



khan zafar <zafar1219@gmail.com>

DBMS

1 message

Google Forms <forms-receipts-noreply@google.com>
To: zafar1219@gmail.com

Tue, Sep 1, 2020 at 3:28 PM

Thanks for filling out **DBMS**

Here's what we got from you:

DBMS

Student Details

Email address *

zafar1219@gmail.com

University Enrollment No *

17205135087

Name *

zafar iqbal khan

Batch *

☒ Option 1

Which of the following relational algebra operations do not require the participating tables to be union-compatible?

- ☐ Union
- ☒ Cartesian Product
- ☐ Intersection
- ☐ Set Difference

Which of the following is a database recovery technique?

- ☒ Deferred Update
- ☐ Two Phase commit

- ☐ Time Stamp ordering
- ☐ None of the options

Consider the following statements related to PL/SQL triggers: (I) Triggers are stored procedures which get executed when database user executes them. (II) Event logging and synchronous replication of tables are few applications of triggers (III) Triggers are executed by command RUN TRIGGER. Which of the above statement(s) is/are correct?

- ☒ Only I
- ☐ Only II
- ☐ Only III
- ☐ All statements are incorrect

Consider the following statements regarding database recovery and concurrency. (I) Time stamp ordering protocol is used for concurrency control (II) Two phase commit protocol ensures isolation property of transactions (III) Immediate Update is a Database recovery technique. Which of the above statement(s) is/are correct?

- ☐ Only I
- ☐ Only II
- ☐ Both I and II
- ☒ I , II and III are correct

Consider a relational schema $R(L, M, N, O)$ and functional dependencies $L \twoheadrightarrow M$, $M \twoheadrightarrow N$ and $N \twoheadrightarrow O$. Then the decomposition of R into two relations $R_1(L, M)$ and $R_2(N, O)$ is:

- ☒ dependency preserving and loss-less join
- ☐ loss-less join but not dependency preserving
- ☐ dependency preserving and not loss-less join
- ☐ not dependency preserving and not loss-less join
- ☐ Other:

Consider the entities 'PLAYER', and 'TEAM' with a Many-to-Many relationship 'PLAYS' as shown in figure 1: If we wish to store information about the runs scored by each player while playing for different teams, then this information should appear as an attribute of which relation:

- ☐ PLAYER
- ☒ TEAM
- ☐ PLAYS
- ☐ Either PLAYER or TEAM
- ☐ None of the options

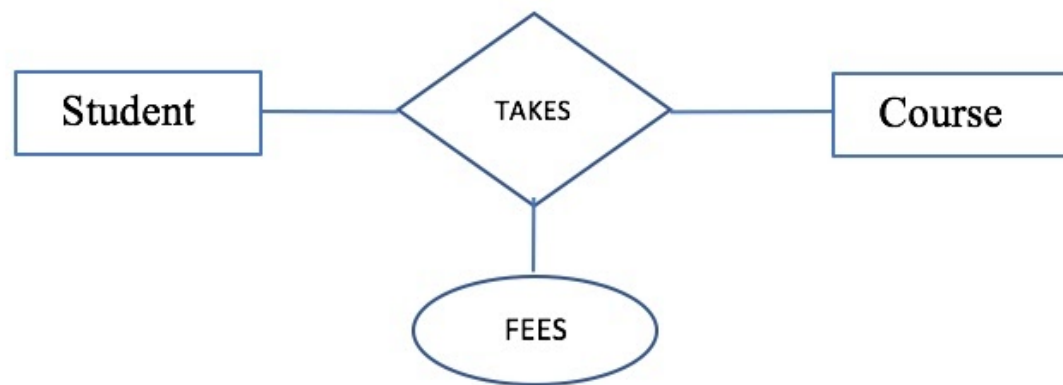
Figure 1



Consider the entities 'STUDENT', and 'COURSE' with a many-to-many relationship 'TAKES' as shown in ER diagram at figure 2. What is true with respect to mapping of said ER diagram? (I) ER diagram will be mapped into total of two relations STUDENT, COURSE and 'fees' will be the attribute of either STUDENT relation or COURSE relation (II) TAKES would be mapped as separate relation with only one attribute 'fees'.

- ☐ Only I
- ☒ Only II
- ☐ Both statements are true
- ☐ Both statements are false

Figure 2



How many rows will be returned in a result by performing Natural join and Cartesian Product of Table 1 and Table 2 shown at figure 3.

- ☐ Natural Join= 4 rows , Cartesian Product= 8 rows
- ☐ Natural Join= 1 rows , Cartesian Product= 8 rows
- ☐ Natural Join= 2 rows , Cartesian Product= 4 rows
- ☒ Natural Join= 2 rows , Cartesian Product= 16 rows

Figure 3.

Table 1	
X	Y
abc	45
xyz	25
lmn	26
opq	26

Table 2	
X	Z
abc	41
stu	25
abc	26
vuw	26

How many rows will be returned in result by performing Division operation between Table 1 and Table 2 (Table 1 / Table 2) shown at figure 4:

- ☐ 2
- ☐ 3
- ☐ 1
- ☐ Null (No rows returned in result)

figure 4

Table 1	
X	Y
abc	45
xyz	25
xyz	45
opq	26

Table 2
X
abc
xyz

Let $R = (A, B, C, D, E, F)$ be a relation schema with the following dependencies: $C \rightarrow F$, $E \rightarrow A$, $EC \rightarrow D$, $A \rightarrow B$. Which of the following statement is true for R ?

