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SARDAR PATEL UNIVERSITY
B.Sc. (Vth SEM.) INSTRUMENTATION(VOC.)
1st NOVEMBER-2018 EXAMINATION
8-BIT MICROPROCESSOR PROGRAMMING AND APPLICATION-1
SUB.CODE-US05CINV05

Q-1   Choose correct answer   [10]

1.   8085 microprocessor has _____.
      (A) 40 pin   (C) 8 pin
      (B) 20 pin   (D) none of above

2.   _____ Flag is affected during data transfer operation.
      (A) Carry   (C) Zero
      (B) Sign   (D) none of above

3.   _____ is the 16-bit register in 8085 μp.
      (A) Temporary register   (C) accumulator
      (B) flag register   (D) none of above

4.   The data buses of 8085 μp contain _____ bit.
      (A) 4   (C) 16
      (B) 8   (D) none of above

5.   _____ is machine control instruction.
      (A) NOP   (C) MOV
      (B) JNC   (D) none of above

6.   Following are control signals in 8085 μp.
      (A) WR and RD   (C) SOD and SID
      (B) AD_0 (D) none of above

7.   JMP is _____ byte instruction.
      (A) One   (C) Three
      (B) Two   (D) none of above

8.   Which of following is one bytes instruction?
      (A) MVI B,0A H   (C) JMP 2001 H
      (B) RRC   (D) none of above

9.   RAR instruction is type of _____ instruction.
      (A) logical   (C) branch
      (B) data transfer   (D) none of above

10.   Out instruction is type of _____ instruction.
      (A) logical   (C) branch
      (B) data transfer   (D) none of above

Q-2   Short answer type question. (any ten)   [20]

1.   Why data bus is bi-directional in 8085 μp?
2.   State characteristics of logical instruction.
3.   Differentiate between DCR and DCX instruction.
4.   Explain NOP instruction.
5.   Define looping and counting technique.
6.   List pins of interrupt control section of 8085 microprocessor.
7.   State meaning of RRC and RLC with illustration.
8.   Explain HLT instruction.
9.   Define programme and software,
10.   Briefly explain function of ALU.
11.   What is flag register? List different type of flag.
12.   State three byte instructions.

Q.3　Draw the architectural block diagram of 8085 µp and discuss function of each section　[10]
　　　of it.

<div align="center">OR</div>

Q.3　Discuss the concept of bus timing and Generating the control signal in 8085 up.　[10]

Q.4(A)　Explain the method of writing, assembling and executing a simple program in 8085 µp.　[07]

Q.4(B)　Differentiate between op-code and operand.　[03]

<div align="center">OR</div>

Q.4　Describe classification of instruction according to operation perform and according to　[10]
　　　word size with suitable illustration.

Q.5(A)　Discuss different Arithmetic instructions with suitable illustration.　[06]

Q.5(B)　State different types of addressing mode of 8085 µp with illustration.　[04]

<div align="center">OR</div>

Q.5(A)　Explain different data transfer instructions with suitable example.　[06]

Q.5(B)　Write a programme to load two numbers in two registers now subtract one number　[04]
　　　from other such that carry flag will set and display the answer at output port.

Q.6　Discuss different additional data transfer instructions and 16-bit arithmetic instructions with　[10]
　　　illustration of each.

<div align="center">OR</div>

Q.6(A)　Discuss method of static and dynamic debugging a programme.　[05]

Q.6(B)　Write a program to load C9 H and 7B H in register B and C respectively. Now add both　[05]
　　　the numbers, if the sum is greater than FF H display 01 at output port 0, otherwise
　　　display the sum.

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