Microprocessor IMP Questions

S.E. (COMP) by Ganesh Sir
SEM-IV (cell: 9821751128)

Module 1: Intel 8086 Architecture

1) Draw and explain architecture of 8086
2) Draw and explain format of flag register of 8086.
3) Draw and explain programming model of 8086.
4) Explain memory banking in 8086
5) Explain memory segmentation in 8086. Write its advantages and disadvantages.
6) Draw and explain minimum and maximum mode configuration of 8086.
7) Draw timing diagram of minimum mode and maximum mode*
8) Differentiate between minimum mode and maximum mode.
9) Explain interrupt structure (Types on interrupts) of 8086.*
10) Draw and explain Interrupt Vector Table (IVT).

Module 2: Intel 8086 Instruction Set and Programming

1) Explain 8086 addressing modes with suitable example*
2) What are assembler directives? explain with examples.
3) Explain following instruction of 8086 microprocessor.
   a) String Instructions b) DIV c) LOOP d) Processor control instruction e)XLAT f)PUSH g)POP h)AAA i)DAA j)MUL i) LAHF

Module 3: Memory and Peripheral Interfacing

1) RAM and ROM interfacing. *
2) Draw block diagram of 8255 PPI.
3) Draw block diagram of 8259 PIC
4) Explain operating modes of 8259 PIC.
5) Explain initialisation command words and operational command words of 8259.
6) Draw Interfacing diagram of 8259 with 8086.
7) Explain data transfer modes of DMA 8257.

Module 4: 80386 Architecture

1) Explain control registers 0 of 80386.
2) Explain descriptors tables of 80386.
3) Explain paging mechanism and protection mechanism in 80386.
4) Explain virtual 8086 mode*

Module 5: Pentium Processor

1) Write features of Pentium Processor.
2) Block diagram of Pentium.
3) Explain instruction pairing rules in Pentium processor.
4) Integer and floating pipeline in Pentium. *
5) Branch prediction logic in Pentium*
6) Data cache and code cache organisation in Pentium. *

Module 6: Pentium 4 Processor

1) Compare 8086, 80386, Pentium 1, Pentium 2, Pentium 3
2) Explain Pentium 4 architecture.
3) Short note on hyperthreading(multitasking).