

GUJARAT TECHNOLOGICAL UNIVERSITY**BE - SEMESTER-VI • EXAMINATION – SUMMER 2013****Subject Code: 162002****Date: 27-05-2013****Subject Name: Micro Processors and Micro controllers****Time: 10.30 am - 01.00 pm****Total Marks: 70****Instructions:**

1. Attempt all questions.
2. Make suitable assumptions wherever necessary.
3. Figures to the right indicate full marks.

- Q.1** (a) Draw and explain the simple model of microprocessor based system. **07**
(b) Explain the programming model of 8085 Microprocessor. **07**

- Q.2** (a) Explain the programming model of 8051 Microcontroller **07**
(b) Describe the memory organization of 8051 Microcontroller. **07**

OR

- (b) Explain the PSW register of 8051. **07**

- Q.3** (a) Explain the generation of control signals in 8085 with necessary **07**
Diagrams.
(b) Draw and explain the timing diagram for the execution of the Instruction **07**
STA 8000H in 8085. The memory address is starting from 2050H. indicate
all signals associated with instruction in Timing diagram.

OR

- Q.3** (a) What are the Interrupts in microprocessor? Draw and explain the interrupt **07**
Structure of 8085 microprocessor.
(b) Explain the peripheral mapped Input/output with example. **07**

- Q.4** (a) Write a Program to perform the Multiplication of Two 8 bit Numbers in **07**
8085.
(b) Write a Program to find the largest number in an array of data using 8085 **07**
instruction set.

OR

- Q.4** (a) Explain the TCON register in 8051 with example. **07**
Q.4 (b) Describe the Addressing modes in the 8051 microcontroller. **07**

- Q.5** (a) Write a program to perform the subtraction of two 16 bit numbers in **07**
8051.
(b) Write a program to find average of 10 numbers using 8051 instruction set. **07**

OR

- Q.5** (a) Explain the port structure in 8051. **07**
(b) Enumerate the various types of JUMP instruction in 8051 according to **07**
range.
