Roll No. ..... Total Pages : 03

BT-7/D-14 **8714**

ADVANCED MICROPROCESSORS

ECE-423-E

Time : Three Hours] [Maximum Marks : 100

Note : Attempt *Five* questions in all, selecting at least *one* question from each Unit. All questions carry equal marks. Assume missing data, if any.

Unit I

1. (a) Discuss the addressing modes of 8086 with two examples for each mode.
   (b) Explain interfacing of memory with 8086. **10+10**

2. Explain the operation of 80386 in protected mode. **20**

Unit II

3. Discuss the differences between 8086, 80186, 80286 and 80386. What improvements have been made in 80486 and Pentium ? What do you understand by superscalar architecture ? **20**

4. (a) Discuss the instruction format of 8086.
   (b) Draw and explain the internal block diagram of 80386. **10+10**

Unit III

5. (a) Draw and explain internal block diagram of 80287.
   (b) Discuss the status and control word of 80287. **10+10**

6. (a) What are the data types supported by 80287 ? Explain.
   (b) What are the functions of the following pins of 80287 ?
   (i) CMD_0 and CMD_1
   (ii) ERROR
   (iii) BUSY
   (iv) PEREQ
   (v) $\overline{PEACK}$
   (vi) CKM

(c) Discuss any *two* of the instruction formats of 80287. 8+6+6

Unit IV

7. (a) Discuss the register set of 80387.

   (b) Draw and discuss the architecture of 80387. 10+10

8. Write short notes on any *two* of the following :

   (a) Differences between 80387 and 80487

   (b) Registers in 80487

   (c) Assembler Directives. 10+10