V Semester B.C.A. Degree Examination, March 2023
(Y2K14) (CBCS) (F+R)
COMPUTER SCIENCE
BCA 505 : Microprocessor and Assembly Language

Time : 3 Hours　　　　　　　　　　　　　　　　　　　Max. Marks : 70

Instruction : Answer all Sections.

SECTION – A

Answer **any 10** questions.　　　　　　　　　　　　　　(10×2=20)

1. List any two features of 8085.

2. Differentiate between program counters and stack pointer.

3. How many memory locations can be accessed by processor, if it has 10 address lines ?

4. List any 4 data transfer instructions of 8085 processor.

5. Define machine cycle and instruction cycle.

6. What is the use of DAA Instruction ?

7. Write an ALP to find 2's complement of 8-bit number.

8. Define counter and time delay.

9. What is memory Interfacing ?

10. What are handshaking signals ?

11. Define subroutine.

12. What is an Interrupt ?

CS – 500

SECTION – B

Answer **any five** questions.

13. Explain the architecture of 8085 processor with a neat labelled diagram. **10**

14. a) Explain Flag Register with a diagram. **5**

    b) Explain opcode fetch machine cycle with a neat timing diagram. **5**

15. a) Explain the classification of 8085 microprocessor instruction based on word size. **5**

    b) Compare memory mapped I/O and peripheral mapped I/O. **5**

16. a) Explain the following Instructions : **6**
    i) CMP M
    ii) DAD
    iii) STAX B.

    b) Write an assembly language program to add two 8 bit numbers. **4**

17. a) Calculate the time delay using a register with a clock frequency of 2 MHZ. **5**

         MVI B, FF

    LOOP : DCR B

         JNZ LOOP

    b) Explain various Interrupts of 8085. **5**

18. a) What is stack ? Explain PUSH and POP operations. **5**

    b) Write the steps to convert Binary to BCD. **5**

19. a) Write an ALP to perform Block Transfer. **5**

    b) Write a note on RIM and SIM Instructions. **5**

20. Write short notes on :
    i) Program status word of 8255 PPI **5**
    ii) Demultiplexing of address bus in 8085. **5**

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