DBMS Theory

Started on	Monday, 8 March 2021, 12:45 PM
State	Finished
Completed on	Monday, 8 March 2021, 12:59 PM
Time taken	14 mins 51 secs
Grade	**9.00** out of 11.00 (**82**%)

Question 1

Correct

Mark 1.00 out of 1.00

Flag question

Consider the relation schema R(A,B,C) with functional dependencies A→B and A→C. Decomposing R into R1(A,B) and R2(B,C) will be

Select one:

- Lossless
- Lossy ✓

The correct answer is: Lossy

Question 2

Correct

Mark 1.00 out of 1.00

Flag question

Consider the relation schema R(A,B,C,D) with functional dependencies A→B, B→C and C→D. Decomposing R into R1(A,B,D) and R2(A,C,D) will be

Select one:

- Lossless ✓
- Lossy

The correct answer is: Lossless

Question 3

Correct

Mark 1.00 out of 1.00

Flag question

Consider the relation schema R(A,B,C,D) with functional dependencies A→B and BC→D. Which of the following is the candidate key of R?

Select one:

- ACD
- AB
- ABC
- ABCD

- AC ✓
- BC

The correct answer is: AC

Question 4

Correct

Mark 1.00 out of 1.00

Flag question

Consider the relation schema R(A,B,C,D,E) with functional dependencies A→B, BC→D and CD→E. Which of the following is/are the candidate key(s) of R?

Select one:

- ABDE
- ACD, ACE and ABCD ✓
- ACE, BDE and ABC
- ABCDE
- BCD and ACD
- BDE, BCD and ACE
- BCE, ACD and ABDE
- ABC and BCD
- ABC, ACE and ABCD
- ACDE

The correct answer is: ACD, ACE and ABCD

Question 5

Correct

Mark 1.00 out of 1.00

Flag question

Consider the relation schema R(A,B,C,D) with functional dependencies A→B, B→C and C→D. Which of the following is true about R?

Select one:

- R is both in BCNF and 3NF
- R is neither in BCNF nor in 3NF ✓
- R is in BCNF but not in 3NF
- R is in 3NF but not in BCNF

The correct answer is: R is neither in BCNF nor in 3NF

Question 6

Correct

Mark 1.00 out of 1.00

Consider the relation schema R(A,B,C) with functional dependencies B→C and AC→B. Which of the following is true about R?

Select one:

Flag question

- R is in BCNF but not in 3NF
- R is not in 3NF
- R is in BCNF
- R is in 3NF but not in BCNF ✓

The correct answer is: R is in 3NF but not in BCNF

Question 7

Correct

Mark 1.00 out of 1.00

Flag question

Consider the relation schema R(A,B,C) with multi-valued dependencies A→→B and A→→C. Which of the following is true about R?

Select one:

- R is not in 3NF
- R is in BCNF but not in 4NF ✓
- R is in 3NF but not in BCNF or 4NF
- R is in 4NF

The correct answer is: R is in BCNF but not in 4NF

Question 8

Correct

Mark 1.00 out of 1.00

Flag question

Consider the relation schema R(A,B,C,D) with functional dependencies A→B and BC→D. Clearly, R is not in BCNF. Using the functional dependency A→B, let us decompose R into R1(A,B) and R2(A,C,D). Which of the following is true about the decomposition?

Select one:

- Both R1 and R2 are not in BCNF
- Both R1 and R2 are in BCNF ✓
- R1 is in BCNF but R2 is not in BCNF
- R1 is not in BCNF but R2 is in BCNF

The correct answer is: Both R1 and R2 are in BCNF

Question 9

Incorrect

Mark 0.00 out of 1.00

Flag question

Consider the relation schema R(A,B,C,D) with functional dependencies A→B and BC→D. Clearly, R is not in BCNF. Using the functional dependency BC→D, let us decompose R into R3(B,C,D) and R4(A,B,C). Which of the following is true about the decomposition?

Select one:

- R3 is in BCNF but R4 is not in BCNF. R4 is only in 3NF
- Both R3 and R4 are in BCNF
- Both R3 and R4 are in 3NF but neither of them is in BCNF ✗

R3 is in BCNF and R4 is not in 3NF

The correct answer is: R3 is in BCNF and R4 is not in 3NF

Question 10

Correct

Mark 1.00 out of 1.00

Flag question

Consider the relation schema R(A,B,C,D,E) with functional dependencies A→B and BC→D. Let us decompose R into R1(A,B) and R2(A,C,D,E). Which of the following is true about the decomposition?

Select one:

- R1 is in BCNF but R2 is not in BCNF ✓
- R1 is not in BCNF but R2 is in BCNF
- Both R1 and R2 are in BCNF
- Both R1 and R2 are not in BCNF

The correct answer is: R1 is in BCNF but R2 is not in BCNF

Question 11

Incorrect

Mark 0.00 out of 1.00

Flag question

Consider the relation schema R(A,B,C) with functional dependencies B→C and AC→B. Let us decompose R into R1(B,C) and R2(A,B). Which of the following is true about the decomposition?

Select one:

- Both R1 and R2 are in BCNF and the decomposition is dependency preserving
- Both R1 and R2 are in 3NF (but neither is in BCNF) and the decomposition is dependency preserving
- Both R1 and R2 are in 3NF (but neither is in BCNF) and the decomposition is not dependency preserving ✗
- Both R1 and R2 are in BCNF but the decomposition is not dependency preserving

The correct answer is: Both R1 and R2 are in BCNF but the decomposition is not dependency preserving

Finish review

QUIZ NAVIGATION

1 2 3 4 5 6 7 8 9 10 11

Show one page at a time

Finish review