

**Total No of Questions: [8]****SEAT NO. :** **[Total No. of Pages : 2 ]**

**S.E. 2012 (Computer Engineering)**  
**Computer Organization**  
**(Semester -II)**

**Time: 2Hours****Max. Marks : 50****Instructions to the candidates:**

- 1) Answers Q1 or Q2, Q3 or Q4, Q5 or Q6, Q7 or Q8.
- 2) Neat diagrams must be drawn wherever necessary.
- 3) Figures to the right side indicate full marks.
- 4) Use of Calculator is allowed.
- 5) Assume Suitable data if necessary

- Q1) a) Using Booth's algorithm multiply the following [6]  
 Multiplicand = 7, Multiplier = 3  
 b) Explain IEEE 488 format for single precision and double precision floating point numbers with example. [6]

OR

- Q2) a) Explain the various speeds up techniques of processor [4]  
 b) Explain following addressing modes of 8086 with suitable examples [8]  
 a. Index Addressing  
 b. Register Indirect  
 c. Auto Increment  
 d. Relative Addressing

- Q3) a) Draw flowchart for Non restoring Division algorithm [6]  
 b) Write control sequence for execution of the instruction [6]  
 Add (R3), R1

OR

- Q4) a) Explain the Key components of the front end of the Intel Nehalem architecture. [6]  
 b) What are the different design methods for Hardwired control units? Explain any one. [6]

- Q5) a) Explain cache mapping techniques with example [6]  
 b) Explain Intel Nehalem memory organization with diagram [7]

OR

- Q6) Write short Notes (Any Three) [13]  
 DDR3 Memory  
 NUMA

USB Packet Format

PCI Bus

- Q7) a) Draw and explain block diagram of itanium processor [6]  
b) Write short note on [7]  
    1. i7 Mobile Version  
    2. Instruction format of IA-64 architecture

OR

- Q8) a) Explain the architecture of CBE processor with the help of block diagram [6]  
b) Write short note on [7]  
    1. Sun UltraSparc T1  
    2. NVIDIA GPU

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