Prelim Paper **Computer Organization and Architecture**

Time: 3 Hrs.] **[Marks : 80**

N.B.: (1) Question No. 1 is compulsory.
(2) Solve any THREE questions from remaining FIVE questions.
(3) Assume suitable data if required.

1. (a) Explain Lock(bar) and Test(bar) signal. **05**
(b) Explain assembler directives. **05**
(c) Explain difference between RISC and CISC. **05**
(d) Explain nano programming. **05**

2. (a) Explain the various addressing modes of 8086 with example. **10**
(b) Explain IEEE format for floating point representation. **10**

3. (a) Explain Booth's Algorithm. **10**
(b) Explain characteristics of memory in detail. **10**

4. (a) What is Virtual memory? Explain in detail paging, segmentation and paged segments. **10**
(b) Explain the different mapping techniques of cache memory. **10**

5. (a) Explain RAID Levels. **10**
(b) Explain DMA and different modes of DMA. **10**

6. (a) Explain Flynn's classification in detail. **10**
(b) Explain instruction cycle state diagram. Explain execution of instruction in detail. **10**

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