

Seat No.: _____

Enrolment No. _____

GUJARAT TECHNOLOGICAL UNIVERSITY

BE - SEMESTER-V EXAMINATION – WINTER 2015

Subject Code: 150701

Date: 15/12/2015

Subject Name: Advance Processors

Time: 10:30am to 1:00pm

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) Draw and write a brief note on 8086 architecture. **07**
(b) Explain various addressing modes supported by 8086. **07**
- Q.2** (a) Write a note on 8086 in maximum mode. **07**
(b) Write an assembly language program in 8086 that defines a string and counts the occurrence of a given character in the string. **07**
- OR**
- (b) Write an assembly language program in 8086 that evaluates $1! + 2! + 3! + \dots + n!$ for a given n where factorial is calculated by a near procedure. **07**
- Q.3** (a) Explain the instructions : 1. LEA 2010H 2. DIV BX 3. XLAT **06**
(b) What is the difference bet Near and Far procedures? Explain the parameter passing methods with example. **08**
- OR**
- Q.3** (a) Explain the assembly directives : 1. ASSUME 2. ORG 3. EXTRN **06**
(b) What is an Interrupt? Explain which interrupts are supported by 8086 along with the priorities, interrupt vector table and steps to execute an Interrupt service routine. **08**
- Q.4** (a) What is Segment Descriptor? Explain the format of segment descriptors. **07**
(b) Explain the basic concept of 80386 paging system. **07**
- OR**
- Q.4** (a) Write a brief note on Virtual 8086 Mode. **07**
(b) Explain Pentium Processor Architecture. **07**
- Q.5** (a) Explain the architecture of SUN SPARC processor. **07**
(b) Discuss features of RISC and CISC and differentiate them. What is Register Window? **07**
- OR**
- Q.5** (a) Explain Task State Segment (TSS) and Task Register (TR) in 80386. Also explain various ways of task switching. **07**
(b) Discuss new features of 80486 compared to 80386. Also explain its functional units. **07**
