

Enrollment No: \_\_\_\_\_ Exam Seat No: \_\_\_\_\_

# C.U.SHAH UNIVERSITY

## Summer Examination-2019

Subject Name: Microprocessor & Its Applications

Subject Code: 4TE04MPA1

Branch: B.Tech (EC)

Semester: 4

Date: 18/04 /2019

Time: 02:30 To 05:30

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 following terms 1. Nibble. 2. Control Bus. 1
  - b) Define the following terms 1. Mnemonics 2. Instruction. 1
  - c) Define the following terms 1. Word. 2. Software. 1
  - d) Draw the diagram flag register of 8085 $\mu$ p. 1
  - e) Draw the hardware model of 8085  $\mu$ P. 1
  - f) Why PC register is 16-bit in 8085  $\mu$ P? 1
  - g) What is the main function of SP register in 8085  $\mu$ P? 1
  - h) Explain in brief Flash memory. 1
  - i) Explain in brief DRAM. 1
  - j) How many address space processed by 8085  $\mu$ P? 1
  - k) How many RAM and ROM we can interface with 8085  $\mu$ P? 1
  - l) If the memory chip size is 2048 x 4 bits, how many data lines are necessary on this chip? 1
  - m) If the memory chips size is 4096 x 8 bits, how many chips are required to make up 64K x 8 bits memory? 1
  - n) The memory address of the last location of a 1Kbyte memory chip is given as 87FF H. State first location of the memory. 1

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

- Q-2 Attempt all questions (14)**
- (a) State different operations performed by  $\mu$ P. Explain in detail  $\mu$ P internal data operations performed by  $\mu$ P. 07
  - (b) Draw and explain in brief 8085  $\mu$ P pin signal diagram. 07
- Q-3 Attempt all questions (14)**
- (a) Explain in brief with diagram for generating individual read and write control signals for memory and I/O in 8085  $\mu$ P. Explain in detail flag register with diagram. 07
  - (b) Draw the chart for memory classification. Explain different types of ROM 07



<b>Q-4</b>	<b>Attempt all questions</b>	<b>(14)</b>
	(a) Draw the timing diagram for the instruction LDA 2050H.	<b>07</b>
	(b) Explain in detail with examples data transfer instruction group	<b>07</b>
<b>Q-5</b>	<b>Attempt all questions</b>	<b>(14)</b>
	(a) Explain in detail with examples logical instruction group	<b>07</b>
	(b) Write an ALP to add two 32-bit numbers. Assume result is more than 32-bit.	<b>07</b>
<b>Q-6</b>	<b>Attempt all questions</b>	<b>(14)</b>
	(a) Explain in brief SIM and RIM instructions.	<b>07</b>
	(b) Write an ALP to find out largest number from the given array of data bytes.	<b>07</b>
<b>Q-7</b>	<b>Attempt all questions</b>	<b>(14)</b>
	(a) Explain in detail successive approximation Analog to Digital converter.	<b>07</b>
	(b) Write short notes on Programmable Peripheral Interface IC 8255A.	<b>07</b>
<b>Q-8</b>	<b>Attempt all questions</b>	<b>(14)</b>
	(a) Write short notes on Programmable keyboard/Display interface IC 8279.	<b>07</b>
	(b) Write short notes on Programmable interval timer IC 8253.	<b>07</b>

