应用系统体系架构 — 作业 8

学号：_____ 姓名：_____ 得分：

回答下列问题

A. Compute the closure of the following set F of functional dependencies for relation schema R = (A, B, C, D, E).

$$A \to BC \qquad CD \to E \qquad B \to D \qquad E \to A$$

List the candidate keys for R. (2 points)

B. Using the functional dependencies of Question A, compute the canonical cover Fc. (2 points)

C. Suppose that we decompose the schema R = (A, B, C, D, E) into

$$(A, B, C) \quad \text{and} \quad (A, D, E)$$

Show that this decomposition is a lossless-join decomposition if the following set F of functional dependencies holds: (1 point)

$$A \to BC \qquad CD \to E \qquad B \to D \qquad E \to A$$