[48] SEAT No._____ No. of Printed Pages : 2

SARDAR PATEL UNIVERSITY

Vallabh Vidyanagar - 388 120

B. Sc. - 5th Semester (Instrumentation)

US05CINS01 (8085 Microprocessor Architecture and Programming -1)

Monday, 11/11/2019, 10:00 am to 01:00 pm

Maximum Marks: 70

Que 1 Objective Type Questions. [10]

1 ____ Pair is used to index the memory location.
- a) HL
- b) BC
- c) DC
- d) All of these

2 Arithmetic and logical operations takes place in ____ register of 8085 microprocessor.
- a) B
- b) C
- c) A
- d) H

3 ____ is not user accessible register.
- a) Flag
- b) Accumulator
- c) B
- d) C

4 The data bus is a group of ____ lines.
- a) 4
- b) 8
- c) 12
- d) 16

5 8085 microprocessor has ____ control signals.
- a) 1
- b) 2
- c) 3
- d) 4

6 ALE stands for ____.
- a) Address latch entire
- b) Address latch enable
- c) Address load enable
- d) Adopt Latch Enabling

7 8085 microprocessor is ____ bit processor.
- a) 8
- b) 16
- c) 32
- d) 64

8 MVI is ____ byte/s instruction.
- a) 1
- b) 2
- c) 3
- d) 4

9 ____ is arithmetic instruction.
- a) ADD
- b) MVI
- c) IN
- d) OUT

10 ____: 3-byte instruction.
- a) ADD
- b) SUB
- c) SUI
- d) LXI

Que 2 Short Questions (Attempt Any Ten) [20]

1 What do you mean by register?
2 Explain function of accumulator register with example.
3 Explain what assembly language is.
4 Draw 8085 microprocessor bus structure.

(P.T.O)

5 Enlist the primary four operations performed by any microprocessor system.
6 Discuss function of data bus of 8085 microprocessor.
7 Explain importance of ALE pin of 8085 microprocessor.
8 What is DMA? Explain with respect to 8085 microprocessor.
9 What is microprocessor? What are its applications?
10 What are different data transfer instructions of 8085 microprocessor? Explain MOV with example.
11 What do you mean by addressing mode?
12 Write a program to load hexadecimal 88_H in register C, and display the number at the output port PORT 5.

Que 3 [A] Give an account of 8085 microprocessor hardware model. [05]
[B] Write note on instruction word size and data format in detail with respect to 8085 microprocessor. [05]

OR

Que 3 [A] Explain 8085 microprocessor instruction set. [05]
[B] Explain 8085 microprocessor programming model. [05]

Que 4 [A] Explain what latch is. [05]
[B] Write a note on peripheral-mapped and memory-mapped I/O. [05]

OR

Que 4 [A] Explain function of encoder and buffer in detail with respect to 8085 microprocessor. [05]
[B] With respect to 8085 microprocessor, discuss decoder and tri-state devices. [05]

Que 5 [A] Write note on latching of low-order address bus (AD_0-AD_7) of 8085 microprocessor. [05]
[B] Explain how to generate read/write control signals for memory and I/O in detail with respect to 8085 microprocessor. [05]

OR

Que 5 [A] Write detailed note on 8085 MPU with necessary diagram. [10]

Que 6 [A] Enlist different logical instructions. Explain any two in detail. [05]
[B] Load $7E_H$ in register D and $F8_H$ in register E. Mask the high-order bits (D_7-D_4) from both the data bytes, exclusive-OR the low-order bits (D_3-D_0), and display the answer at $PORT_{10}$. [05]

OR

Que 6 [A] Write program to load $5B_H$ and $C7_H$ in register D and E, respectively, and add both the numbers. If the sum is greater than CC_H, display FF_H at output PORT 10; otherwise, display the sum. [05]
[B] Load 55_H in register B and 77_H in register C. Mask the low-order bits (D_3-D_0) from both the data bytes, AND the high-order bits (D_7-D_4), and display the answer at $PORT_{20}$. [05]