MIDTERM
EXAMINATION
Spring 2010
CS403- Database Management Systems (Session - 2)

Question No: 1
(M a r k s: 1)

Which of the following is NOT a feature of Context DFD?

► one process (which represents the entire system)
► all sources/sinks (external entities)
► data flows linking the process to the sources and sinks (external entities)
► sub-processes (which explain and decomposed the major process into small processes)

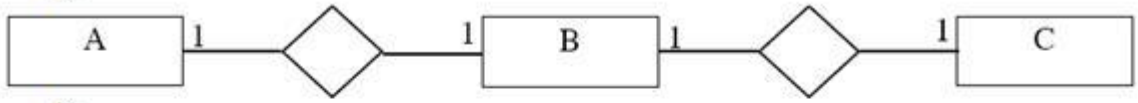
Question No: 2
(M a r k s: 1)

Which of the following is true for the relational model?
Degree of a relation is the number of rows in a relation. ►
Null value is a blank or zero value given to an attribute value when its value is inapplicable or its value is unknown. ►
Complex key is a key consisting of more than one attribute. ►
► Constraint is a rule that restricts the values in a database.

Question No: 3
(M a r k s: 1)

Which one of the following four E-R diagrams is the typical result you obtain when you initially start with an E-R diagram containing just two entities, A and C, in a Many-to-Many relationship, and then introduce an associative entity (B).

►



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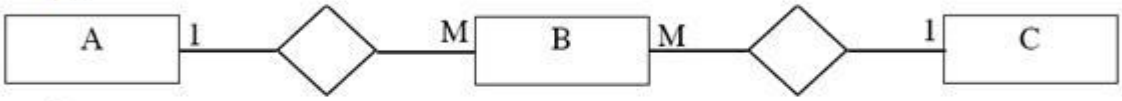

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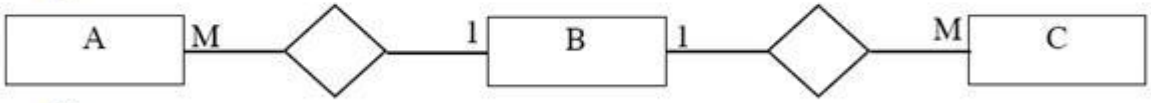

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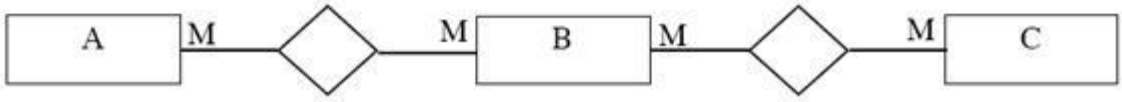

Question No: 4
(M a r k s: 1)

Which of the following most certainly implies the need for an entire table to implement?
► A binary relationship
► **A ternary relationship**
► A recursive relationship
► An identifying relationship
http://odin.lcb.uoregon.edu/pangburn/dbms/Test1samples_a.pdf
Question No: 5
(M a r k s: 1)

Which of the following constraints enforces entity integrity?
► **PRIMARY KEY**
► FOREIGN KEY
► CHECK
► NOT NULL
let see few types of constraints
Entity Integrity ensures that there are no duplicate rows in a table.
Domain Integrity enforces valid entries for a given column by restricting the type, the format, or the range of possible values.
Referential integrity ensures that rows cannot be deleted, which are used by other records (for example, corresponding data values between tables will be vital).
User-Defined Integrity enforces some specific business rules that do not fall into entity, domain, or referential integrity categories.
Question No: 6
(M a r k s: 1)

Which of the following is not true about relational tables?
► Column values are of the same kind.
► Each row is unique.
► Each column must have a unique name.
► **The sequence of rows is significant.**
Question No: 7
(M a r k s: 1)

In a conceptual model for a university, what type of relationship exists between Grade and Student entities?
► 1:1
► 1:M
► M:M
► Ternary
http://odin.lcb.uoregon.edu/pangburn/dbms/Test1samples_a.pdf
Question No: 8
(M a r k s: 1)

Controlling redundancy in a database management system DOES NOT help to
► avoid duplication
► avoid unnecessary wastage of storage space
► **avoid unauthorised access to data**

► avoid inconsistency among data
Question No: 9
(M a r k s: 1)

Which of the following is INCORRECT with respect to file systems?
► At the physical level, pointer or hashed address scheme may be employed to provide a certain degree of data independence at the user level.
► A logical record is concerned with efficient storage of information in the secondary storage devices.
► Some physical organisations use pointers to record blocks to locate records on disk.
► The efficiency of a file system depends on how efficiently operations such as retrieve, insert, update, delete may be performed on the information stored in the file.
Question No: 10
(M a r k s: 1) http://www.vchowk.com

