

数据库系统考试说明如下:

- 1) 开卷考试, 携带材料类型仅限于教材、课件、计算器。不能携带课后习题答案。
- 2) 英文试题, 可用英文或中文作答。
- 3) 题目类型包括判断题、选择题、简答题、计算题、画图题等。
- 4) 实验课内容不考试。
- 5) 题目难度系数为中等。
- 6) 平时成绩占 30%。缺交的作业要在开学第一周周六前补齐。

复习概要如下:

Introduction:

- 1) Database catalog concept
- 2) Meta-data concept
- 3) Data independence concept

SQL:

- 1) Basic SQL statements
- 2) Basic relational algebra expressions
- 3) Aggregate functions
- 4) Null value logic
- 5) Outer join
- 6) Foreign key and referential integrity constraints

E-R model:

- 1) E-R diagram construction
- 2) Weak entity set

Norms:

- 1) BCNF decomposition
- 2) Dependency preserving concept
- 3) Computing the attribute closure, candidate key or primary key

Storage:

- 1) Slotted-page structure
- 2) Buffer-Replacement Strategies (Textbook 13.5.2)

Indexing:

- 1) B+ tree insertion, deletion, construction, query

Query processing:

- 1) External sort-merge: steps and I/O
- 2) Number of I/Os for nested loop join, block nested loop join, index nested loop join, sort-merge join and hash join

Transaction:

- 1) Conflict serializability, precedence graph
- 2) 2PL(two-phase locking) and strict 2PL concepts
- 3) ARIES algorithm