Enrolment No. Seat No.: **GUJARAT TECHNOLOGICAL UNIVERSITY** BE - SEMESTER-V • EXAMINATION - WINTER • 2014 Date: 26-11-2014 Subject Code: 150701 **Subject Name: Advanced Processors Total Marks: 70** Time: 10.30 am - 01.00 pm **Instructions:** 1. Attempt all questions. 2. Make suitable assumptions wherever necessary. 3. Figures to the right indicate full marks. (a) Draw and explain the 8086 microprocessor architecture. Q.1 07 (b) Explain the concept of segmented memory? What are its advantages? 07 **Q.2** 1) Differentiate between microprocessor and microcontroller. (a) 07 2) What is an instruction queue? Explain in details. (b) Explain the following instructions: 07 2) PUSHF 3) DAA 4) CBW 5) SAR 6) RCR 7) RET 1) LDS OR 1) The original contents of AX, BL, word-sized memory location SUM, and 04 carry flag CF are 1234H, ABH, 00CDH, and 0H, respectively. Describe the results of executing the following sequence of instructions: ADD AX, [SUM] ADC BL, 05H INC WORD PTR [SUM] 2) Compare the minimum and maximum modes of the 8086 microprocessor. 03 Q.3 (a) Write an 8086 assembly program to find largest of two 8-bit numbers. **07** (b) Explain different types of registers in 8086 microprocessor architecture. 07 Q.3 (a) Write an 8086 assembly program to sum of series of 8-bit numbers. 07 (b) Explain the flag register format of 80286 with suitable figure. 07 **Q.4** (a) Draw and explain the internal block diagram of 80286 microprocessor. 07 (b) Explain the 80386 microprocessor register set. 07 **Q.4** (a) Draw and explain the internal block diagram of 80486 microprocessor. 07 (b) Explain the addressing modes of 80386 with examples. 07 Q.5 (a) Explain the MMX and Hyper Threading. 07 (b) What is descriptor table? What is its use? Dedifferentiate between GDT and 07 LDT. OR Q.5 (a) Give and explain the architecture of SUN SPARC processor. **07** (b) Differentiate the RISC architecture and CISC architecture. 07
