

Student Exam No:- _____

GANPAT UNIVERSITY
B.TECH SEM-V (ELECTRICAL)
REGULAR EXAMINATION DEC-2013
2EE501:-FUNDAMENTAL OF MICROPROCESSORS

Time: 3 Hours

Total Marks:-70

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

SECTION-I

- Que-1 (A) Explain control word format and different modes of 8255. [7]
(B) How SIM instruction interprets the Accumulator? [5]

OR

- Que-1 (A) What are interrupts? List and explain the interrupt available in microprocessor 8085? [7]
(B) How RIM instruction interprets the Accumulator? [5]

- Que-2 (A) Write a subroutine to design a delay of 500 ms, assume the clock frequency of 2MHz. [6]
(B) Explain digital to analog converter with circuit diagram. Explain its working. [5]

OR

- Que-2 (A) Write a program for 8085 to generate a square wave with period of 400 μ s. Use bit D₀ of port 01 to output the square wave. The system clock period is 325ns. [7]
(B) When following program is executed what will be the following contents? [4]

Label	Mnemonics	A	B	C	CY	Z
	MVI B,55H	?	?	?	?	?
	MVI C,AAH	?	?	?	?	?
	MOV A,B	?	?	?	?	?
	RLC	?	?	?	?	?
	RLC	?	?	?	?	?
	ADD C	?	?	?	?	?
	HLT	?	?	?	?	?

- Que-3 **Attempt any two** [12]
(A) Write a short note on Programmable Interrupt Controller 8259.
(B) What is stack and stack pointer? Explain working of PUSH and POP instruction with suitable example.
(C) Explain the following instructions of microprocessor 8085 (i) SHLD (ii) DAA (iii) DAD

SECTION-II

- Que-4 (A) With neat diagram explain the ADC interface to microprocessor. [7]
(B) Write an 8085 assembly language program to find the smallest value [5]
between two number in memory location 2800H and 2801. Store the
value in memory location 3000H.

OR

- Que-4 (A) A set of ten BCD numbers are stored in memory locations starting from [7]
2500H. Write an ALP to convert each BCD number to binary hex
number and store the result in memory locations starting from address
4000H

(B) Describe the control word format for 8254 programmable timer/counter. [5]

- Que-5 (A) Explain with diagram the need to demultiplex the bus AD_7-AD_0 . [6]
(B) Explain the timing diagram of the opcode fetch cycle. [5]

OR

- Que-5 (A) Draw pin diagram of 8086 microprocessor and explain the function of [6]
following pin NMI, INTR, TEST, READY and RQ/GT_0

(B) Draw the bus structure of 8085 and explain the importance of each bus [5]

- Que-6 Answer the following. (Any three) [12]

- (A) Give Difference between 8085 and 8086 microprocessor
(B) How different read and write control signal are generated
(C) Write a short note on Memory Classification
(D) Explain the function of each flag of 8086 microprocessor.

END OF PAPER

Best of Luck