QP Code : 31091

(80 Marks) (3 Hours)

- Question no. 1 is compulsory.
- Answer any three questions from question no. 2 – 6.
- Assume suitable data, if necessary.

Q.1. Answer following questions in brief.
    a. Explain programming model of 8086. (05)
    b. Explain V86 mode of 80386DX. (05)
    c. Explain, in brief, pipeline stages on Pentium processor. (05)
    d. Explain, in brief, data format supported by SuperSparc processor. (05)

Q.2. a. Explain memory segmentation with pros and cons. (08)
    b. Draw and explain the block diagram of 8255. Also, explain different operating modes of 8255. (12)

Q.3. a. Design 8086 based minimum mode system for following requirements: (12)
      I. 256 KB of RAM using 64 KB x 8-bit device
      II. 128 KB of RAM using 64 KB x 8-bit device
      III. Three 8-bit parallel ports using 8255
      IV. Support for 8 interrupts
    b. Explain, in brief, cache organization of Pentium processor. (08)

Q.4. a. Draw and explain architecture of SuperSparc processor. (12)
    b. Discuss, in brief, protection mechanism of 80386DX. (08)

Q.5. a. Draw and explain architecture of Pentium processor. (10)
    b. Draw timing diagram of read operation on 8086 based system. (10)

Q.6. Write short notes on
    a. 8089 I/O Processor (05)
    b. Comparison between i5 and i7 (05)
    c. SuperSparc registers (05)
    d. 8259 – PIC (05)

———— ✗ ————