

GUJARAT TECHNOLOGICAL UNIVERSITY
BE - SEMESTER– IV(NEW) EXAMINATION – SUMMER 2023

Subject Code:2141001**Date:11-07-2023****Subject Name:Microprocessor and Interfacing****Time:10:30 AM TO 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.
4. Simple and non-programmable scientific calculators are allowed.

- Q.1 (a)** Describe following pins of 8085. **07**
(1) RESET IN (2) HOLD (3) HLDA (4) READY
(5) ALE (6) IO/M' (7) TRAP
- (b)** Describe following instructions with example and suitable data:
(1) LXI (2) LDAX (3) ANA (4) ORI
(5) DAA (6) DAD (7) INX
- Q.2 (a)** Describe each addressing modes of 8085 with two examples each. **07**
(b) Describe programming model of 8085. Describe Flag register of 8085. **07**
OR
- (b)** Sketch block diagram of 8085. **07**
- Q.3 (a)** (1) Sketch and describe de-multiplexing of address and data bus **04**
(2) Sketch and describe control-signal generation using 3-to-8 line decoder **03**
(b) Sketch and Explain timing diagram of LDA 3000H instruction. **07**
OR
- Q.3 (a)** (1) Write assembly language program to transfer 100 bytes from source location 2000H to destination location 3000H **04**
(2) Write assembly language program to add 10 numbers stored at location 2000H. Store result at 3000H (LSB) and 3001H(MSB) **03**
(b) Sketch and Explain timing diagram of MOV A, B instruction. **07**
- Q.4 (a)** Develop 8085 based system to interface 16KB of Flash memory and 16KB of RAM. Write starting and ending location for both memories. Sketch neat diagram. **07**
(b) Describe internal architecture of 8086 microprocessor. **07**
OR
- Q.4 (a)** Develop 8085 based system to interface 8-switches at port-77H. Sketch neat diagram. **07**
(b) Describe 8253 timer IC and its modes. **07**
- Q.5 (a)** Describe memory mapped IO and IO mapped IO **07**
(b) Sketch and describe 8259 IC. **07**
OR
- Q.5 (a)** Describe PUSH and POP instruction with example. **07**
(b) Describe various control word format of PPI IC 8255. **07**
