Question No: 1 (Marks: 1) - Please choose one
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) (Page 62)

Question No: 2 (Marks: 1) - Please choose one
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. (Page 18)

Question No: 3 (Marks: 1) - Please choose one
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).

![E-R Diagram](Click here for Detail)
Question No: 4 (Marks: 1) - Please choose one
Which of the following most certainly implies the need for an entire table to implement?

- A binary relationship
- A ternary relationship  Click here for Detail
- A recursive relationship
- An identifying relationship

Question No: 5 (Marks: 1) - Please choose one
Which of the following constraints enforces entity integrity?

- PRIMARY KEY
- FOREIGN KEY
- CHECK
- NOT NULL  (Page 134)

Question No: 6 (Marks: 1) - Please choose one
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.  Click here for Detail

Question No: 7 (Marks: 1) - Please choose one
In a conceptual model for a university, what type of relationship exists between Grade and Student entities?

- 1:1
- 1:M  Click here for Detail
- M:M
- Ternary

Question No: 8 (Marks: 1) - Please choose one
Controlling redundancy in a database management system DOES NOT help to

- avoid duplication  (Page 16)
- avoid unnecessary wastage of storage space
- avoid unauthorised access to data  Click here for detail
- avoid inconsistency among data

Question No: 9 (Marks: 1) - Please choose one
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 (Marks: 1) - Please choose one
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** (Page 26)
- Allocation of storage locations and data structures

Question No: 11 (Marks: 1) - Please choose one
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.** (Page 33)
- 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 (Marks: 1) - Please choose one
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 (Marks: 1) - Please choose one
Which of the following is not a benefit of normalization?

- Minimize insertion anomalies
- Minimize deletion anomalies
- Minimize updation anomalies
- Maximize redundancy (Page 162)
Question No: 14 (Marks: 1) - Please choose one
Consider the following relation R and its sample data. (Consider that these are the only tuples for the given relation)

<table>
<thead>
<tr>
<th>EmpNo</th>
<th>DeptNo</th>
<th>ProjNo</th>
</tr>
</thead>
<tbody>
<tr>
<td>1001</td>
<td>01</td>
<td>12</td>
</tr>
<tr>
<td>1001</td>
<td>01</td>
<td>13</td>
</tr>
<tr>
<td>1002</td>
<td>01</td>
<td>12</td>
</tr>
<tr>
<td>1003</td>
<td>01</td>
<td>14</td>
</tr>
</tbody>
</table>

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 (Marks: 1) - Please choose one
The Entity Relation Model models

► Entities, Relationships and Processes
► Entities and Relationships (Page 71)
► Relationships
► Entities

Question No: 16 (Marks: 1) - Please choose one
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

MIDTERM EXAMINATION
Spring 2010
CS403- Database Management Systems (Session - 4)

Question No: 1 (Marks: 1) - Please choose one
User rights information is stored in

► Physical database
► Catalog (Page 46)
► Logical database
► Buffer
Question No: 2 (Marks: 1) - Please choose one
Making a change to the conceptual schema of a database but not affecting the existing external schemas is an example of

► Physical data independence.
► Concurrency control.
► **Logical data independence.**  Click here for detail
► Functional dependency

Question No: 3 (Marks: 1) - Please choose one
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) (Page 62)

Question No: 4 (Marks: 1) - Please choose one
A relation (from the relational database model) consists of a set of tuples, which implies that

► **all tuples in a relation must be distinct.** (Page 129)
► relational model supports multi-valued attributes whose values can be represented in sets.
► for any two tuples, the values associated with all of their attributes may be the same. ► all tuples in a particular relation may have different attributes.

Question No: 5 (Marks: 1) - Please choose one
Choose the symbol that corresponds to a discriminator attributes.

► attribute
► attribute
► attribute  Click here for detail
► attribute
► attribute
Question No: 6 (Marks: 1) - Please choose one
Identify the constraint that limits the values that can be placed in a column.

