

**III B.Tech I Semester Supplementary Examinations, May 2005**  
**MICROPROCESSORS AND MICRO-CONTROLLERS**  
**(Electronics & Computer Engineering)**

**Time: 3 hours**

**Max Marks: 80**

**Answer any FIVE Questions**  
**All Questions carry equal marks**

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1. (a) Draw the internal architecture of 8085? Explain about each block in it.  
(b) List out the assembler directives of 8086? And explain them?
2. (a) Discuss about descriptors supported by 80386.  
(b) Draw and discuss the paging mechanism of 80386.
3. (a) Explain the following instructions of MC 68000
  - i. BFCHG
  - ii. BSR
  - iii. CAS2
  - iv. FBCC
  - v. SUBA  
(b) Explain how different data sizes are handled in MC 68000? Explain.  
(c) How many address spaces does 68000 provide and how I/O devices are addressed?
4. What are the basic properties of a RISC processor? Discuss the properties that are necessary to reduced instruction set computers in the present day context?
5. (a) What do you understand by Super scalar architecture?  
(b) Bring out the architectural differences between Pentium and Pentium Pro microprocessors.
6. (a) Explain the various stages involved in the development of Pentium based systems?  
(b) Explain the use of in circuit emulator in a development system? Discuss ICE for Pentium based system development?
7. (a) Determine whether the 8051 can be made to execute a single program instruction using external circuitry only without the help of software?  
(b) Outline a scheme for single stepping the 8051 using a combination of hardware and software?
8. (a) Explain the terms:
  - i. Baud rate in the 8051
  - ii. SCON register

- (b) List out the steps involved in programming the 8051 to transfer data serially.

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