

[73/A-14]

SEAT No. _____

No. of Printed Pages : 2

SARDAR PATEL UNIVERSITY V.V.NAGAR

B.Sc. (VIth SEM.) ELECTRONICS

29th MARCH-2019 EXAMINATION

SUBJECT- 8-BIT MICROPROCESSOR PROGRAMMING AND APPLICATION-II

SUB.CODE-US06CELE03

TIME: 10:00 am to 1:00 pm

MARKS-70

[10]

Q-1 Choose correct answer

1. The decimal equivalent of FC_H is _____.
(A) 252 (C) 225
(B) 253 (D) none of above
2. To design counter and time delay _____ and _____ techniques are used.
(A) Looping, Counting (C) Nesting, Subroutine
(B) Debugging, Indexing (D) none of above
3. If accumulator (A) = 23 H, after execution of ANI F0 H, contain of Accumulator is _____.
(A) 20 H (C) 23 H
(B) 02 H (D) none of above
4. Maximum time delay using single register program is _____.
(A) 1 sec. (C) 1.8 ms
(B) 1.8 sec. (D) none of above
5. RET is _____ instruction.
(A) one byte (C) three byte
(B) two byte (D) none of above
6. To set the carry flag _____ instruction is used.
(A) STC (C) CMC
(B) PCHL (D) none of above
7. Rotate accumulator right instruction is _____.
(A) RAR (C) RLC
(B) RAL (D) none of above
8. A down counter counts in _____ order.
(A) ascending (C) both A and B
(B) descending (D) none of above
9. _____ is one tool for dynamic debugging.
(A) single step (C) multi step
(B) memory examine (D) none of above
10. To make interrupt active _____ instruction used.
(A) EA (C) EI
(B) DI (D) none of above

Q-2 Short answer type question. (any ten)

[20]

1. Write a program to load 4C H in register D, multiply 4C H by 2 using rotate instruction, and specify the result.
2. Briefly explain ASCII code.
3. Define T-state in 8085 μ p.
4. Define counter and time delay.
5. Draw the flow chart of counter and time delay using single register.
6. How many ways we can reset the flip-flops in interrupt process?
7. Briefly explain subroutine.
8. List arithmetic instructions related to memory in 8085 system.
9. Define RAL and RLC instruction.
10. What do you mean by debugging in 8085 μ p?
11. Briefly explain EI and DI.
12. Which instructions are used to stored and retrieves data from STACK

①

(P.T.O.)

Q.3 Fifteen byte of data is stored in memory location starting at XX70. Write a programme to add all the data bytes and save the carry generated in a register. Display the entire sum at any two output ports. [10]

OR

Q.3 Discuss different Rotate and compare instructions with illustration. [10]

Q.4 Write a program to count continuously in hexadecimal from EF H to 00 H in a system with 1 MHz clock frequency. Install 1.5 msec. time delay between each count and display the count at output port. (Take no. Of T-state =15) [10]

OR

Q.4 Discuss different STACK and Subroutine instructions with illustration. [10]

Q.5 A set of 3packed BCD number stored in memory. The seven segment code for digit 0 to 9 is also stored in memory location. Write a main program and two subroutine to unpack BCD number and select an appropriate seven segment code for each digit and stored them in output buffer memory. [10]

OR

Q.5 Write a programme to convert two digit BCD number stored in memory location to its equivalent binary number. [10]

Q.6 A set of Ten pack BCD number is stored in memory location stating at XX50 H. Write a program with subroutine to add all these numbers in BCD if carry is generated save it in register B after adjusting it for BCD and stored the answer in output buffer memory. [10]

OR

Q.6 What is interrupt in 8085 system? Draw interrupt vector diagram and explain it in detail. [10]

*****X*****

2