

17627

21415

3 Hours / 100 Marks

Seat No.

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- Instructions* –
- (1) All Questions are *Compulsory*.
 - (2) Illustrate your answers with neat sketches wherever necessary.
 - (3) Figures to the right indicate full marks.
 - (4) Assume suitable data, it necessary.
 - (5) Use of Non-programmable Electronic Pocket Calculator is permissible.
 - (6) Mobile Phone, Pager and any other Electronic Communication devices are not permissible in Examination Hall.

Marks

1. a) Attempt any THREE of the following : **12**
- (i) Describe the functions of the following pins of 80386.
 - 1) $\overline{BE}_3 - \overline{BE}_0$
 - 2) $M/\overline{I\bar{O}}$
 - 3) \overline{ADS}
 - 4) $\overline{BS16}$
 - (ii) What is multimedia extension ?
 - (iii) How the interrupt is processed in X86 processor ?
 - (iv) Write any four advantages of RISC processor.

P.T.O.

- b) **Attempt any ONE of the following :** **6**
- (i) Draw the neat labelled architecture of 80386.
 - (ii) With neat sketch describe the branch prediction logic in pentium processor.
- 2. Attempt any FOUR of the following :** **16**
- a) State the functions of Test and debug register of 80386 with the neat diagram.
 - b) List the floating point exception in pentium.
 - c) What do you meant by hybrid architecture ?
 - d) How the intel MMX architecture handles floating point register ?
 - e) List the hardware and software interrupts.
 - f) Describe any two dedicated interrupts.
- 3. Attempt any FOUR of the following :** **16**
- a) Draw the MSW of 80386 and describe the function of each bit.
 - b) What are the advancement available in pentium pro inline with the pentium architecture.
 - c) State the instruction latency in RISC processor designing.
 - d) Draw the interrupt vector table of X86 and labelled each field in it.
 - e) How many control registers are present in 80386. State the function of each.

4. a) **Attempt any THREE of the following :** **12**
- (i) Describe the real addressing mode of 80386 with neat diagram.
 - (ii) Write any four features of pentium.
 - (iii) Write any four features of RISC processor.
 - (iv) State the functions of following interrupts.
 - 1) INT25H
 - 2) INT10H
 - 3) INT16H
 - 4) INT21H
- b) **Attempt any ONE of the following :** **6**
- (i) Describe the virtual 8086 mode in 386 with neat sketch of memory mapping.
 - (ii) Describe the pentium CPU architecture with neat sketch.
5. **Attempt any FOUR of the following :** **16**
- a) List the system address register 80386 and state their one function each.
 - b) State the functions of INT 17H. Give any two examples.
 - c) Draw the superscaler organisation of pentium processor and state the function of each stage.
 - d) What do you meant by Register windowing in RISC processor ?
 - e) State the features of pentium III processor.
 - f) What do you meant by Dynamic execution of instruction in pentium processor.

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Marks

6. Attempt any FOUR of the following :

16

- a) What do you mean by paging. State the two advantages of paging.
 - b) Draw and describe the segment descriptor cache register of 80386.
 - c) Write the advantages of separate code and data cache available in Pentium.
 - d) State any four features of SUN ultra SPARC.
 - e) State any four differences between .com and .exe programs.
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