Quiz #5   **14th Feb 2013**

Global Time and Order

Name: **Roll No:**

1. Given a clock synchronization system that achieves a precision of 90 microseconds, what is a reasonable granularity for the global time? What are the limits for the observed values for a time interval of 1.1 msec?

2. Consider a system with 10 clocks.
a) If the number of clocks behaving maliciously faulty is 4, determine the condition of clock synchronization.
b) If the number of clocks behaving maliciously faulty is 2, determine the condition of clock synchronization.

3. Given a latency jitter of 20µs, a clock drift rate of 10^{-5} sec/sec and a resynchronization period of 1 second. What precision can be achieved by the FTA algorithm in a system with 10 clocks where 1 clock could be malicious?

4. Given a latency jitter of 20µs, a clock drift rate of 10^{-5} sec/sec and a resynchronization period of 1 second. What precision can be achieved by the central master algorithm?

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