SEAT No._____ No. of Printed Pages: 02

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SARDARPATEL UNIVERSITY VVNAGAR

B.Sc.(6th SEM.) ELECTRONICS

17th July -2021 EXAMINATION

8-BIT MICROPROCESSOR PROGRAMMING AND APPLICATION-II

SUB.CODE-US06CELE23

TIME:-10:00 am to 12:00 pm **MARKS-70**

Q-1 Choose correct answer [10]

1. HLT is _____ instruction.
   (A) one byte (C) three byte
   (B) two byte (D) none of above
2. _____ is conditional jump instruction.
   (A) JNC (C) JMP 2030
   (B) MOV A,B (D) All of above
3. An up counter counts in _____ order.
   (A) ascending (C) both A and B
   (B) descending (D) none of above
4. If accumulator (A) =39 H, after execution of ANI F0 H, the contain of accumulator is_____.
   (A) 93 H (C) 03 H
   (B) 39 H (D) 30 H
5. Looping and counting techniques are used to design ____ and ____.
   (A) counter ,time delay (C) repeating ,exiting
   (B) nesting ,subroutine (D) debugging, indexing
6. The decimal equivalent of FA_H is _____.
   (A) 250 (C) 235
   (B) 251 (D) 255
7. _____program is used to count event.
   (A) Counter (C) Stacking
   (B) Time delay (D) none of above
8. Rotate accumulator Left instruction is _____.
   (A) RAR (C) RLC
   (B) RAL (D) none of above
9. To set the carry flag _____ instruction is used.
   (A) XTHL (C) CMC
   (B) PCHL (D) STC
10. POP H is _____byte instruction.
    (A) one (C) three
    (B) two (D) four

Q-2 Fill in the blank [08]

1. DAA instruction full name is _____.
2. Down Counter program is used to count in _____ sequence.
3. Maximum time delay using single register program is _____.
4. Out instruction is type of _____ instruction.

(P.T.O.)

True or False

5. TRAP interrupt is Maskable.
6. RST 7.5 has highest priority interrupt signal in 8085 microprocessor.
7. XCHG instruction of 8085 exchanges the content of BC and DE register pair
8. Programme counter is 16-bit register in 8085 microprocessor.

Q-3 Short answer type question. (any ten) [20]

1. Define programme and software.
2. Briefly explain EI and DI.
3. Define T-state in 8085 µp.
4. Explain instructions: LHLD and ADC M
5. Which instructions are used to store and retrieve data from STACK?
6. Briefly explain CALL and RET instruction.
7. Write full name of ASCII code.
8. Write a program to load 9D H in register D, multiply 9D H by 2 using rotate instruction, and specify the result.
9. What do you mean by debugging in 8085 µp?
10. Draw the flow chart of counter and time delay using single register.
11. State different technique of debugging a program.
12. State different pins of interrupt control section of 8085 system.

Q-4 Long answer questions(attempt any 4) [32]

1. Discuss different conditional and non conditional CALL and RETURN instructions with illustrations.
2. Write a program to count from 0 to 9 with 5 msec. time delay. At the count of 9 the counter should reset to zero and repeat the sequence continuously .Take the clock frequency is 1MHz and no. of T-state= 15 .Draw its flowchart also.
3. A set of three packed BCD number stored in memory locations starting at XX50 H. the seven segment code of digit 0 to 9 are stored in memory location starting at XX70 H. write a main programme and two subroutine to unpacked BCD number and select an appropriate seven segment code for each digit. The codes should be stored in the output buffer memory.
4. Write a programme to convert two digit BCD number stored in memory location to its equivalent binary number.
5. A set of five packed BCD number is stored in memory location stating at XX70 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.
   Write second subroutine to unpack the BCD sum and stored them in output buffer memory starting at XX60 H.
6. Draw 8085 up vectored interrupt diagram and discuss it in detail.
7. Describe following advanced instructions of 8085 up
   (a) SHLD (b) ADC R (C) CMC
8. Discuss DAC and ADC concept in microcontroller.

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