► NOT NULL
► CHECK [Click here for detail]
► FOREIGN KEY
► UNIQUE

Question No: 7 (Marks: 1) - Please choose one
Given are the relations of student and instructor

<table>
<thead>
<tr>
<th>Student</th>
<th>Instructor</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>First Name</strong></td>
<td><strong>Fname</strong></td>
</tr>
<tr>
<td>Saman</td>
<td>Ajith</td>
</tr>
<tr>
<td>Romesh</td>
<td>Sujith</td>
</tr>
<tr>
<td>Jeeva</td>
<td>Saman</td>
</tr>
<tr>
<td>Nadee</td>
<td>Kasun</td>
</tr>
<tr>
<td>Kumari</td>
<td>Peiris</td>
</tr>
<tr>
<td>Geetha</td>
<td>Romesh</td>
</tr>
<tr>
<td>Prasad</td>
<td>Dias</td>
</tr>
<tr>
<td></td>
<td><strong>Lname</strong></td>
</tr>
<tr>
<td>Perera</td>
<td>Gamage</td>
</tr>
<tr>
<td>Dias</td>
<td>Hewage</td>
</tr>
<tr>
<td>Silva</td>
<td>Perera</td>
</tr>
<tr>
<td>Alwis</td>
<td>Peiris</td>
</tr>
<tr>
<td>Costa</td>
<td>Dias</td>
</tr>
<tr>
<td>Zoysa</td>
<td></td>
</tr>
</tbody>
</table>

Consider the following table obtained using Student and Instructor relations.

<table>
<thead>
<tr>
<th>Fname</th>
<th>Lname</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ajith</td>
<td>Gamage</td>
</tr>
<tr>
<td>Sujith</td>
<td>Hewage</td>
</tr>
<tr>
<td>Kasun</td>
<td>Peiris</td>
</tr>
</tbody>
</table>

Which relational algebra operation could have been applied on the pair of relations Student and Instructor to obtain the above data?

► Instructor – Student
► Student ∩ Instructor
► Instructor ÷ Student
► Student – Instructor

Question No: 8 (Marks: 1) - Please choose one
Identify the correct statement with respect to normalization.

► Normalization is a formal technique that can be used only at the starting phase of the database design.

► **Normalization can be used as a top-down standalone database design technique.** [Click here for detail]

► The process of normalization through decomposition must achieve the lossless join property at any cost whereas the dependency reservation property is sometimes sacrificed.

► The process of normalization through decomposition must achieve the dependency reservation property at any cost whereas the lossless join property is sometimes sacrificed.
Question No: 9 (Marks: 1) - Please choose one
Consider the relation Interview(CandidateNo, InterviewDate, InterviewTime, StaffNo, RoomNo) and the following functional dependencies.
FD1 : CandidateNo, InterviewDate -> InterviewTime, StaffNo, RoomNo
FD2 : RoomNo, InterviewDate, InterviewTime -> StaffNo, CandidateNo
FD3 : StaffNo, InterviewDate -> RoomNo
Which of the following is correct?

► The relation Interview is in 3NF Click here for detail
► The relation Interview is in BCNF.
► The FD3 violates 3NF.
► The FD2 violates 2NF.

Question No: 10 (Marks: 1) - Please choose one
Identify the INCORRECT statement among the given.

► An entity may be an object with a physical existence like a car, a house or an Employee.
► One cannot consider something which has conceptual existence like a course in a degree program as an entity. (Page 71)
► Age can be considered as a single value attribute of a person.
► An entity type describes the schema or intension for a set of entities which share the same structure.

Question No: 11 (Marks: 1) - Please choose one
Structural constraints of a relationship type refer to

► identifying the owner entity type relevant to a given entity type
► whether the existence of an entity depends on it being related to another entity via the relationship type. Click here for detail
► the role that a participating entity from the entity type plays in each relationship instance.
► the constraints applicable in granting access to tables, columns and views in a database schema.

Question No: 12 (Marks: 1) - Please choose one
A collection of concepts that can be used to describe the structure of a database

► Database
► DBMS
► Data model Click here for Detail (Page 68)
► Data

Question No: 13 (Marks: 1) - Please choose one
An entity can be logically connected to another by defining a ____.

