SARDAR PATEL UNIVERSITY

Instrumentation B.Sc. (Sem – V) Examination 2013

Subject :- 8085 Microprocessor – I

Subject Code :- US05CINV05

DATE: 22-11-2013   TIME: 10:30 AM TO 1:30 PM
DAY: Friday   TOTAL MARKS: 70

Q. 1   **Choose the correct answer.**   [10]

(1) Following instruction transfer the data from memory to microprocessor.
   (A) STAX D   (C) DCX B
   (B) LDAX B   (D) None of above

(2) The address buses of 8085 up contain _____ bus.
   (A) 4   (C) 8
   (B) 32   (D) 64

(3) Following are control signals of 8085 up _____.
   (A) S_0 and S_1 (C) SOD and SID
   (B) $\overline{WR}$ and $\overline{RD}$ (D) None of above

(4) _____ is 16 bit register in 8085.
   (A) Flag   (C) Stack pointer
   (B) Accumulator   (D) None of above

(5) In 8085 up SUB instruction byte size is _____.
   (A) 1 byte   (C) 3 byte
   (B) 2 byte   (D) None of above

(6) The following is the programming techniques of 8085_____
   (A) Retrieving   (C) Looping
   (B) Filtering   (D) None of above

(7) _____ is machine control instruction.
   (A) NOP   (C) RET
   (B) JNC   (D) None of above

(8) The content of accumulator is 55H after execution of CMA instruction it becomes _____.
   (A) 5AH   (C) A5H
   (B) AAH   (D) None of above

(9) Which of the following is 2 byte instruction?
   (A) JMP 2098   (C) MOV B,C
   (B) MVI C,82H   (D) None of above

(10) _____ flag is affected during data transfer operation.
   (A) Carry   (C) Sign
   (B) Zero   (D) Parity

Q.2 **Answer the following.(Attempt Ten)** [20]

   (1) Define Programme and software.

   (2) State the characteristics of logical instruction.

   (3) State different arithmetic instruction related to memory.

   (4) List the pins of interrupt control section of 8085.

   (5) State the different addressing mode of 8085.

   (6) What is the difference between DCX and DCR instruction?

   (7) State the function of ALU.

   (8) Why data bus is bi-directional?

   (9) Define indexing technique of 8085 programming.

  (10) What do you mean by RST instruction?

  (11) State any two byte and 3 byte instruction with illustration.

  (12) Define looping techniques of 8085.

Q.3   Draw the architecture block diagram of 8085 and discuss it. [10]

                                                OR

Q.3 **(A)** Discuss the concept of bus timing with necessary diagram. [05]

     (B) Discuss technique of generating control signal in 8085. [05]

Q.4 **(A)** Describe the method of writing, assembling and executing a program with suitable [07] example.

     (B) Explain SUI instruction with example. [03]

                                                OR

Q.4   Describe the classification of instructions according to word size giving suitable [10] example of each.

Q.5 **(A)** Write a program to load 8BH and 6FH in register C and D respectively. Now [07] increment content of C than add both the number and display it on port 1.

     (B) Register B has 32H and accumulator has 79H. Write instruction to subtract content of [03] B from A, also indicate the flag status of result.

                                                OR

Q.5 **(A)** [05]

     (B) Enlist the different arithmetic and logical instruction with necessary illustration. [05]

         Write a program to load two different number in two different register. Now subtract content of one register from another such that carry flag will set and display the answer on port 1.

Q.6   Discuss different additional data transfer instruction and 16 bit arithmetic instruction [10] with illustration.

                                                OR

Q.6 **(A)** Write a program to load two hex decimal numbers in register D & E respectively now [05] add both the numbers, if the sum is greater than FFH display 01H at out Port 0, otherwise display the sum.

     (B) Explain counting and indexing techniques in 8085. [05]

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