Question 1

In the system of Question 4 it is required to synchronize a file server's clock to within ±1 millisecond. Discuss this in relation to Cristian's algorithm.

Question 2

An NTP server B receives server A's message at 16:34:23.480 bearing a timestamp 16:34:13.430 and replies to it. A receives the message at 16:34:15.725, bearing B's timestamp 16:34:25.7. Estimate the offset between B and A and the accuracy of the estimate.

Question 3

Discuss the factors to be taken into account when deciding to which NTP server a client should synchronize its clock.

Question 4

By considering a chain of zero or more messages connecting events *e* and *e'* and using induction, show that $e \rightarrow e' \Rightarrow L(e) < L(e')$.

Question 5

Discuss how it is possible to compensate for clock drift between synchronization points by observing the drift rate over time. Discuss any limitations to your method.