► hyperlink
► common attribute Click here for detail
► primary key
► superkey
Question No: 14  (Marks: 1) - Please choose one
The ____ constraint specifies whether each entity supertype occurrence must also be a member of at least one subtype.
► specialization
► uniqueness
► inheritance
► completeness  Click here for Detail

Question No: 15  (Marks: 1) - Please choose one
Database management systems, operating systems, applications and utilities are all examples of ____.
► hardware
► software  Click here for detail
► computer infrastructure
► input and output

Question No: 16  (Marks: 1) - Please choose one
Which of the following concepts is applicable with respect to 2NF?
► Full functional dependency  Click here for detail
► Any kind of dependency
► Transitive dependency
► Non-transitive dependency

MIDTERM EXAMINATION Spring 2010
CS403- Database Management Systems (Session - 4)

Question No: 1  (Marks: 1) - Please choose one
A database system allows the following EXCEPT
► management and control of data towards an efficient working of an organisation.
► more critical functions in organisations to be computerised and the need to keep a large volume of data available in an up to the minute current state increased.
► any user to access all its data.
► integration of data across multiple applications into a single application.

Question No: 2  (Marks: 1) - Please choose one
User rights information is stored in
► Physical database
► Catalog (Page 46) rep
► Logical database
► Buffer
Question No: 3 (Marks: 1) - Please choose one
The ER-data model is an example of:

- Physical database
- Logical database
- Relational database
- Conceptual database

Click here for detail

Question No: 4 (Marks: 1) - Please choose one
Which of the following is true about NOT NULL constraint?

- enforce domain integrity
- limit the values that can be placed in a column.
- prevents any actions that would destroy links between tables with the corresponding data values
- enforces the uniqueness of the values in a set of columns

Click here for detail

Question No: 5 (Marks: 1) - Please choose one
Consider the relation Interview(CandidateNo, InterviewDate, InterviewTime, StaffNo, RoomNo) and the following functional dependencies.
FD1 : CandidateNo, InterviewDate -> InterviewTime, StaffNo, RoomNo
FD2 : RoomNo, InterviewDate, InterviewTime -> StaffNo, CandidateNo
FD3 : StaffNo, InterviewDate -> RoomNo

Which of the following is correct?
- The relation Interview is in BCNF.
- The FD3 violates 3NF.
- The FD3 violates BCNF.
- The FD2 violates 2NF.

Question No: 6 (Marks: 1) - Please choose one
Consider the following diagram depicting a kind of a relationship type where X and Z are entities and Y is a relationship type:

Muhammad Moaaz Siddiq MCS (3rd)
moe1094m283@gmail.com
Campus:- Institute of E-Learning & Modern Studies (IEMS) Samundari
Select the correct statement among the following on the above diagram.

► The relationship type Y is of cardinality ratio 1 : N.  
► The diagram depicts existence dependencies.
► The participation of X in the Y relationship type is total.
► The participation of Z in the Y relationship type is partial.

Question No: 7 (Marks: 1) - Please choose one
Select the correct statement among the following.
► Role names are not technically necessary in relationship types when all the participating entity types are distinct.
► When different entity types participate only once in a single relationship type it is called a recursive relationship. (Page 87)
► Cardinality ratios for binary relationship are displayed on Entity Relationship Diagrams by using a diamond shape notation.
► Partial participation which is also called existence dependency is displayed as a double line connecting the participating entity type to the relationship.

Question No: 8 (Marks: 1) - Please choose one
Which of the following is true about relational schema?
► The sequence of columns is significant
► The sequence of rows is significant.
► Contains only derived attributes.
► Values are atomic. (Page 127)

Question No: 9 (Marks: 1) - Please choose one
Consider the given relations Student and Instructor as given below. Please note that Fname and Lname also denote the First Name and Last Name respectively.

