Question 1

Not yet answered

Marked out of 1.00

3NF concept is related to

Select one:

- a. Super Key definition
- b. Full dependency definition
- c. Atomic definition
- d. All of the others
- e. Transitive dependency definition

Clear my choice

Question 2

Not yet answered

Marked out of 1.00

"R(A,B,C,D)" is an example of:

Select one:

- a. A relation
- b. A relation instance
- c. A schema instance
- d. A schema

Clear my choice

Question 3

Not yet answered

Marked out of 1.00

A table is in 3NF if it is in 2NF and if it has no .....

Select one:

- a. multivalued dependencies
- b. transitive dependencies
- c. trivial functional dependency
- d. functional dependencies

Clear my choice

Question 4

Not yet answered

Marked out of 1.00

A table is in BCNF if it is in 3NF and if every determinant is a ..... key.

Select one:

- a. Both B & C
- b. dependent
- c. candidate
- d. normal

Clear my choice

Question 5

Not yet answered

Marked out of 1.00

Which of the followings was the first ever used for data model?

Select one:

- a. Graph based model
- b. File system
- c. Relational model
- d. Tree based model

Clear my choice

Question 6

Not yet answered

Marked out of 1.00

Database users can connect to database management system as _____

Select one:

- a. Database administrator
- b. Database designer
- c. All of the others
- d. Database end-user

Clear my choice

Question 7

Not yet answered

Marked out of 1.00

Which of the followings is not available in relational data model?

Select one:

- a. Data manipulation language
- b. None of the others
- c. Data controlling language
- d. Data definition language

Clear my choice

Question 8

Not yet answered

Marked out of 1.00

Suppose a relation R with two instances R1, R2. Suppose A, B are key and nonkey components of R, respectively. Which of the followings refers to key constraints?

Select one:

- a. Choice c
- b. Choice d
- c. Choice a
- d. Choice b

Clear my choice

Question 9

Not yet answered

Marked out of 1.00

Which of the following ways can we NOT use expressions of relational algebra to express constraints?

Select one:

- a. if R and S are expressions of relational algebra, the S Í R is constraint, that is every tuple in the result of R must also be in the result of S
- b. If R is an expression of relational algebra, the R = Q is a constraint, that is there are no tuples in the result of R
- c. if R is an expression of relational algebra, then R≠Q is a constraint, that is there are some tuples in the result of R
- d. All of the others

Clear my choice

Question 10

Not yet answered

Marked out of 1.00

Which of following statement is NOT correct?

Select one:

- a. Primary key may be include more than one attribute
- b. Every relation must have only one primary key
- c. Unique key is also a candidate key
- d. Two tuples can have the same values on primary key's components

Clear my choice

Question 11

Not yet answered

Marked out of 1.00

Suppose the theta join R3 :=R1$\bowtie_C$R2, where C is a condition that refers to attributes of R_1 and R_2. Which of the followings is correct?

Select one:

- a. None of the others
- b. Each tuple t_1 of R_1 connect with all those tuple t_2 of R_2 that satifsy C
- c. Each tuple t_1 of R_1 connect with one tuple t_2 of R_2
- d. Each tuple t_1 of R_1 connect with some those tuple t_2 of R_2 that satisfy C

Clear my choice

Question 12

Not yet answered

Marked out of 1.00

When we define an attribute A as PRIMARY KEY of relation R, then _____

Select one:

- a. There are no two tuples that have the same values on the A component
- b. No more primary key on the relation R
- c. Tuple must be not null on the A component
- d. All of the others

Clear my choice

Question 13

Not yet answered

Marked out of 1.00

Suppose relation R(A,B,C,D,E), and set of FD's S={ A->B, B->D, AD->C }. Find one key of R.

Select one:

- a. {B,E}
- b. {A,E}
- c. {A,B,E}
- d. {A}

Clear my choice

Question 14

Not yet answered

Marked out of 1.00

Consider a relation with schema R(A, B, C, D) and FD's A -> B, A -> C, C -> D. Which of the following is the {A}+ ?

Select one:

- a. {A,B,C,D}
- b. {A,B}
- c. {A,B,C}
- d. {A}

Clear my choice

Question 15

Not yet answered

Marked out of 1.00

Consider a relation with schema R(A, B, C, D) and FD's BC -> D, D -> A, A -> B. Which of the following is the key of R?

Select one:

- a. D
- b. BC
- c. BD
- d. AB

Clear my choice

Question 16

Not yet answered

Marked out of 1.00

Given a relation R(A,B,C,D). Which of the followings is trivial?

Select one:

- a. A->BCD
- b. A->->BCD
- c. A->AB
- d. A->->AB

Clear my choice

Question 17

Not yet answered

Marked out of 1.00

Choose the false statement about the decomposition into 3NF?

Select one:

- a. The decomposition has the dependency preservation property.
- b. The decomposition has a lossless join.
- c. The relations of the decomposition are all in 3NF.
- d. The decomposition eliminates all anomalies.

