

## GUJARAT TECHNOLOGICAL UNIVERSITY

**BE - SEMESTER-VI(OLD) • EXAMINATION – WINTER 2017**

**Subject Code:160805**
**Date: 08/11/2017**
**Subject Name: Advance Microprocessor**
**Time:02.30 PM TO 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.

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|------------|--|-----------|
| <b>Q.1</b> | (a) Explain BIU (Bus Interface Unit) & EU (Execution Unit) of 8086 in details  | <b>07</b> |
|            | (b) Explain interfacing of 8086 microprocessor with co-processor.  | <b>07</b> |
| <b>Q.2</b> | (a) Describe different addressing modes of 8086 Microprocessor with example.   | <b>07</b> |
|            | (b) Explain variable, suffix & operators in brief.   | <b>07</b> |
|            | <b>OR</b>  |           |
|            | (b) Explain concept of pipelining and its advantages of 8086.  | <b>07</b> |
| <b>Q.3</b> | (a) Explain the following Assembler directives of 8086 Microprocessor.<br>EQU, DW, ENDP, EXTRN, ENDS, ASSUME, EVEN   | <b>07</b> |
|            | (b) What is MACRO? How it differs from Procedure? Explain use of macro with one simple program.  | <b>07</b> |
|            | <b>OR</b>  |           |
| <b>Q.3</b> | (a) Describe the following instruction of 8086 Microprocessor.<br>LAHF, XLAT, AAA, ROL, DAA, BTC, IN   | <b>07</b> |
|            | (b) What is the Multiprocessing System? Write Applications of Multiprocessing system.  | <b>07</b> |
| <b>Q.4</b> | (a) Write a program to add a profit factor to each element in the cost array & put the result in a prices array, where profit factor is 15h & cost = 10h, 12h, 23h, 40h. | <b>07</b> |
|            | (b) Describe Memory mapped I/O and Direct I/O. Give the main advantage and disadvantage of each.   | <b>07</b> |
|            | <b>OR</b>  |           |
| <b>Q.4</b> | (a) Write a program to find out the number is even or odd from given series of numbers.  | <b>07</b> |
|            | (b) Explain the Rules & Advantages for memory segmentation.  | <b>07</b> |
| <b>Q.5</b> | (a) Explain internal interrupt of 8086.  | <b>07</b> |
|            | (b) Explain typical configuration of 8086 Microprocessor Minimum mode.   | <b>07</b> |
|            | <b>OR</b>  |           |
| <b>Q.5</b> | (a) Explain BIOS routines.   | <b>07</b> |
|            | (b) Write down the difference between 8085 & 8086.   | <b>07</b> |

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