QUESTION BANK UT-1

Chp 1:

1. State the function of –BHE and Ao pins of 8086. (S-19) (2M)
2. Explain the concept of pipelining in 8086. State the advantages of pipelining (any two). (S-19) (W-19) (4M)
3. Explain memory segmentation in 8086 and list its advantages. (any two) (S-19) (S-22) (4M)
4. Describe the mechanism for generation of physical address in 8086 with suitable example. (S-19) (4M)
5. Draw architectural block diagram of 8086 and describe its register organization. (S-19) (6M) (W-19) (4M)
6. State the function of READY & INTR pin of 8086. (W-19) (2M)
7. Draw flag register of 8086 and explain any four flags. (W-19) (4M)
8. Define logical and effective address. Describe physical address generation process in 8086. If DS = 345A H and SI = 13DC H. Calculate physical address. (W-19) (6M)
9. Draw the labelled format of 8086 flag register. (S-22) (2M)
10. Write the function of following pins of 8086 : (i) BHE (ii) ALE (iii) READY (iv) RESET (S-22) (4M)
11. Describe how 20 bit Physical address is generated in 8086 microprocessor with suitable example. (S-22) (4M)
12. Calculate the physical address if : (S-22) (6M)
    (i)   CS = 1200H and IP = DE00H
    (ii)   SS = FF00H and SP = 0123H
    (iii)   DS = 1F00H and BX = 1A00H for MOV AX, [BX]
13. State any four features of 8086. (Sample paper)

Chp 2:

1) State the role of Debugger in assembly language programming (S-19) (2M)
2) Demonstrate in detail the program development steps in assembly language programming. (S-19) (6M)
3) Explain any four assembler directives of 8086 with example. (S-19) (S-22) (4M)
4) List assembly language programming tools. (W-19) (2M)
5) Explain assembly language program development steps. (W-19) (4M)
6) Explain the use of assembler directives : (i) DW (ii) EQU (iii) ASSUME (iv) OFFSET (v) SEGMENT (vi) EVEN   (W-19) (6M)
7) State the function of editor and assembler (S-22) (2M)
8) Describe how an assembly language program is developed and debugging using program developments tools. (S-22) (6M)

Chp 3:

1. Describe any six addressing modes of 8086 with suitable diagram. (S-19) (W-19) (6M)
2. Draw Machine language instruction format for Register-to-Register transfer. (W-19) (2M)
3. Define immediate addressing mode with suitable example. (S-22) (2M)
4. State the addressing mode of following instructions : (S-22) (6M)
    (i)   MOV AX, 3456H

(ii)   ADD BX, [2000H]
(iii)   DAA
(iv)   MOV AX, [Si]
(v)   MOV AX, BX
(vi)   SUB AX, [BX + SI + 80H]

Chp 4:

1. Write ALP for addition of two 8 bit numbers. Assume suitable data. (S-19) (S-22) (2M)
2. Write an ALP to add two 16-bit numbers. (W-19) (4M)
3. Write an ALP to multiply two 16 bit signed numbers. (S-22) (4M)
4. Write ALP for subtraction of two 8 bit numbers and 16 bit numbers.