2007-RAJASTHAN UNIVERSITY

IV B.E/B.TECH VII SEMESTER DEGREE EXAMINATION

ADVANCED MICROPROCESSOR

(ELECTRONIC INSTRUMENTATION ENGINEERING)

TIME-3HOUR
MARKS-80

ANSWER ALL QUESTIONS

1.(a) Explain the operation of the following pins of 8086 microprocessor:-

(i) INTR

(ii) M/IO'

(iii) Status lines (S2',S1',S0')

(iv) BHE'/S7

(b) Explain the physical memory organization in an 8086 system.

2.(a) Explain the following addressing modes with suitable examples:-

(i) Indexed

(ii) Register-relative

(iii) Based indexed

(iv) Relative based indexed.

(b) What is interrupt vector table of 8086? Explain its structure.

3.(a) Explain the operation of the following instructions along with their correct syntax:-

(i) LEA

(ii) XCHG

(iii) DAS

(iv) MOVSW

(b) Write an 8086 program to find out the largest number from an underscored array of 16-bit numbers stored sequentially in the memory locations starting at offset 0500H in the segment 2000H. Also draw the flowchart for the above program.

4. It is required to interface two chips of 32K*8 ROM and four chips of 32K*8 RAM with 8086 according to the following map:-

ROM 1 and 2: F0000H-FFFFFH

RAM 1 and 2: D0000H-DFFFFH

RAM 3 and 4: E0000H-EFFFFH

show the implementation of this memory system.

5.(a) Draw and explain the block diagram of ADC 0808/0809.

(b) Explain the following registers of 80386:-

(i) Segment descriptor register

(ii) Control register

(iii) System address register

(iv) Debug and test register

6.(a) Explain the protected mode of 80386 without paging unit.

(b) Explain the process of converting a linear address to a physical address for 80386.

7.(a) Explain the register organization of 80486 with the help of a diagram.

(b) Draw and explain Pentium CPU Architecture.

8. Write short note on any two of the following:-

(a) Min/Max mode of 8086

(b) Keyboard and display interface

(c)Rs232 communication standard.