Clear my choice

Question 18

Not yet answered

Marked out of 1.00

Which of the following statements is TRUE?

Select one:

- a. Key is the super key.
- b. Super key is the minimal key of relation.
- c. A relation can have only one key.
- d. All of the others.

Clear my choice

Question 19

Not yet answered

Marked out of 1.00

Suppose relation R(A,B,C,D,E), and set of FD's S={ A -> D, BD -> E}. Which of the followings is a key of R?

Select one:

- a. AB
- b. ABC
- c. A
- d. ABCD

Clear my choice

Question 20

Not yet answered

Marked out of 1.00

Which of the following statements is valid?

Select one:

- a. All of the others
- b. If A->->B, B->->C hold in relation R, then A->->C holds, too
- c. If A->->B, B->C hold in relation R, then A->->C holds, too
- d. If A->B, B->->C hold in relation R, then A->->C holds, too

Clear my choice

Question 21

Not yet answered

Marked out of 1.00

An attribute A is called the key of relation R if _____

Select one:

- a. Its closure includes all attributes of relation R
- b. All of the others
- c. There are no two tuples that have the same values on the A component
- d. It functionally determines all the other attributes of relation R

Clear my choice

Question 22

Not yet answered

Marked out of 1.00

Given relations

name	address	gender	birthdate
Carrie Fisher	123 Maple St., Holywood	F	9/9/99
Mark Hamill	456 Oak Rd., Brentwood	M	8/8/88

Relation R

name	address	gender	birthdate
Carrie Fisher	123 Maple St., Holywood	F	9/9/99
Harrison Ford	789 Palm Dr., Beverly Hills	M	8/8/88

Relation S

How many is rows in R U S

Select one:

- a. 3
- b. 2
- c. 0
- d. 1

Clear my choice

Question 23

Not yet answered

Marked out of 1.00

Given relations

name	address	gender	birthdate
Carrie Fisher	123 Maple St., Holywood	F	9/9/99
Mark Hamill	456 Oak Rd., Brentwood	M	8/8/88

Relation R

name	address	gender	birthdate
Carrie Fisher	123 Maple St., Holywood	F	9/9/99
Harrison Ford	789 Palm Dr., Beverly Hills	M	8/8/88

Relation S

How many is rows in R ∩ S

Select one:

- a. 0
- b. 2
- c. 3
- d. 1

Clear my choice

Question 24

Not yet answered

Marked out of 1.00

Given relations

name	address	gender	birthdate
Carrie Fisher	123 Maple St., Holywood	F	9/9/99
Mark Hamill	456 Oak Rd., Brentwood	M	8/8/88

Relation R

name	address	gender	birthdate
Carrie Fisher	123 Maple St., Holywood	F	9/9/99
Harrison Ford	789 Palm Dr., Beverly Hills	M	8/8/88

Relation S

How many rows are there in the result of R \ S

Select one:

- a. 0
- b. 1
- c. 3
- d. 2

Clear my choice

Question 25

Not yet answered

Marked out of 1.00

What is incorrect to domains in relational model?

Select one:

- a. It is permitted for a value to be a record structure, set, list, array, or any type that can have its values broken into smaller components
- b. Domain is a particular elementary type of attribute
- c. The components of any tuples must have a value that belongs to the domain of the corresponding column
- d. Each component of each tuple must be elementary type such as INTEGER or STRING

Clear my choice

Question 26

Not yet answered

Marked out of 1.00

A relation is changing over time with operations:

Select one:

- a. Delete a tuple from the database
- b. Edit existing tuples if there are some modifications
- c. Insert tuples for new row as these appear
- d. All of the others

Clear my choice

Question 27

Not yet answered

Marked out of 1.00

Consider a relation with schema R(A, B, C, D) and FD's BC -> D, D -> A, A -> B. Which of the following is the key of R?

Select one:

- a. D
- b. AB
- c. BC
- d. BD

Clear my choice

Question 28

Not yet answered

Marked out of 1.00

Consider a relation with schema R(A, B, C, D) and FD's BC -> D, D -> A, A -> B. Which of the following is the key of R?

Select one:

- a. D
- b. BC
- c. BD
- d. AB

Clear my choice

Question 29

Not yet answered

Marked out of 1.00

Data model describes design of database at level

Select one:

- a. Logical level
- b. View level
- c. Physical level
- d. All of the mentioned

Clear my choice

Question 30

Not yet answered

Marked out of 1.00

ER model is best to use for database of a

Select one:

- a. General model
- b. Relational design
- c. Aggregated model
- d. Conceptual design

Clear my choice

Question 31

Not yet answered

Marked out of 1.00

Here are two relations, R(A,B), S(C,D). Their current values are:

R

A B

---

1 4

2 5

3 6

4 7

S

C D

---

0 1

1 0

2 1

Compute the result of the query:

SELECT A, B, C, D

FROM R LEFT OUTER JOIN S

ON R.A = S.C

Identify, in the list below, the row that appears in the result.

