

GUJARAT TECHNOLOGICAL UNIVERSITY

BE - SEMESTER-IV (OLD) EXAMINATION – WINTER 2018

Subject Code:140701

Date: 28/11/2018

Subject Name: Microprocessor And Interfacing

Time: 02:30 PM TO 05:00 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) i. Distinguish between assembly language and high level languages. **04**
ii. Explain flag register in 8085. **03**
(b) i. Explain functioning of following pins of 8085. **04**
(i) ALE (ii) READY (iii) INTR (iv) HOLD.
ii. The memory map of 8K byte memory chip begins at the location 8000 H. **03**
Specify the address of the last location on the chip.
- Q.2** (a) Compare memory mapped I/O with I/O mapped I/O. **07**
(b) Explain execution of instruction LDA 3000H with timing diagram. **07**
OR
(b) Explain execution of instruction OUT F0H with timing diagram. **07**
- Q.3** (a) What is stack and stack pointer? Explain working of PUSH and POP instructions with suitable example. **07**
(b) What do we mean by Addressing Modes? Explain, giving suitable example, all the addressing modes supported by 8085. **07**
OR
- Q.3** (a) Write a program to generate delay of 50 msec. Make necessary assumptions and mention it clearly. **07**
(b) Explain following instructions of 8085. **07**
(i) LDA and LDAX (ii) RAL and RLC (iii) DAA
- Q.4** (a) Data block of ten data bytes is stored in memory starting from locations 2000H. Write a program to count even numbers in this data block. Store the result in memory location 3000H. **07**
(b) List various vectored interrupts in 8085. Give their vectored locations, triggering methods and priority. **07**
OR
- Q.4** (a) A binary number is stored in memory location 2000H. Write a program to convert it into equivalent unpacked BCD representation. Store result in consecutive memory locations starting from 3000H with most significant digit stored first. **07**
(b) Explain the function of RIM and SIM instructions in 8085. **07**
- Q.5** (a) Draw and explain block diagram of 8255. **07**
(b) With neat diagram discuss working of IC 8259A -Programmable interrupt controller. **07**
OR
- Q.5** (a) Explain with block diagram function of 8254 programmable interval timer. **07**
(b) What is direct memory transfer? Explain 8257 DMA controller with block diagram. **07**
