

II B.Tech II Semester Supplementary Examinations, April/May 2005
COMPUTER ORGANISATION
(Common to Computer Science & Engineering, Information Technology,
Computer Science & Systems Engineering and Electronics & Computer
Engineering)

Time: 3 hours

Max Marks: 80

Answer any FIVE Questions
All Questions carry equal marks

1. (a) Describe an instruction execution using a state diagram.
(b) Describe a program of flow of control without and with interrupts.
2. (a) Explain the steps involved in instruction execution using a state diagram
(b) Compare Zero-, One-, Two-, and Three-address machines by writing a low level program to compute $(A + B)/(D * C - E * F)$ for each of the 4 machines.
3. (a) Explain the following instructions with respect to function, T-states, machine cycles, and addressing mode:
 - i. XCHG.
 - ii. SIM
 - iii. OUT port address.
 - iv. POP rp
(b) Write a program for 8085 processor to Pick up maximum among a set of n numbers stored in memory.
(c) Which instruction uses AC flag in 8085 ? Can the programmer be allowed to manipulate this flag ?
4. (a) Clearly distinguish between
 - i. Packed/Unpacked microinstructions
 - ii. Hard/Soft microprogramming
(b) List and briefly explain applications of microprogramming.
5. (a) Compare SRAM with DRAM
(b) Why are multilevel memories used in a computer system ?
6. Write short notes on the following page replacement schemes
 - (a) First in first out (FIFO)
 - (b) Least Recently used (LRU)
7. (a) Describe an asynchronous data transfer using strobe control with the help of timing diagram.
(b) Describe any two methods of I/O addressing.

8. (a) Describe the centralized and distributed bus arbitration schemes.
(b) Discuss the need of interface circuits

★ ★ ★ ★ ★