

C. U. SHAH UNIVERSITY
Winter Examination-2021

Subject Name: Advanced Micro-Processors

Subject Code: 4TE05AMP1

Branch: B.Tech (CE)

Semester: 5

Date: 13/12/2021

Time: 11:00 To 02:00

Marks: 70

Instructions:

- (1) Use of Programmable calculator & any other electronic instrument is prohibited.
- (2) Instructions written on main answer book are strictly to be obeyed.
- (3) Draw neat diagrams and figures (if necessary) at right places.
- (4) Assume suitable data if needed.

Q-1 Attempt the following questions: (14)

- a) Define the term mnemonics.
- b) Define the term instruction.
- c) Define the term microprocessor.
- d) Define the term word.
- e) Why data bus is bidirectional?
- f) The memory address of the last location of a 1KB memory chip is given as FBFF H. Specify the memory map.
- g) If the memory chip size is 2K X 8, how many chips are required to make up 16K bytes of memory?
- h) What is pipelining?
- i) If the SS register contains 3000H and the SP register contains 2400H. What is the physical address?
- j) What are the controlling flags in 8086 μ P?
- k) What is the special use of CX register in 8086 μ P?
- l) Which 8086 registers are used as memory pointer?
- m) What is an instruction queue?
- n) Which group of instructions does not affect flags?

Attempt any four questions from Q-2 to Q-8:

Q-2 Attempt all questions (14)

- a) Draw and explain in brief the internal architecture of 8085 μ P. **07**
- b) How many machine cycles are required to execute STA 3050h instruction? Draw compete timing diagram of it. **07**

Q-3 Attempt all questions (14)

- a) Explain with examples different arithmetic instructions of 8085 μ P. **07**
- b) Write an assembly language programming in 8085 to prove De Morgan's laws. **07**



