Code No: OR321052 **OR**

III B.Tech II Semester Supplementary Examinations, April/May 2005
COMPUTER ORGANIZATION
(Electronics & Instrumentation Engineering)

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

Answer any FIVE Questions
All Questions carry equal marks

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1. (a) Perform the arithmetic operation (-42) (-13) in binary using signed 2's complement representation of negative numbers.
   (b) Convert the decimal number 6132.789 into a normalized binary number.
2. (a) Design a 4-bit incrementer.
   (b) List and define the logic micro operations.
3. (a) Illustrate with a flow chart how the multiplication of two integer numbers is performed using assembly language.
   (b) Write a program loop, using a pointer and counter, that clears to 0, the contents of hexadecimal locations 500 through FFF.
4. (a) Evaluate the arithmetic statement X=(A+B)*(C+D) using three and two address instructions.
   (b) List and explain with suitable examples, the typical addressing modes followed in instruction format.
5. (a) Explain the fields of 20 bit format of micro instructions.
   (b) Distinguish between hardwired control and micro programmed control
6. (a) Distinguish between strobe control and hand shaking.
   (b) What is the difference between isolated I/O and memory mapped I/O? What are the advantages and disadvantages of each.
7. (a) Sketch the block diagram of a 128X8 RAM chip.
   (b) Explain about the implementation of set associative mapping.
8. (a) List the contents of all registers in the pipeline for l=1 to 6, for the arithmetic operation $(A_i+B_i)(C_i+D_i)$
   (b) Illustrate the multiport memory organization with a suitable block diagram.

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