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?

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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.