

GUJARAT TECHNOLOGICAL UNIVERSITY**BE - SEMESTER-VIII • EXAMINATION – WINTER • 2014****Subject Code: 181104****Date: 29-11-2014****Subject Name: Advanced Microprocessors****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) (i) What is the main difference between 8086 and 8088 microprocessors? **02**
(ii) What do you mean by the term assembler directives? **02**
(iii) What are the advantages of segmentation in 8086? **03**
(b) Explain following instructions. **07**
(i) LOCK (ii) JNS (iii) XLAT (iv) STI
- Q.2** (a) In how many functional groups we can divide the 8086 instructions? List each functional group with one example of each. **07**
(b) Short note on 8086 memory banks. **07**
- OR**
- (b) Explain block diagram of clock generator 8284. **07**
- Q.3** (a) Explain the function of following pins of 8086. (i) Ready (ii) INTR **07**
(iii) S3 and S4 (iv) NMI (v) RESET (vi) HLDA (vii) QS₁ and QS₀
(b) Develop assembly language program that uses the REPEAT-UNTIL construct to copy the contents of byte sized memory Block-A into byte sized memory Block-B until a 00H is moved. **07**
- OR**
- Q.3** (a) (i) Reentrant and recursive procedure. **07**
(ii) Short note on macro.
(b) Write assembly language program to find minimum number from TEN bytes of array. **07**
- Q.4** (a) Describe the interrupts and interrupt response of an 8086 family processor. **07**
(b) Write assembly language program to convert given string from uppercase to lowercase. **07**
- OR**
- Q.4** (a) Discuss 8086 loop instructions and how they are useful to generate delay? **07**
(b) Write assembly language program to find number of ones in given byte. **07**
- Q.5** (a) (i) Contrast the Pentium with the Pentium Pro Microprocessor. **07**
(ii) List the special features of Pentium processors.
(b) Write short note on 80486 Microprocessor. **07**
- OR**
- Q.5** (a) Explain Memory Management in 80386 Microprocessor. **07**
(b) Explain basic block diagram of 80186. **07**
