[07 – 3110]

III/IV B.Tech. DEGREE EXAMINATION.

First Semester

Computer Science and Engineering

MICROPROCESSORS – II

(Common with Dual Degree Programme in S.E. and I.T.)

(Effective from the admitted batch of 2006–2007)

Time : Three hours Maximum : 70 marks

First question is compulsory.

Answer any FOUR from the remaining.

All questions carry equal marks.

Answer all parts of any question at one place.

1. (a) Explain in detail about SRAM.

   (b) Explain the interrupted I/O data transfer scheme.

   (c) State the necessity of flags in a Microprocessor.

(d) Why the Program Counter and Stack pointer are of 16 bit registers in 8085 Microprocessor.

(e) Explain the timers / counters of 8051.

(f) Explain D/A conversion methods.

(g) What are Pentium processors?

2. (a) With a neat sketch explain the internal organization of SRAM chip. List out the input and output pins.

(b) Draw the basic cell structure of EPROM and explain the principles of operation.

3. (a) Describe the operation of 8279 with neat block diagram.

(b) Explain the control words of 8255.

4. (a) Write an ALP in 8086 to generate a symmetrical square wave form with 1 KHz frequency. Give the necessary steps with a DAC.

(b) Explain how an ADC can be interfaced to a Microprocessor.

5. (a) Explain in detail about the interrupt structure of 8051.

(b) Explain the following terms SCON, TCON, TMOD and PSW.

6. (a) Explain the special purpose registers of 8051 microcontroller.

(b) Explain the need for DMA in microprocessor based systems.

7. (a) Explain the programmed I/O and interrupt driven I/O in detail.

(b) Explain different methods of interfacing I/O devices in detail.

8. (a) Differentiate between DOS and BIOS function calls.

(b) Write an ALP to read the data 'HELLO HOW ARE YOU" from the computer screen using DOS functions.