
    b. 128 KB EPROM using 32KB
    c. 32KB RAM using 16KB [10 M]

Module 4 : Intel 80386DX Processor

1. Write salient features of 80386. [5M]
2. Explain EFLAGS registers of 80386DX [10M]
   OR
   Explain flag register format of 80386 DX
   OR
   Explain VM, RF, IOPL and NT flags of 80386 microprocessor [10M]
3. Write a short note on : Control registers of 80386 DX [5M]
4. Explain modes of operation of 80386 microprocessor [10M]
   OR
   Differentiate Real mode , Protected Mode and Virtual Mode of 80386
5. What is GDT? Explain structure of GDT [5M]
6. Explain memory management of 80386 in detail.
   OR
   Draw format of selector and explain it's field.
7. Explain with neat diagram , address translation mechanism implemented on 80386 DX.
   OR
   Draw format of selector and explain it's filed.

8. Explain data segment descriptor with neat diagram.
9. Explain page translation.
10. Write short note on TLB.

Module 5 : Pentium Processor

1. Write salient features of Pentium (80586) processor. [5M]
2. Draw and explain block diagram of Pentium processor. [10M]
3. Explain in brief, pipeline stages on Pentium processor. [10M]
   OR
   Explain integer pipeline of Pentium processor.
4. Explain floating point pipeline for Pentium processor. [5M]
5. Explain branch prediction logic used in Pentium. [10M]

Module 6 : Pentium 4

1. Explain Pentium 4 Net Burst Architecture Feature. [10M]
2. Explain NetBurst Micro Architecture. [10M]
3. Draw and explain pipelining in Netburst Architecture (20 stages). [10M]
4. Explain hyper threading technology and its use in pentium. [5M]