SEM IV

MP Question bank :

Module 1: 8086 Architecture

1. Explain flag register of 8086 [5 M]
2. Write short notes on Memory Segmentation in 8086. [10 M]
3. Explain Memory banks for 8086 processors [10 M]
4. Explain minimum mode configuration of 8086. [10 M]
5. Explain maximum mode configuration of 8086. [10 M]
6. Explain Architecture of 8086 processor. [10 M]
7. Write salient features of 8255. [5M]
8. Draw and explain timing diagram for read operation in minimum mode [10M]
9. Draw and explain timing diagram for read operation in maximum mode [10M]
10. Draw and explain timing diagram for write operation in minimum mode [10M]
11. Draw and explain timing diagram for write operation in maximum mode [10M]
12. Differentiate between minimum mode and maximum mode of 8086. [10M]
13. Differentiate between 8085, 8086 and 8088. [10M]
14. Explain types of interrupts in 8086.[10M]
15. Explain interrupt structure of 8086. [10M]

Module 2: Instruction Set and Programming

1. Explain addressing modes of 8086. [10 M]
2. Differentiate procedure and Macro with example [10 M]
3. Explain string instruction with example [10 M]
   MOVS
   LODS
   STOS
   CMPS
   SCAS
4. Write short note on mixed language programming. [10 M]
5. Explain Assembler Directives [10 M]
6. Write assembly language program on _____ [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]

Module 3: Memory and Peripherals Interfacing

11. Write short notes on 8259 PIC. [10 M]
12. Explain operating modes of PIC 82592. [10 M]
13. Give formats of initialisation command words (ICW's)of 8259 PIC. [10 M]
14. Explain the operation of three 8259 PIC in cascade mode. [10 M]
15. Draw and explain the block diagram of 8255 Programmable Peripheral Interface (PPI) with control word formats. [10 M]
16. Explain the I/O mode control word format of 8255 PPI25.Discusscontrol word format for Bit Set Reset (BSR)mode of 8255 PPI. [10 M]
17. Write salient features of 8255. [5M]
18. Draw and explain the block diagram of 8257 DMA controller. [10M]
19. Explain need of DMA. [5M]
20. Explain different transfer modes of DMA. [5M]
21. Design 8086 based system for following specifications:
    a) 8086 in minimum mode with clock frequency ?MHZ
    b) ? KB EPROM using ?KB
    c) ?KB RAM using ?KB [10 M]

Module 4: Intel 80386DX Processor

1. Write salient features of 8038629. [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
   OR
   DifferentiateReal mode , Protected Mode and Virtual Mode of 80386 [10M]
5. What is GDT? Explain. structure of GDT [5M]
6. Explain memory managementof 80386 in detail
   OR
   Draw format of selector and explain it's field
7. Explain with neatdiagram , address translationmechanism implemented on 80386 DX
   OR
   Draw format of selector and explain it's filed
8. Explaindata 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]