

[A-78]

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SARDAR PATEL UNIVERSITY

T.Y. B.Sc. Electronics

SEM – VI, April 2016

8-Bit microprocessor programming and application -II

SUB CODE: US06CELE03

DATE: 1st April 2016

DAY: Saturday

TIME: 2:30 PM TO 5:30 PM

TOTAL MARKS: 70

Q. 1 Choose the correct answer.

[10]

- (1) RET is _____ instruction.
- (A) One byte (C) Two byte
(B) Three byte (D) Four byte
- (2) Maximum time delay using single register program is _____.
- (A) 1 sec. (C) 1.8 sec
(B) 1.8 μ s (D) None of above
- (3) Rotate accumulator right instruction is _____.
- (A) RLC (C) RAR
(B) RET (D) None of above
- (4) Counter program is used to _____.
- (A) Counting (C) Stacking
(B) Masking (D) None of above
- (5) To design counter and time delays _____ and _____ techniques are used.
- (A) Nesting, subroutine (C) Looping, counting
(B) Debugging, indexing (D) None of above
- (6) If accumulator (A) = 39 H, after execution of ANI F0, the contain of Accumulator is _____.
- (A) 30 H (C) 03 H
(B) 39 H (D) None of above
- (7) To set the carry flag _____ instruction is used.
- (A) PCHL (C) CMC
(B) STC (D) None of above
- (8) _____ is unconditional jump instruction.
- (A) JNZ (C) JNC
(B) JMP 2F0F H (D) None of above
- (9) The decimal equivalent of FD_H is = _____.
- (A) 532 (C) 253
(B) 235 (D) None of above
- (10) A down counter counts in _____ order.
- (A) Ascending (C) Descending
(B) Both A and B (D) None of above

- Q.2 Answer the following.(attempt any ten, each two marks) [20]**
- (1) List arithmetic instruction related to memory in 8085 μ p.
 - (2) What is use of counter and delay in program?
 - (3) Which instructions are used to store and retrieve data from STACK?
 - (4) Define RAR and RRC instruction.
 - (5) What is ASCII code? Explain briefly.
 - (6) What do you mean by debugging?
 - (7) Define T- states in 8085 μ p.
 - (8) What is subroutine? State its instruction.
 - (9) Draw the flow chart of counter and time delay using single register.
 - (10) Write a program to load 4C H in register D, multiply 4C H by 2 using rotate instruction. Specify the result.
 - (11) Explain EI and DI briefly.
 - (12) How many ways we can reset the flip –flops in interrupt process?

- Q.3 (A) Explain rotate instruction in detail. [05]**
(B) Explain compare instruction in detail. [05]

OR

- Q.3 A 15 byte of data are stored in memory location starting at XX60 H. Write a program to add all these data bytes and save the carry generated in a register. Display the sum at output PORTS. [10]**

- Q.4 (A) Explain STACK instruction with illustration. [05]**
(B) Discuss CALL and RETURN instruction. [05]

OR

- Q.4 (A) Write a program to count continuously in hexadecimal from AF_H to 00_H in system with 1 micro second clock period. Setup time delay of 0.8 millisecond between each count. Display the count at output PORT. (Take no. of loop T- state =15) [10]**

- Q.5 Write program to convert a BCD number stored in memory to its equivalent binary number and save the answer in output buffer memory. [10]**

OR

- Q.5 Write program to convert a BINARY number stored in memory to its equivalent unpacked BCD number and save the answer in output buffer memory. [10]**

- Q.6 What do you mean by interrupt in 8085 μ p system? List priority of interrupts and Discuss vectored interrupt in detail. [10]**

OR

- Q.6 A set of ten pack BCD number is stored in memory location starting at XX00 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. [10]**