

Seat No.: _____

Enrolment No. _____

GUJARAT TECHNOLOGICAL UNIVERSITY

BE - SEMESTER-V (NEW) - EXAMINATION – SUMMER 2018

Subject Code:2150707

Date:30/04/2018

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.

		MARKS
Q.1	(a) Answer the following questions: (1) How many machine cycles are executed by 8085 microprocessor? List down it. (2) How many flags are available in 8085 microprocessor? List down each. (3) List down various segment registers of 8086 microprocessor.	03
	(b) Differentiate: (1) higher level language and low level language (2) hardware and software interrupt	04
	(c) Draw and explain the internal block diagram of 8085 microprocessor.	07
Q.2	(a) What are the addressing capacity of 8085 microprocessor and 8086 microprocessor?	03
	(b) Write an 8085 program to add two 16-bit nos stored in memory locations 2100H and 2200H respectively.	04
	(c) Explain 8085 data transfer instructions with suitable examples.	07
	OR	
	(c) Explain 8085 branch instructions with suitable examples.	07
Q.3	(a) How many flags are available in an 8086 microprocessor? How the parity flag (PF) is used by 8086 microprocessor?	03
	(b) Explain stack and subroutine with suitable example.	04
	(c) Explain various addressing modes of 8085 microprocessor.	07
	OR	
Q.3	(a) How many I/O modes are available in 8255A programmable peripheral interface? List and explain them in short.	03
	(b) Differentiate 8085 microprocessor with 8086 microprocessor.	04
	(c) Explain programmable interrupt controller 8259A in detail.	07
Q.4	(a) Draw timing diagram for an arithmetic instruction: MOVE A, B.	03
	(b) Write an assembly language program to find the factorial of a number from 0 to 10.	04
	(c) Draw and explain the architecture of Pentium processor.	07
	OR	
Q.4	(a) What are the main features of ARM processor? List down each.	03
	(b) How the physical addresses are calculated from segment register in 8086 microprocessor?	04
	(c) Draw and explain internal architecture diagram of 8086 microprocessor.	07
Q.5	(a) What is page table? How it works?	03
	(b) Explain arithmetic instruction of SUN SPARC with example.	04
	(c) Differentiate 80286 with 80386 microprocessor.	07

OR

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|------------|------------|---|-----------|
| Q.5 | (a) | What is a descriptor table? What is it's main usage? | 03 |
| | (b) | Explain branch instruction of SUN SPARC with example. | 04 |
| | (c) | Draw and explain SUN SPARC microprocessor architecture in detail. | 07 |
