

CS2102 Database Systems – Quiz 2
2013/2014 Semester I

This is a series of MCQ. Please write your answers in the OCR form provided.

Questions 1 to 5 are based on the following relation schema R and the set of functional dependencies F.

$R = (A, B, C, D, E, G)$

$F = \{ \{A\} \rightarrow \{D\}, \{A, E\} \rightarrow \{G\}, \{D, G\} \rightarrow \{B, C\}, \{A, D, G\} \rightarrow \{C\} \}$

1. Which of the following is a functional dependency in F^+ ?

- a. $\{A, D\} \rightarrow \{D\}$
- b. $\{G\} \rightarrow \{C\}$
- c. $\{A, G\} \rightarrow \{E\}$
- d. All of the above
- e. None of the above

2. Which of the following is a trivial functional dependency in F^+ ?

- a. $\{A, D\} \rightarrow \{D\}$
- b. $\{G\} \rightarrow \{C\}$
- c. $\{A, G\} \rightarrow \{E\}$
- d. All of the above
- e. None of the above

3. Which of the following is a functional dependency in a minimal cover of F ?

- a. $\{A\} \rightarrow \{G\}$
- b. $\{A, D, G\} \rightarrow \{C\}$
- c. $\{D, G\} \rightarrow \{B, C\}$
- d. All of the above
- e. None of the above

4. Which of the following is a super key of R with F ?

- a. $\{A, D, E, G\}$
- b. $\{A, B, C, G\}$
- c. $\{A, D, C, G\}$
- d. All of the above
- e. None of the above

5. Which of the following is a candidate key of R with F ?

- a. $\{A, D\}$
- b. $\{A, E\}$
- c. $\{A, G\}$
- d. All of the above
- e. None of the above