B-2072

Total No. of Printed Pages:2

SUBJECT CODE NO:- B-2072
FACULTY OF SCIENCE AND TECHNOLOGY
B.Sc. S.Y. (Sem-III) Examination Oct/Nov 2019
Electronics Paper-VIII (A)
(A) 8086 Microprocessor

[Time: 1:30 Hours]   **[Max. Marks: 50]**

Please check whether you have got the right question paper.

N.B   1) Attempt all questions
             2) Illustrate your answer with suitable labeled diagram.

Q.1   Draw and discuss the read and write cycle timing diagram of 8086 in minimum mode and maximum   20
      mode

                                          OR

      What is an instruction for 8086 microprocessor? Explain data copy/transfer instruction with suitable
      example write a program to perform one byte BCD addition.

Q.2   Explain the physical address formation in different addressing mode   20
                                          OR
      Write short note on any four
          1) Write an 8086 based ALP to subtract two 16-bit numbers, store the result at 0200AH
          2) Explain any five arithmetic instruction with example
          3) Function of HOLD and HLDA pin
          4) State flags of 8086 microprocessor
          5) Shift instruction
          6) Find out- the machine code for following instructions.
             i)   ADC AX,BX   ii) TEST AX, 5555H

Q.3   Attempt the following selecting correct answer from the given alternatives.   10
          1) The instructions that are used to call a subroutine from a main program and return to the main
             program after execution of called function are
                    a) CALL, JMP   b) JMP, IRET
                    c) CALL,RET   d) JMP, RET
                                                          e)
          2) The instruction that subtracts 1 from the contents of the specified register/ memory location is
                    a) INC   b) SUBB
                    c) SUB   d) DEC
                                                          e)
          3) In general the source operand of an instruction can be
                    a) Memory location   b) Register
                    c) Immediate data   d) All of the mentioned

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4) If $MN/\overline{MX}$ is low the 8086 microprocessor operates in --------mode.
    a) Minimum   b) Maximum
    c) Both and b   d) None of given
                                      e)

5) Which of the following is not an arithmetic instruction?
    a) IMC   b) CMP
    c) DEC   d) ROL

6) In 8086 microprocessor the address BUS is ---------bit wide
    a) 8   b) 16
    c) 12   d) 20
                                        e)

7) The index register are used to hold
    a) Memory register   b) Offset address
    c) Segment memory   d) Offset-memory
                                      e)

8) In the RCL instruction the contents of the destination operand undergoes function as
    a) Carry flag is pushed into LSB and MSB is pushed into carry flag   b) Carry flag is pushed into MSB and LSB is pushed into carry flag
    c) Auxiliary flag is pushed into LSB and MSB is pushed into carry flag   d) Parity flag is pushed into MSB and LSB is pushed into carry flag

9) The push source copies a word form source to-------
    a) Stack   b) Memory
    c) Destination   d) Register

10) The instruction that involve various string manipulation operations are
    a) Branch instruction   b) Flag manipulation instruction
    c) Shift-and rotate instruction   d) String instruction

OR

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FACULTY OF SCIENCE AND TECHNOLOGY
B.Sc. S.Y. (Sem-III) Examination Oct/Nov 2019
Electronics Paper- VIII (B)
(B) 8085 Microprocessor – I

[Time: 1:30 Hours] [Max. Marks: 50]

Please check whether you have got the right question paper.
N.B
3) Attempt all questions
4) Illustrate your answer with suitable labeled diagram.

Q.1   Explain the architecture of 8085 microprocessor   20

OR

Write in brief 8085 microprocessors instruction fetching and Execution operation

Q.2   Explain the addressing modes of opcode format of 8085 microprocessor's with suitable examples.   20

OR

Write short notes on any four from the following each.
   a) Flow chart symbols
   b) Write a program to load data 05H into accumulator & data 20H into B reg.
   c) Write a program to add 2 data bytes FFH & FFH. The result is greater than 8 bits.
   d) Concept of looping in assembly language programming
   e) Arithmetic & logical section
   f) 8085 power on RESET & RESET key circuit.

Q.3   Attempt the following multiple choice questions.   10
   1) ---------is an active low output control signal used to write data to memory or as I/O device
        a) Write   b) Read
        c) TRAP   d) None of these

   2) ----------is used the hold the address of program memory.
        a) Stack pointer   b) Program counter
        c) Index Resistors   d) None of these

   3) FPGA mean------------
        a) Field programmable gate array   b) Forward programmable gate array
        c) Forward parallel gate array   d) Field parallel gate array

3

B-2072   2019

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4) Which one of the following is not a vectored interrupt
   - a) TRAP
   - b) INTR
   - c) RST7.5
   - d) RST3

5) In 8085 name of the 16 bit resistors is
   - a) Stack pointer
   - b) Program counter
   - c) Both a and b
   - d) None of these

6) Total no. of instruction for 8085 microprocessor assembly language is
   - a) 244
   - b) 245
   - c) 246
   - d) 247

7) The INTEL 8085 is an ---------bit nmos microprocessor
   - a) 16
   - b) 8
   - c) 4
   - d) None of these

8) -----------is used to hold the address of the stack memory.
   - a) Stack pointer
   - b) Indian resisters
   - c) Program counters
   - d) Both a & b

9) READY signal in 8085 microprocessor is useful the CPU communicates with ------
   - a) A fast peripheral device
   - b) A DMA chip
   - c) A PPI
   - d) A slow peripheral device

10) Temporary registers in 8085 microprocessor are--------
   - a) B & C
   - b) W & Z
   - c) D & E
   - d) H & L

4