C 31887

FOURTH SEMESTER B.TECH. (ENGINEERING) DEGREE EXAMINATION JUNE 2007

EC/AI 2K 405—MICROPROCESSORS AND MICROCONTROLLERS

Time : Three Hours   Maximum : 100 Marks

Answer **all** *questions.*

I. (a) What are pseudo instructions ? What for they are used ?

   (b) Name the flag bits of 8086 and explain their use.

   (c) What is meant by Bit Set Rest (BSR) operation with respect to 8255 PPI Clip ? Explain.

   (d) List and explain different modes of operation of 8253 Timer IC.

   (e) Explain the function of the following pins of 80386 ADS, READY, LOCK, HOLD, ERROR.

   (f) Give the format of 80386 descriptor.

   (g) Explain the following with reference to 80196 microcontroller :

      (i) H windows.

      (ii) High speed inputs and outputs.

   (h) Discuss about the data types supported by 80196.

                                                     (8 × 5 = 40 marks)

II. (a) List and explain with example the different addressing modes supported by 8086 instruction set.

Or

   (b) Discuss about the interrupt structure of 8086.

III. (a) Draw the block diagram of 8257 DMA controller and explain the function of each block.

Or

   (b) Explain how 8259 respond to an interrupt request.

IV. (a) With the help of diagram explain how 80386 addresses a memory segment in the protected mole ?

Or

   (b) Explain about branch prediction logic and the special registers of pentium.

V. (a) Draw the block diagram of 80196 RALU and memory controller block and explain.

Or

   (b) (i) Draw the memory map of 80196 microcontroller.   (6 marks)

      (ii) List the various addressing modes supported by 80196 and explain with example.

                                                (9 marks)

                                               [4 × 15 = 60 marks]