

Time Duration: 3 hrs.

Max Marks: 80

Note

- a. Q.1 is compulsory
- b. Solve any 3 questions out of the remaining questions
- c. Figures to the right indicate full marks

Q.1 Solve any 4

- a. List the prominent features of super-scalar architecture. (5)
- b. State advantages of segmentation in 8086. (5)
- c. State the significance of queue in pipelining in 8086. (5)
- d. Explain the significance of following pins in 8086.
i) INTR ii) TEST* iii) DEN* iv) BHE/S7 v) ALE (* indicates bar) (5)
- e. Explain memory banking in 8086. (5)

- Q.2 a. Draw and explain minimum mode operation of 8086. (10)
- b. Draw and explain timing diagram for i) read ii) write cycle in 8086. (10)

- Q.3 a. Explain different addressing modes of 8086 with example. (10)
- b. Explain interrupt structure in 8086 (10)

- Q.4 a. Show interfacing of 8259 with 8086 in single mode and explain significant pins. (10)
- b. Write a program to blink port C bit 2 of 8255. Assume address of CWR of 8255 as 83H. Use bit Set/Reset mode. (5)
- c. Explain any 2 operating modes of DMA 8257. (5)

- Q.5 a. Draw and explain interfacing of 8086-8087 math-coprocessor. (10)
- b. Write a program in 8086 to exchange block of data consisting of 5 bytes at 1000H and 02000H using string instructions. (5)
- c. Explain following instructions in 8086. (5)
i) LOOPE/ LOOPZ ii) JE/JZ iii) Call

- Q.6 Write short notes on any 4 (20)
a. DOS interrupts.
b. Intel Pentium processor – Branch Prediction Logic
c. Mode 1 operation of 8255PPI
d. ICW's and OCW's in 8259
e. Operation of DMA controller
