15525

Reg. No. | | | | | | | | |

V Semester B.C.A. Degree Examination, March/April - 2023
COMPUTER APPLICATIONS
Microprocessor and Assembly Language
(CBCS Scheme)

Time : 3 Hours **Maximum Marks : 70**

Instructions to Candidates:

Answer all sections.

SECTION - A

I. Answer any **ten** questions. Each question carries **two** marks. **(10×2=20)**

1. What is a microprocessor?
2. Define the terms program counter and stack pointer.
3. Briefly explain about instruction format.
4. Give the purpose of the instruction SUI 4FH.
5. What is data masking? How it can be done?
6. What are looping and indexing?
7. What is a counter?
8. Differentiate between Absolute and partial decoding.
9. What is memory interfacing?
10. Define interrupt.
11. Mention the different functions performed by programmable interface device.
12. Explain SOD and SID pins of 8085.

SECTION - B

II. Answer any **five** questions. Each question carries **ten** marks. **(5×10=50)**

13. Explain the architecture of 8085 microprocessor with a neat diagram. **(10)**
14. a. Explain the various flags of 8085 microprocessor.
    b. What is addressing modes? Explain the various addressing modes. **(5+5)**
15. a. Explain the various Rotate instructions with an example.
    b. Write an assembly language program for addition of two 16 - bit numbers. **(5+5)**

[P.T.O.

16. a. Explain the following 8085 instructions.
    i. LDA E000.
    ii. INX H.
    iii. XCHG.
    b. Write a note on counters and time delays. **(6+4)**

17. a. Explain PUSH and POP instructions with an example.
    b. What are condition call and RETURN instructions? Explain. **(5+5)**

18. a. Explain the method of converting BCD to Binary with an example.
    b. Write a note on IN and OUT instructions. **(6+4)**

19. a. Differentiate between memory mapped I/O and Peripheral I/O.
    b. Explain DMA. **(5+5)**

20. a. What are the modes of operations of 8255? Explain.
    b. Explain DAC with a neat diagram. **(5+5)**

15525

Reg. No. | | | | | | | | | |

V Semester B.C.A. Degree Examination, April - 2022
COMPUTER SCIENCE
Microprocessor & Assembly Language
Paper : BCA 505 T
(CBCS Scheme)

Time : 3 Hours **Maximum Marks : 70**

Instructions to Candidates:

Answer all sections.

SECTION - A

Answer any **Ten** questions. Each question carries **Two** marks. **(10×2=20)**

1. What is microprocessor.
2. Define program counter and stack pointer.
3. Mention compare instructions.
4. What is mnemonic. Give example.
5. What is the difference between MOV and MVI instructions.
6. Name any 4 addressing modes of 8085.
7. Briefly explain PUSH and POP instructions.
8. What is a counter? Mention its types.
9. What are handshake signals?
10. Explain SID and SOD pins of 8085.
11. What is memory interfacing?
12. What is DMA?

SECTION - B

Answer any **Five** questions. Each carries **10** marks. **(5×10=50)**

13. Explain the architecture of 8085 with a neat diagram. **(10)**
14. a) Explain instruction set classification based on word size. **(5)**
    b) Explain any 5 data transfer operations. **(5)**

[P.T.O.

15. a) Write a program to subtract two 16 bit numbers. (5)

b) Explain conditional jump instructions. (5)

16. a) Write a program to find square root of a number using look up table. (5)

b) Explain the different types of flags. (5)

17. a) Define subroutine. Explain CALL and RET instructions. (5)

b) Write a short note on demultiplexing of address bus in 8085. (5)

18. a) Explain the following instructions. (5)

1. XCHG.
2. LHLD
3. ADC M
4. INR R
5. DCR M

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

19. Explain the different addressing modes. (10)

20. a) Explain the different types of buses. (5)

b) Briefly explain error checking methods. (5)

15525

Reg. No. | | | | | | | | |

V Semester B.C.A. Degree Examination, March - 2021
COMPUTER SCIENCE
Microprocessor and Assembly Language
(CBCS Scheme)

Time : 3 Hours **Maximum Marks : 70**

***Instructions to Candidates*:**

Answer All the Sections.

SECTION - A

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

1. Define the terms program counter and stack pointer.
2. Give the purpose of address bus and data bus.
3. Mention any four interrupt signals of 8085 microprocessor.
4. What are the different fields of an instruction. Give an example.
5. Give the description for the instruction SUI 02H.
6. Explain IN and OUT instruction.
7. Name any four addressing modes of 8085.
8. Write the different applications of rotate instructions.
9. What is a counter? Mention the different types of counters.
10. What is a memory interfacing?
11. Write instruction to Load 05H in Accumulator and to find its complement.
12. What are handshake signals?

[P.T.O.

SECTION - B

Note: Answer any **Five** questions. (5×10=50)

13. Explain the functional block diagram of 8085 microprocessor with a neat diagram. **(10)**

14. a) What are flags? Explain the various flags of 8085 microprocessor. **(5+5)**
    b) Explain the classification of 8085 instructions based on word size with example.

15. a) Explain the different logical instructions with an example. **(5+5)**
    b) Write an assembly language program for block transfer of data bytes.

16. a) Explain PUSH and POP operations with example. **(5+5)**
    b) Write an assembly language program to add two 16-bit numbers.

17. a) Explain the following instructions of 8085. **(5+5)**
        i) LDA F100
        ii) XCHG
        iii) DCX H
        iv) DAD B
        v) ANA M
    b) Write a note on generation of time delay.

18. a) Explain the method of converting Binary to BCD with an example. **(5+5)**
    b) Explain CALL and RETURN operations of 8085.

19. a) Give the differences between memory mapped I/o and peripheral I/o. **(5+5)**
    b) Explain RIM and SIM instructions.

20. a) Explain the steps involved in interrupt process. **(5+5)**
    b) Explain the block diagram of 8255 APPI.