Q. P. Code: 13589

(3 Hours) Total Marks: 80

N.B. 1) Question **number 1** is compulsory.
2) Attempt **any three** from remaining five questions.
3) Assume suitable data wherever necessary.
4) Figure to **the right** indicates full marks.

Q1. Attempt any four from the following (20)

a) At reset, interrupts in 8086 processor are disabled. Give reason.
b) List the differences between 8086 and 8088 processor.
c) Explain 8086 flag register format and significance of each flag bit.
d) Write a note on the various system bus arbitration schemes.
e) Explain the significance of ALE signal and its use in 8086 based minimum system.

Q2)a)Explain the various addressing modes in 8086 using appropriate examples (10)

b) Explain programmable interrupt controller 8259 – features and operation. (10)

Q3) a) Explain 8086-8087 coprocessor configuration in maximum mode of operation. (10)

b) Explain the 8086 instructions having following mnemonics using examples

a) DAA b)MUL c)MOVSB d)PUSH e) JMP & JC (10)

Q4) a) Explain the need for interrupts and the interrupt structure of 8086 processor. (10)

b) Using the functional block representation explain the DMA controller 8237.(10)

Q5) a) Explain the architecture of 8086 processor. What is the need for memory segmentation. (10)

b) Using subroutines/procedures write a program in 8086 assembly to obtain the square of an array of ten bytes (assume and state the relevant additional data required). (10)

Q6) a) Write a brief note on programmable peripheral interface (PPI) IC – 8255 and its modes of operation. (10)

b) Using string instructions write a program in 8086 assembly to copy a block ten bytes initialized in data segment to extra segment. Assume the necessary details. (10)