RAN-0919

S Y B Sc (Semester - 4) Examination

March / April - 2019

Electronics Paper - 4

(Microprocessor - 8085) New Course

સૂચના : / Instructions

નીચે દર્શાવેલ ☛ નિશાનીવાળી વિગતો ઉત્તરવહી પર અવશ્ય લખવી.
Fill up strictly the details of ☛ signs on your answer book

Name of the Examination:

☛ **S Y B Sc (Semester - 4)**

Name of the Subject :

☛ **Electronics Paper - 4 (Microprocessor - 8085) New Course**

Subject Code No.: | 0 | 9 | 1 | 9

Seat No.:

Student's Signature

Instruction:

(1) Q. 1 is compulsory.

(2) Figures at extreme right indicate full marks.

(3) Abbreviations have their usual meanings.

Q. 1   **Answer in brief.**   **[8]**

A) What do you mean by Stack? Differentiate between top of the stack and stack.

B) What is the function of ALE pin in case of 8085A?

C) What is the function of program counter register?

D) What is the bus width of data bus and address bus in case of 8085A? What is the maximum unique memory location that can be accessed in 8085A?

Q. 2   **[14]**

A) Explain the architecture of 8085A microprocessor.

B) Explain the following instructions.

(1) MOV M,r (2) DAA (3) LXI H 2200H, (4) SBB r1, r2
(5) INR r (6) JNC Addr (7) CALL Addr

Q. 2 **[14]**

A) Two BCD numbers are stored at consecutive memory locations X and X+1. Write a program to add these two number and store the result at memory location Y. (Ignore possible overflow)

B) Write a program to subtract two 8-bit numbers and assume that the result is 8-bit only.

Q. 3 **[14]**

A) What do you mean by addressing mode of 8085A? Explain each addressing mode with suitable example.

B) Explain the importance of stack in case of execution of an interrupt instruction.

OR

Q. 3 **[14]**

A) Explain the functional block diagram of PPI 8255 Interface Chip

B) A double precision number (a 16-bit unsigned number) is stored in memory location X and X+1. Another double precision number is stored at memory location Y and Y+1. Write a microprocessor program to compute the sum of the two numbers and store the result at memory location W and W+1. (DO NOT USE DAD Instruction)

Q. 4 **[14]**

A) Draw the functional block diagram of the 8085A and explain the function of each block.

B) Explain Flag Register, in detail.

OR

O.4 **[14]**

A) Explain the functional block diagram of PIT 8253 Interface Chip

B) Write a program to add series of number stored in consecutive memory location and assume that the result can be more than 8-bit.

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