 

INFO 445 Study Guide Winter 2018

Part A: Short-Answer in 35 minutes (4 questions for 5 points)

1. Explain the concept of error-handling (try and be complete: briefly explain what is it, when it happens, why it happens and how it happens). Touch on the benefits of error-handling as well.
2. Normalization seeks to eliminate several different types of data anomalies; please identify what these data anomalies are and how normalization can eliminate them.
3. Describe the differences between Online Transaction Processing (OLTP) databases and those that are supporting Data Warehousing or Online Analytical Processing (OLAP).
4. Explain the difference between synchronous and asynchronous data transfer; when are each preferred?
5. Describe 5 different SQL commands that are considered ‘control of flow’ language.
6. Compare database mirroring, log shipping and replication; when is each the preferred tool of use?
7. Describe the use and benefits of an output parameter; how do these allow for more efficient processing?
8. Explain the purpose and structure of a synthetic transaction; when are they used?
9. Explain the difference between the concepts of ‘high-availability’ and ‘scalability’ in regards to relational database systems: What are the terms and tools are used? How do we measure their effectiveness?
10. Explain how a CASE statement improves flexibility in reporting.

Part B: Coding in 75 minutes (5 questions for 10 points)

* Create at least one stored procedure that takes in several parameters of friendly names and INSERTs into multiple tables in an explicit transaction with proper error-handling
* Create at least one business rule or computed column leveraging a function
* Create at least one stored procedure that calls a second stored procedure (‘nested’ stored procedures) leveraging OUTPUT parameter
* Create at least one complex view (multiple JOINs, GROUP BY, HAVING, CASE)