Select one:

- a. (4, 7, 0, 1)

b. (4, 7, 2, 1)

c. (4, 7, null, null)

d. (4, 7, 1, 0)

Clear my choice

Question 32

Not yet answered

Marked out of 1.00

Which of following feature is NOT responsibility of Database Management System

Select one:

a. Manage user accounts of computer on which DBMS is running

b. Allow users to create new databases and specify their schemas

c. Give users the ability to query the data

d. Support the storage of very large amounts of data

Clear my choice

Question 33

Not yet answered

Marked out of 1.00

Which of following is never used as data model?

Select one:

- a. Tree-based model
- b. Relational database model
- c. Graph-based model
- d. Hierarchical model
- e. None of the others

Clear my choice

Question **34**

Not yet answered

Marked out of 1.00

When we define an attribute A as PRIMARY KEY of relation R, then _____

Select one:

- a. Tuple must be not null on the A component
- b. There are no two tuples that have the same values on the A component
- c. All of the others
- d. No more primary key on the relation R

Clear my choice

Question 35

Not yet answered

Marked out of 1.00

Which of the following expression represents the below constraint on relation R(A:int,B:int,C:int):
For every tuple in R, the value on A must be greater than the value on B or value on C must be less than the sum of value on A and value on B

Select one:

- a. $\sigma_{A>B \text{ AND } C < A + B (R)} = `O/`$
- b. $\sigma_{A<=B \text{ AND } C>=A+B}(R)=`O/`$
- c. $\sigma_{A>B \text{ OR } C < A + B (R)} = `O/`$
- d. $\sigma_{A<=B \text{ OR } C>=A+B}(R)=`O/`$

Clear my choice

Question 36

Not yet answered

Marked out of 1.00

The relational operator that yields all possible pairs of rows from two tables is known as a ...

Select one:

- a. Join
- b. Product
- c. Union
- d. Selection

Clear my choice

Question 37

Not yet answered

Marked out of 1.00

Suppose two relations R1(A,B), R2(C,D) and the theta join R3 := R1 $\bowtie_{B<C}$ R2. Which of the followings is correct?

Select one:

- a. Each tuple t1 of R1 connect with some those tuple t2 of R2 if t1.B < t2.C
- b. None of the others
- c. Each tuple t1 of R1 connect with all those tuple t2 of R2 if t1.B < t2.C
- d. Each tuple t1 of R1 connect with one tuple t2 of R2 if t1.B < t2.C

Clear my choice

Question 38

Not yet answered

Marked out of 1.00

Why do we choose relational data model?

Select one:

- a. None of the others
- b. Because it is used in object oriented programming
- c. Because of its important role in software engineering
- d. Because it is the most modern data model in market

Clear my choice

Question 39

Not yet answered

Marked out of 1.00

Given a relation R(A,B,C,D) with functional dependencies A->B, C->D. Find one key of R.

Select one:

- a. {A}
- b. {B,C}
- c. {B,C,D}
- d. {A,C}
- e. {A,B,C}

Clear my choice

Question **40**

Not yet answered

Marked out of 1.00

Given a relation R(A,B,C,D) with functional dependencies A->B, C->D, D->B. Compute {C}+

Select one:

- a. {A,B,C}
- b. {A,B,C,D}
- c. {B,C,D}
- d. {A,C}

Clear my choice

Question **41**

Not yet answered

Marked out of 1.00

Given a relation R(A,B,C,D,E) with functional dependencies A->B, C->D, D->E, E->A. Compute {C}+

Select one:

- a. {C,D,E,A,B}
- b. {C,D}
- c. {C,D,E,A}
- d. {C,D,E}

Clear my choice

Question 42

Not yet answered

Marked out of 1.00

An A attribute is called the key of relation R if _____

Select one:

- a. All of the others
- b. Its closure includes all attributes of relation R
- c. It functionally determines all the other attributes of relation R
- d. There are no two tuples that have the same values on the A component

Clear my choice

Question 43

Not yet answered

Marked out of 1.00

Consider a relation with schema R(A, B, C, D) and FD's A -> B, A -> C, C -> D. Which of the following is the {A}+ ?

Select one:

- a. {A}
- b. {A,B,C,D}
- c. {A,B,C}
- d. {A,B}

Clear my choice

Question **44**

Not yet answered

Marked out of 1.00

Which of the following statements is valid?

Select one:

- a. If A->->B, B->->C hold in relation R, then A->->C holds, too
- b. If A->B, B->->C hold in relation R, then A->->C holds, too
- c. If A->->B, B->C hold in relation R, then A->->C holds, too
- d. All of the others

Clear my choice

Question **45**

Not yet answered

Marked out of 1.00

Given a relation R(A,B,C,D) with functional dependencies A->B, AC-> D, C->A. Which functional dependency violates the BCNF condition?

Select one:

- a. AC->D
- b. A->B
- c. None of the others
- d. C->A

Clear my choice