Which of the following functions are NOT performed by a database administrator?
► Planning, designing and implementing database systems
► Establishing standards and procedures for database systems
► Communicating with database users
► Allocation of storage locations and data structures
Question No: 11
(M a r k s: 1)

Select the correct statement about the ANSI/SPARC architecture.
► The conceptual level is a level of indication between the internal level and the external level.
► The internal level in a database system will definitely be relational.
► Any given database has many conceptual schemas and one physical schema, but it has only one external schemas.
► The external level is not concerned with individual user perceptions, while the conceptual level is concerned with a community user perception.
Question No: 12
(M a r k s: 1)

Which of the following is a correct way to implement one-to-many relationship while designing tables?
► by splitting the data into two tables with primary key and
foreign key relationships.
► using a junction table with the keys from both the tables
forming the composite primary key of the junction table.
► by splitting each table into three
► as a single table and rarely as two tables with primary
and foreign key relationships.
Question No: 13
(M a r k s: 1) http://www.vchowk.com

Which of the following is not a benefit of normalization?
► Minimize insertion anomolies
► Minimize deletion anomolies

► Minimize updation anomolies
► Maximize redundancy
Question No: 14
(M a r k s: 1)

Consider the following relation R and its sample data. (Consider that these are the only tuples for the given relation)
Which of the following statements is NOT correct?
► The functional dependency (EmpNo, DeptNo) -> ProjNo holds over R.
► The functional dependency EmpNo -> DeptNo holds over R.
► The functional dependency ProjNo -> DeptNo holds over R.
► The functional dependency (EmpNo, ProjNo) -> DeptNo holds over R.
Question No: 15
(M a r k s: 1)

The Entity Relation Model models
► Entities, Relationships and Processes
► Entities and Relationships
► Relationships
► Entities
Question No: 16
(M a r k s: 1)

As part of database naming conventions, attribute names should use suffixes such as ID, NUMBER or CODE for the _____.
► primary key
► foreign key
► index
► determinant
Question No: 17
(M a r k s: 2)
For which purpose do we use relational data model?
Question No: 18
(M a r k s: 2)
What major problem can occur if we do not normalize a relation into the first normal form?
Question No: 19
(M a r k s: 2)
In which situation do a recursive relationship exist?
Question No: 20
(M a r k s: 3)
What is DML (Data Manipulation Language)?
Question No: 21
(M a r k s: 3)
What are the three important objectives for using data types while specifying attributes?

Question No: 22
(M a r k s: 5)

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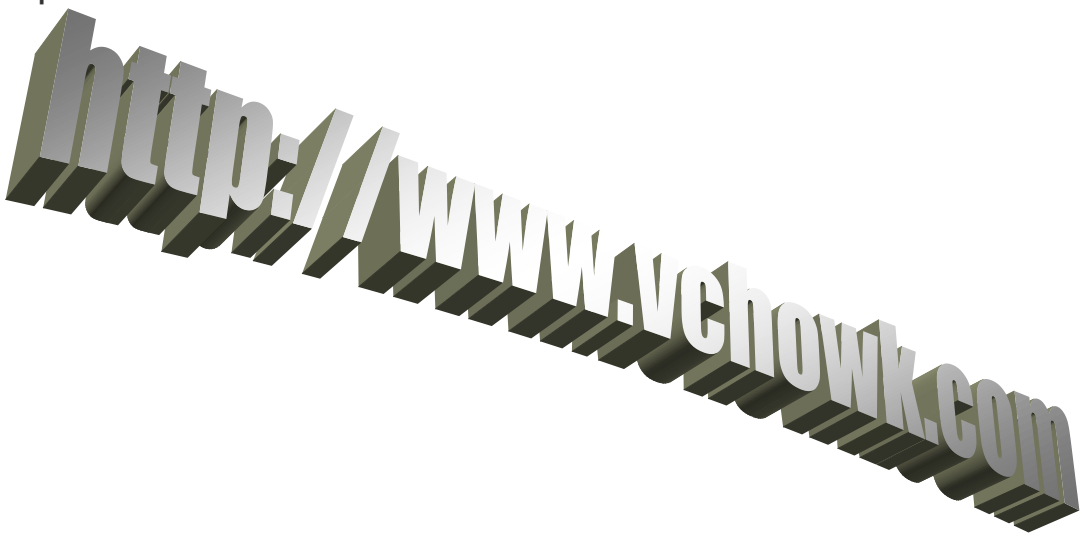

Briefly explain **super key in relation with primary key**.

Question No: 23
(M a r k s: 5)

When is a functional dependency **F** said to be minimal?