

17627

21819

3 Hours / 100 Marks

Seat No.

--	--	--	--	--	--	--	--	--

- Instructions :**
- (1) All Questions are *compulsory*.
 - (2) Answer each next main Question on a new page.
 - (3) Illustrate your answers with neat sketches wherever necessary.
 - (4) Figures to the right indicate full marks.
 - (5) Assume suitable data, if necessary.
 - (6) Use of Non-programmable Electronic Pocket Calculator is permissible.

Marks

1. Attempt any FIVE :

20

- (a) Explain features of 80386 microprocessor. (any eight)
- (b) Draw Register organization format of 80386 DX. State the function of segment registers.
- (c) Justify the use of separate cache in Pentium configuration.
- (d) Draw the block diagram of Pentium System Architecture.
- (e) List the advantages of RISC. (Any four)
- (f) Describe any four DOS interrupts.
- (g) Differentiate between hardware and software interrupts. (4 points)

2. Attempt any FOUR :

16

- (a) Explain with neat diagram DOS. BIOS interface.
- (b) State and explain features of RISC processors. (Any four)
- (c) Describe the floating point unit operation in Pentium processor.
- (d) Explain features of Intel MMX Architecture.
- (e) Compare between GDTR and LDTR. (four points)
- (f) Draw and explain the format of CRO register of 80386.

[1 of 2]

P.T.O.

- 3. Attempt any TWO :** **16**
- (a) Draw the Architecture of 80386 and explain any two units in detail.
 - (b) Describe the paging mechanism of 80386 with the help of neat diagram.
 - (c) Draw and explain super scalar execution of Pentium processor.
- 4. Attempt any TWO :** **16**
- (a) Describe the segment descriptor cache registers with suitable diagram in 80386 microprocessor.
 - (b) Describe the concept of branch prediction implemented in Pentium in detail.
 - (c) Describe the inter MMX architecture w.r.t. its data types & instruction set.
- 5. Attempt any TWO :** **16**
- (a) Mention design issues involved in the design of RISC processors. Describe any one issue in detail.
 - (b) List and explain features of Sun Ultra SPARC processor. (Any 8)
 - (c) Distinguish between DOS and BIOS interrupts (Any 8 points)
- 6. Attempt any FOUR :** **16**
- (a) Explain the interrupt processing sequence of X86 microprocessor.
 - (b) Differentiate between Hardware & Software interrupts. (any four)
 - (c) Compare between CISC and RISC processor designs. (Any 4 points)
 - (d) Describe any four architectural features of Pentium 3 processor.
 - (e) List and explain advantages of Pentium-2 processor over Pentium - Pro.
 - (f) Draw the diagram showing debug and test registers of 80386 processor.
-