

Code No: A5802

**JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD
M.TECH I SEMESTER EXAMINATIONS, APRIL/MAY-2012
COMPUTER ORGANIZATION
(COMPUTER SCIENCE & ENGINEERING)**

Time: 3hours

Max.Marks:60

**Answer any five questions
All questions carry equal marks**

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- 1.a) With examples, Discuss single, double and multi precision computer data formats. Also explain about floating – point representation.
- b) With an example, explain Booth’s algorithm for 8 – bit binary division.
2. With examples, discuss about the following micro instructions.
 - (a) Register and memory transfer micro instructions.
 - (b) Arithmetic micro instructions.
 - (c) Logical and shift micro instructions.
- 3.a) Differentiate between hard wired program control and micro programmed Control.
- b) With a neat block diagram, explain micro programmed control unit. Also explain about address sequencing.
- 4.a) Discuss conditions of parallelism.
- b) With neat diagrams discuss about system interconnect architectures.
5. Explain various cache memory accessing techniques with relevant diagrams and examples.
- 6.a) Explain about DMA and types of DMA with examples.
- b) With a neat diagram, discuss about an I/O processor.
- 7.a) With neat diagrams differentiate between arithmetic pipeline and instruction pipeline.
- b) Discuss about Array processors.
- 8.a) Distinguish between inter processor arbitration and inter processor communication.
- b) Discuss about cache coherence and cache synchronization mechanisms.