Seat No.: _____ Enrolment No._____

GUJARAT TECHNOLOGICAL UNIVERSITY

BE- Vth SEMESTER–EXAMINATION – MAY/JUNE - 2012

Subject code: 150701 **Date: 01/06/2012**

Subject Name: Advance Processors

Time: 02:30 pm – 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)** Answer the following questions in brief. **06**

1. How does 8086 identify whether an instruction is 8-bit or 16-bit? Give an example.
2. Why do 8086 need to flush the prefetch queue when jump instruction comes?
3. Give the use of segment override prefix.

(b) Explain the following. **08**

1. 8086 flag register
2. MUL instruction

Q.2 **(a)** Write an 8086 program to add only even numbers from the block of ten 16-bit numbers defined as NUM_BLOCK. Store your answer in DS as ANS. **07**

(b) What are repeat prefixes? List and explain them with suitable examples. **07**

OR

(b) List and explain the various loop instructions with examples. **07**

Q.3 **(a)** Write an 8086 program to count the length of a given string. **07**

(b) What do you mean by assembler directives? Explain the following directives with example. **07**

ASSUME, PTR, OFFSET

OR

Q.3 **(a)** What is subroutine? Explain it with appropriate example. **07**

(b) Show the use of vector table to determine the address of ISR with proper example. **07**

Q.4 **(a)** Give and explain the architecture of SUN SPARC processor. **07**

(b) Give the format of 80386 descriptor and describe the meaning of each field. **07**

OR

Q.4 **(a)** Explain the architectural features of core-2-duo Pentium processor. **07**

(b) Describe the control registers of 80386 with proper meaning of each field. **07**

Q.5 **(a)** Explain the basic concepts of 80386 paging system. **07**

(b) What is GDT? Show its use with example. **07**

OR

Q.5 **(a)** Explain the context switching with suitable diagrams. **07**

(b) Explain the concepts of Call gates with suitable example. **07**

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