Code No: OR310455 **OR**

III B.Tech I Semester Supplementary Examinations, April/May 2005
COMPUTER ORGANIZATION
(Common to Electronics & Communication Engineering and Electronics & Control Engineering)

Time: 3 hours **Max Marks: 70**

Answer any FIVE Questions
All Questions carry equal marks

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1. (a) Compare the ranges of numbers that can be represented in sign-magnitude and 1's complement notation.
   (b) Represent -123.19 as sign-magnitude, 1's complement, 2's complement - number.
2. (a) Write RTL statements to execute the instruction SHL AC which shifts the contents of accumulator left by one.
   (b) List and explain the micro-operations required to execute MOV R_1, R_2 which moves the contents of R_2, toR_1
3. (a) Explain the 0,1,2 and 3 address formats.
   (b) Explain base register addressing.
4. (a) Compare hardwired design with micro-program design.
   (b) Describe a micro-program sequence.
5. (a) List the steps of operation in DMA data transfer.
   (b) List the ways of servicing I/O interrupt and explain one of them.
6. (a) What are page replacement methods in memory? Explain one of them.
   (b) What are cache updation methods? Explain one of them.
7. (a) Explain an arithmetic processor example with pipeline concept.
   (b) What are the various methods of achieving parallelism in CPU execution speedup?
8. (a) What are static interconnection networks? Explain two of their architectures.
   (b) Distinguish between time-shared CPU and multiprogrammed CPU.

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