- ☐ C and E are two candidate keys of R
- ☐ CEA is the only candidate key of R and CEAD is the super key of R
- ☒ CE is the only candidate key of R and CEA is the super key of R
- ☐ None of the options is true

The database system must take special actions to ensure that transactions operate properly without interference from concurrently executing database statements. This property is referred to as:

- ☐ Atomicity
- ☐ Durability
- ☒



Isolation



All of the options

The maximum number of super-keys for the relation schema $R(A,B,C,D)$ with 'A' as the primary key is:



5



4



8



6

Which of the following statements are TRUE about an SQL query? (I) An SQL query can contain a HAVING clause even if it does not have a GROUP BY clause
(II) All attributes used in the GROUP BY clause must appear in the SELECT clause
(III) GROUP BY clause can have more than one attribute



Only statement I is correct



Only statement II is correct



Both I and II are correct



Both II and III are correct

Which of the following statement is FALSE about transaction? (I) Once the data is committed it cannot be rolled back (II) All operations within the transaction must all succeed or fail (III) Concurrent execution of transitions is handled by application programme. (IV) Transaction changes the database from one consistent state to another.

- ☐ Only I is false
- ☐ Only II is false
- ☐ Only III is false
- ☒ Both III and IV are false

Consider the following statements regarding the transaction schedules. (I) All strict schedules are not recoverable (II) All cascade-less schedules are recoverable (III) A schedule is recoverable if each transaction commits only after all transactions from which it has read has committed . Which of the above statements are true?

- ☐ Only I is true
- ☐ Only II is true
- ☐ Both I and II are true
- ☒ Both II and III are true

Which among the following statements regarding serialisability is false?



- ☒ Conflict serialisable schedule is a schedule which is equivalent with some non serial schedule of same transactions
- ☐ Conflict serialisable schedule is a schedule which is conflict equivalent with some serial schedule of same transactions
- ☐ The precedence graph of every conflict serialisable schdeule does not contain a cycle
- ☐ Multiple serial schedules are possible for every Conflict serialisable schedule

Which of the following statements regarding database normalisation is TRUE? (I) Relation with candidate keys comprising of only single attribute is in 2-NF (II) A relation R is in 3-NF if every non-prime attribute of R is fully functionally dependent on every key of R (III) Every relation in BCNF is also in 3NF.

- ☐ Only statement I is true
- ☐ Only statement II is true
- ☐ Both I and II are true
- ☒ Both I and III are true

What is true with regarding to Second Normal Form?

- ☐ A relation R is in 2-NF if every prime attribute of R is fully functionally dependent on every key of R
- ☒ A relation R is in 2-NF if every non-prime attribute of R is fully functionally dependent on every key of R
- ☐



A relation R is in 2-NF if it has only one candidate key



A relation R is in 2-NF if it is already in 1-NF and does not contain any transitive functional dependencies

A Relation R (A,B,C,D,E) has the following functional dependencies: $AB \twoheadrightarrow C$, $AB \twoheadrightarrow D$, $AB \twoheadrightarrow E$, $A \twoheadrightarrow E$. In terms of normalisation, this table is in what Normal Form?



Relation R is in 2-NF



Relation R is in BCNF



Relation R is in Third Normal Form



Relation R is not in 2-NF , 3-NF and BCNF

Consider the relation instance at figure 5. Which of the following functional dependencies are satisfied by this instance?



$XY \twoheadrightarrow Z$ and $Z \twoheadrightarrow Y$



$YZ \twoheadrightarrow X$ and $Y \twoheadrightarrow Z$



$X \twoheadrightarrow Y$ and $Y \twoheadrightarrow Z$



$Y \twoheadrightarrow X$ and $X \twoheadrightarrow Y$

Figure 5.

X	Y	Z
abc	xyz	pqr
abc	rst	lmn
abc	uvw	lmn
lmn	pqr	pqr

Which of the following functional dependencies can be inferred from $AB \twoheadrightarrow CD$, $CD \twoheadrightarrow E$, $E \twoheadrightarrow FG$.

- ☐ $A \twoheadrightarrow C$ and $B \twoheadrightarrow D$
- ☒ $C \twoheadrightarrow E$ and $D \twoheadrightarrow E$
- ☐ $AB \twoheadrightarrow F$ and $AB \twoheadrightarrow D$
- ☐ None of the options

Let E_1 and E_2 be two entities in an ER diagram with simple single-valued attributes. R_1 is the single many-to-many relation between E_1 and E_2 . R_1 has a single descriptive attribute of its own. What is the minimum number of tables required to represent this situation in the relational model?

- ☐ 2
- ☒ 3
- ☐ 4

☐ can be represented with 2 or 3 tables

Consider the following statement regarding ER diagrams: (I) ER diagram is an implementational data model (II) Double line between entity and relationship represent many-to-many relation (III) Multi-valued attribute is represented by double rectangle. Which of the above statements is false:

- ☒ Only I
- ☐ Only II
- ☐ Only III
- ☐ All are incorrect

Which statement in SQL allows us to change the definition/schema of already created table ?

- ☒ ALTER
- ☐ UPDATE
- ☐ CREATE
- ☐ SELECT

A functional dependency is a relationship between or among:

- ☐ Entities

- ☐ Attributes of different entities
- ☒ Attributes of same entity
- ☐ All of the options

Create your own Google Form