QP Code : 15065

(3 Hours) [Total Marks : 100]

N.B.: (1) Question No. **1** is **compulsory**.
(2) Attempt any **four** questions out of remaining **six** questions.

1. Solve any **four** :–
   (a) Explain the integer pipeline stages for Pentium processor. 5
   (b) What is parallelism ? Justify the need of parallelism by giving example. 5
   (c) State the bus cycles of 80386 DX processor. 5
   (d) Draw the flag register of 80386 DX processor and explain. 5
   (e) What is micro acrrchitecture ? Explain by giving example.

2. (a) Explain the principles of designing pipelined processors. 10
   (b) Explain the protection mechaniam incorporated in 80386 DX processor. 10

3. (a) Draw the architecture of Intel P5 processor and explain. 10
   (b) Explain branch prediction mechanism for pentium processor. 10

4. (a) Differentiate between pentium processor versions, Pentium; Pentium pro; Pentium P6. 10
   (b) Draw the Sun-SPARC architecture and explain. 10

5. (a) Discusss IA-64 architecture in detail. 10
   (b) Explain the floating paint pipeline stages. 10

6. (a) Explain the addressing modes of 80386 DX processor in detail. 10
   (b) Explain Systolic architecture in detail. 10

7. Write short note on :–
   (a) PCI Bus 5
   (b) Memory management 5
   (c) Cache memory 5
   (d) USB Bus. 5

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