

**GUJARAT TECHNOLOGICAL UNIVERSITY****BE - SEMESTER-V (Old) EXAMINATION – WINTER 2019****Subject Code: 150701****Date: 29/11/2019****Subject Name: Advance Processors****Time: 10:30 AM TO 01:00 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) Draw and explain 8086 internal block diagram. **07**  
(b) Explain different types of registers in 8086 microprocessor architecture. **07**
- Q.2** (a) Explain the concept of Segmentation in 8086 with its advantages. **07**  
(b) Write 8086 program to find factorial of number. **07**
- OR**
- (b) Explain 8086 interrupt vector table. **07**
- Q.3** (a) Explain the following instructions: **07**  
1) LDS 2) PUSHF 3) DAA 4) CBW 5) SAR 6) RCR 7) RET  
(b) Explain the assembly directives: 1. ASSUME 2. ORG 3. EXTRN **07**
- OR**
- Q.3** (a) Draw and explain pin diagram of 80286 microprocessor. Also explain 80286 protected-mode operations. **07**  
(b) What is descriptor? Explain LDT and GDT in details. **07**
- Q.4** (a) Explain the flag register format of 80286 with suitable figure. **07**  
(b) Explain the addressing modes of 80386 with examples. **07**
- OR**
- Q.4** (a) Explain the MMX and Hyper Threading. **07**  
(b) Discuss new features of 80486 compared to 80386. Also explain its functional units. **07**
- Q.5** (a) Describe Reentrant and Recursive procedures. **07**  
(b) Draw and explain SUN SPARC processor. **07**
- OR**
- Q.5** (a) Differentiate the RISC architecture and CISC architecture. **07**  
(b) What is macro? How can you define and call macros? Give an example of macro with parameter. **07**