Lab 1

1. Number of transactions. to.

   Time taken to send file containing updates at DR

   $$= \frac{2 \times 8 \times 1024 \text{ Mb}}{100 \text{ Mbps}}$$

   $$= 163.84 \text{ s}$$

   Number of transactions during this time at
   primary site $= 5000 \text{ fps} \times 163.84 \text{ s}$

   $$= 819200$$

   Best case : Primary fails immediately after file
   containing updates has reached DR.
   DR is behind 819200 transactions
   Data loss $= 819200 \text{ KB} = 0.8192 \text{ GB}$

   Worst case : Primary fails before transmitting
   the file containing updates
   DR is behind $2 \text{ GB} = 2 \times 10^6$ transactions.
   Data loss $= 2 \text{ GB}$

2. Time to copy at same location $= \dfrac{5 \times 1000}{250}$

   $$= 20 \text{ s}$$

   Time to copy at remote location $= \dfrac{5 \times 1000 \times 8}{100}$

   $$= 400 \text{ s}.$$

3. Throughput : Average amount number of data
   transferred in • • second a given
   amount of time.

Response time: Time taken to recieve some data after requesting it.

Latency: Any delay in transmission of data.

OLTP (Online transaction processing): Systems which support many transactions. e.g. ATM, Online banking. It is online transactional system

OLAP (Online analytical processing): System which are meant for complex analytical needs. It is an online analysis and data retrieving process.

Analytics: These are the techniques of data analysis, using tools to analyze data, is analytics

MIS (Management information system): A management information system is an organized process which provides past, present, and projected information on internal operations as well as extra intelligence to support decision making.

Data mining: The process of finding pattern, anomalies and correlations withing large data set to predict outcomes.