## PART A

**ANSWER ALL QUESTIONS** (10 x 2 = 20 marks)

1. What is an assembler?
2. List the segment registers of 8086.
3. Calculate the physical address for SS =$B500_H$ ,SP=$1500_H$.
4. Define DB and DW directives.
5. What is semaphore? Name the operators.
6. Differentiate between Macro and Procedure.
7. What is interrupt I/O?
8. What is polling?
9. List any four features of the peripheral interface adapter 8259.
10. What are internal and external identifiers in a module?

## PART B

**ANSWER ANY FOUR QUESTIONS:** (4 x 7.5 = 30 marks)

11. What are the different status flag in 8086? When are they set or reset?

12. (a) Identify the addressing modes for the following instruction(4 marks)
    (i) MOV [SI].BL
    (ii) MOV AX, $8712_H$
    (iii) M0V AL, [1D00H]
    (iv) MOV [SI][BX],AL
(b) Distinguish between hardware interrupt and software interrupts?(3.5 marks)

13. (a) At the end of the following sequence of instructions, indicate the condition of SF,ZF and CF. (4 Marks)

        MOV AL,3CH
        MOV BL,4FH
        CMP AL,BL

    (b) What is a DUP directive? give an example(3.5 Marks)

14. Differentiate between the minimum mode and maximum mode signals of 8086.

15. Draw the flow chart of programmed I/O and explain.

16. Discuss in detail the Interrupt related instructions.

**PART C**

**ANSWER ANY FOUR QUESTIONS**            **(4 x 12.5 = 50 marks)**

17. Explain the functional units available in 8086 architecture with a block diagram.

18. (a)Explain the function of the following pins      (a) $\overline{\text{BHE}}$ (b) $\overline{\text{INTA}}$ (c) ALE (d) M/$\overline{\text{IO}}$ (e) $\overline{\text{DEN}}$

  (b) Find the output for the given sequence of instructions

    MOV AL, 3AH

    MOV BL, D7H

     XOR AL, BL

19. Write a MASM program to divide 16 bit number by a 8 bit number and give the quotient and remainder.

20. Explain the daisy chaining method of giving priority to an interrupt system using a neat diagram.

21. Explain the process state of INTEL'S iRMX 86 operating system with a neat block diagram.

22. (a)Discuss the sequence of steps in executing a program written using MASM.(5.5 marks)

  (b) Write a note on common procedure Sharing.(7 marks)