

Extra

**V.P & R.P.T.P. SCIENCE, V.V.NAGAR**

Internal Exam

B.Sc. (VI<sup>th</sup> SEM.) INSTRUMENTATION (Voc.)

DATE: 13/03/2019

SUB: US06CINV05

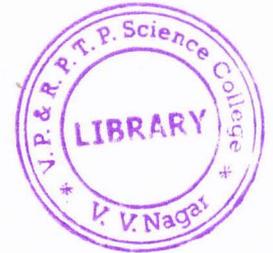
TIME: 10:00 am to 12:00 pm

MARKS-50

**Q-1 Choose correct answer**

[08]

1. The decimal equivalent of FE H is \_\_\_\_ .  
(A) 245 (C) 254  
(B) 255 (D) 155
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) = 93 H, after execution of ANI F0 H, the contain of Accumulator is \_\_\_\_.  
(A) 90 H (C) 99 H  
(B) 09 H (D) none of above
4. Counter program used to \_\_\_\_ .  
(A) Stacking (C) Generate delay  
(B) Masking (D) none of above
5. RST-5 is \_\_\_\_ byte instruction.  
(A) one (C) three  
(B) two (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 left instruction is \_\_\_\_ .  
(A) RAR (C) RLC  
(B) RAL (D) none of above
8. An up counter counts in \_\_\_\_ order.  
(A) ascending (C) desecrate  
(B) descending (D) none of above



**Q-2 Short answer type question. (any five)**

[10]

1. What do you mean counter and time delay?
2. Define T-state in 8085  $\mu$ p.
3. Define debugging in 8085 up.
4. List arithmetic instructions related to memory in 8085 up.
5. Explain LHLD and ADC M instructions.
6. Draw the flow chart of counter and time delay using single register.
7. Briefly explain ASCII code.
8. Write a program to load 4C H in register B, multiply 4C H by 2 using rotate instruction, and specify the result in register D.

Q.3 Discuss different Rotate and compare instructions with illustration. [08]

OR

Q.3 (a) Write a program to load CB H in register A and rotate content of accumulator twice in right direction. Save the result in memory location 20XX H. [04]

Q.3 (b) Discuss different technique of dynamic debugging of a program. [04]

Q.4 Write a program to count continuously in hexadecimal from CF 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) [08]

OR

Q.4 Write a program to generate a continues square wave with period of 500 micro sec. Assume the system clock period is 325 ns and use bit D<sub>0</sub> to output the square wave.(Take no. Of T-state = 11) [08]

Q.5 Write a program to convert a binary number stored in memory location BINBYT to its equivalent unpacked BCD and store the answer in output buffer memory. [08]

OR

Q.5 Write a programme to convert two digit BCD number stored in memory location to its equivalent binary number. [08]

Q.6 A set of eight packed BCD number is stored in memory location starting 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 store the answer in output buffer memory. [08]

OR

Q.6 Discuss different advanced instructions of 8085 system with illustrations. [08]

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