COMP 281 Study Guide for FUPE

Format:

The exam consists of 6 questions for 100 points. It is two hours in length and closed book, notes, calculator, etc. For those students where English is a second language, a translation dictionary may be used. The questions are short answer, definitions, skill demonstration and comparison and contrast. No true/false and no multiple choice questions.

Topics:
The exam is based on the course outcomes for COMP 281 which are:

Upon successful completion of this course, students will be able to:

1. Describe the features of a Database Management System (DBMS) and its use within an organization.
2. Trace the evolution of the DBMS models and implementations from file based systems to legacy products to current technologies such as relational models.
3. Analyze business problems and model the database solution using entity relationship diagrams.
4. Transform entity-relationship diagrams into a logical design of a database system.
5. Apply the process of normalization to remove data anomalies.
6. Analyze the development of a database application from the database structure to the user interface.
7. Apply SQL commands to update, delete, and query a relational database.
8. Create users and roles in a relational database.
9. Apply active database concepts such as triggers in a relational database
10. Design and build a database application, using Structured Query Language (SQL) in Oracle and Cold Fusion
11. Analyze business and database structures and demonstrate data warehousing techniques.
12. Describe and apply Internet Database concepts and tools, such as xml.
13. Analyze databases and infer a distributed database design.

The multimedia piece at http://video.franklin.edu/Franklin/COMP/281/erd.html explains the approach taken to Entity-Relationship Diagramming, which is a major outcome of COMP 281.

Another major outcome is normalization. An interactive tutorial is at http://cs.franklin.edu/~hochstew/NormalizationHowTo.html

Students are strongly advised to review the topics in the textbook used for this course which is the latest edition of <u>Database Systems Design, Implementation and Management</u> by Coronel et al.