

B. Tech Degree VI Semester (Supplementary) Examination ***September 2010***

CS 604 MICROPROCESSOR SYSTEM DESIGN ***(2002 Scheme)***

Time : 3 Hours

Maximum Marks : 100

- I. (a) With a neat diagram explain the architecture of 80286. (10)
 (b) What are the different addressing modes of 8086? Give example for each. (10)
- OR**
- II. (a) Draw a neat diagram and explain maximum mode configuration of 8086. (10)
 (b) What are the different types of interrupts in 8086 microprocessor? Explain the need of interrupt priority management. (10)
- III. (a) Explain the role of segment descriptor registers and tables in 80386 microprocessor. (10)
 (b) Explain the architecture of 80486 with the help of a diagram. (10)
- OR**
- IV. (a) What is the need of virtual memory? How paging can be effectively used in protected mode operation of 80386 microprocessor? (12)
 (b) Compare and contrast the architecture of 80386 and 80486 microprocessors. (8)
- V. (a) Explain the implementation of branch prediction in Pentium processor. (8)
 (b) With the help of a block diagram explain the architecture of Pentium processor. Give the architectural difference between Pentium III and Pentium IV microprocessor. (12)
- OR**
- VI. (a) Explain floating point unit in Pentium. (6)
 (b) What is super scalar architecture? Explain. (6)
 (c) What are the different properties of RISC processors? What are the merits of RISC processors over CISC processors? (8)
- VII. (a) List the functional categories of instruction with example. (10)
 (b) Write a program to check whether a number is prime or not. (10)
- OR**
- VIII. (a) List the different branching instruction in 8086 instruction set with examples. (8)
 (b) Write a program to find the largest of n nos. (10)
- IX. (a) Draw the block diagram and explain the working of 16550 UART. (8)
 (b) Briefly explain the various components on the motherboard. (12)
- OR**
- X. (a) Write short notes on BIOS and Boot Process. (5)
 (b) Write short notes on (i) VESA (ii) IDE (iii) PCI (iv) USB (v) CMOS (5 x 3 = 15)