

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**
