

**GUJARAT TECHNOLOGICAL UNIVERSITY****BE - SEMESTER-VI • EXAMINATION – SUMMER 2013****Subject Code: 160805****Date: 30-05-2013****Subject Name: Advance Microprocessor****Time: 10.30 am - 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) Explain the Internal Architecture of 8086 Microprocessor. **07**  
 (b) What determine whether a microprocessor is considered an 8-bit, 16-bit, or a 32-bit device? Write the differences of 8085 and 8086 microprocessor. **07**
- Q.2** (a) Explain concept of pipelining and its advantages. **07**  
 (b) Explain Minimum Modes of 8086 microprocessor. **07**
- OR**
- (b) Explain Maximum Modes of 8086 microprocessor. **07**
- Q.3** (a) Describe the sequence of signals that occurs on the address bus, control bus and the data bus when a simple microcomputer fetches an instruction. **07**  
 (b) Explain memory interfacing with 8086 microprocessor. **07**
- OR**
- Q.3** (a) Explain register, immediate & direct addressing mode of 8086 microprocessor with example. **07**  
 (b) Briefly describe memory bank of 8086 Microprocessor. **07**
- Q.4** (a) Describe the following assembler directive **07**  
       (i) ASSUME (ii) DD (iii) EQU (iv) DUP (v) ORG  
 (b) Describe the following instruction of 8086 Microprocessor. **07**  
       (i) CBW (ii) LOOP (iii) TEST (iv) IMUL (v) SHR AL,3
- OR**
- Q.4** (a) Write a program that square any number from 00 to FFh placed in AL and place the answer in AX. **07**  
 (b) Write a program to transfer block data from one memory location to another memory location. (With and without Overlapping). **07**
- Q.5** (a) Compare Assembler Macros with Procedures. **07**  
 (b) What is the Coprocessor?. Write applications of coprocessor and explain math processor in brief. **07**
- OR**
- Q.5** (a) Describe the type-3 and type-4 interrupt. **07**  
 (b) What is the Multiprocessing System? Write Applications of Multiprocessing system. **07**

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