[07 – 2218]

II/IV B.Tech. DEGREE EXAMINATION.

Second Semester

Computer Science and Engineering

MICROPROCESSORS – I

(Common with Information Technology)

(w.e.f. admitted batch of 2007–2008)

Time : Three hours Maximum : 70 marks

First question is compulsory.

Answer any FOUR from the remaining questions.

All questions carry equal marks.

1. (a) What is the software interrupt?
   (b) What is latch?
   (c) Explain about Loop instruction.
   (d) What is the Segmentation?
   (e) How to exit from the HALT state?
   (f) Write a short note on machine cycles of 8085?
   (g) What are the programmable registers?

2. (a) Explain various data formats supported by 8085.

   (b) Explain various addressing modes of 8085.

3. Explain BCD to binary code conversion technique and write 8085 assembly language program for the same.

4. What are vector interrupts? Explain in detail about vector interrupts of 8085?

5. Draw and explain the block diagram of microprocessor for maximum and minimum mode of operation with a neat timing diagram.

6. (a) Explain the functions of $\overline{DEN}$, ALE, $\overline{TEST}$, $\overline{LOCK}$ and $MN/\overline{MX}$ pins.

   (b) Write an assembly language program for arranging numbers in Ascending order.

7. (a) Draw the register organization of 8086 and explain typical application of each register.

   (b) Give the various branch instructions of 8086 that are useful for relocation.

8. Draw the complete block diagram of 8086 architecture and explain.