<table>
<thead>
<tr>
<th>Student</th>
<th>Instructor</th>
</tr>
</thead>
<tbody>
<tr>
<td>First Name</td>
<td>Last Name</td>
</tr>
<tr>
<td>Saman</td>
<td>Perera</td>
</tr>
<tr>
<td>Romesh</td>
<td>Dias</td>
</tr>
<tr>
<td>Jeeva</td>
<td>Silva</td>
</tr>
<tr>
<td>Nadee</td>
<td>Alwis</td>
</tr>
<tr>
<td>Kumari</td>
<td>Costa</td>
</tr>
<tr>
<td>Geetha</td>
<td>Zovsa</td>
</tr>
</tbody>
</table>

Which of the following statements is correct with respect to the two relations given above?
► The two relations are not union-compatible since their attribute names differ.
► The set operations such as CARTESIAN PRODUCT and DIVISION can be applied on these two relations.
► To find out those students who work as instructors, it is necessary to perform the operation Student ∩ Instructor.
► To find out the students who are not instructors, it is necessary to perform the operation Student ÷ Instructor.
Question No: 11  (Marks: 1) - Please choose one
Consider the following relation R and its sample data. (Consider that these are the only tuples for the given relation)

<table>
<thead>
<tr>
<th>EmpNo</th>
<th>DeptNo</th>
<th>ProjNo</th>
</tr>
</thead>
<tbody>
<tr>
<td>1001</td>
<td>01</td>
<td>12</td>
</tr>
<tr>
<td>1001</td>
<td>01</td>
<td>13</td>
</tr>
<tr>
<td>1002</td>
<td>01</td>
<td>12</td>
</tr>
<tr>
<td>1003</td>
<td>01</td>
<td>14</td>
</tr>
</tbody>
</table>

Which of the following statements is NOT correct?
- The functional dependency ProjNo -> DeptNo holds over R.
- The functional dependency (EmpNo, ProjNo) -> DeptNo holds over R.
- The functional dependency DeptNo -> ProjNo holds over R.
- The functional dependency EmpNo -> DeptNo holds over R.

Question No: 12  (Marks: 1) - Please choose one
A collection of related data is
- Logical model
- Database (Page 10)
- Data
- Relational model

Question No: 13  (Marks: 1) - Please choose one
A weak entity type
- must have total participation in an identifying relationship
- does not have a key attribute(s)
- both (a) and (b) Click here for detail
- none of the above

Question No: 14  (Marks: 1) - Please choose one
A description on a particular collection of data using the given data model
- Database
- Schema (Page 18)
- None of the above.
- Relation

Question No: 15  (Marks: 1) - Please choose one
If K is a foreign key in relation R1, then
- every tuple of R1 has a distinct value for K.
- K cannot have a null value for tuples in R1.
- K is a key for some other relation. Click here for detail
- K is a primary key for R1.
Question No: 16 (Marks: 1) - Please choose one
Consider the following statements.
A. An entity integrity constraint states that no primary key value can be null.
B. A referential integrity constraint is specified between two relations.
C. A foreign key cannot be used to refer to its own relation.

Identify which of the above statements is/are correct.

► Only A (Page 134)
► Only B
► B and C
► A and B

MIDTERM EXAMINATION 2010
CS403- Database Management Systems

Question No: 1 (Marks: 1) - Please choose one
Which of the following constraints enforces entity integrity?
► PRIMARY KEY
► FOREIGN KEY
► CHECK
► NOT NULL (Page 134) rep

Question No: 2 (Marks: 1) - Please choose one
Which one of the following E-R diagrams most correctly represents the relationship between Student and Grade entities?

Click here for detail

Student 1  has  M  Grade

Click here for detail

Student 1  has  M  Grade

Student M  has  1  Grade

Student M  has  1  Grade
Question No: 3 (Marks: 1) - Please choose one
Which of the following constraints enforces entity integrity?
► PRIMARY KEY
► FOREIGN KEY
► CHECK
► NOT NULL  (Page 134) rep

Question No: 4 (Marks: 1) - Please choose one
Which of the following enforces a relation into 1st normal form?
► The domain of attribute must include only atomic values. (Page 167)
► Every non-key attribute is fully functionally dependent on primary key
► non-key attribute is non-transitively dependent on primary key.
► Every non-key attribute is partially dependent on super key

Question No: 5 (Marks: 1) - Please choose one
Consider the following set of functional dependencies (FDs) on the following relational schema.
Emp_No -> {Ename, Bdate, Address, Dept_No}
Dept_No -> {Dname, Mgr_No}
The additional FD which can be inferred from the above set of FDs is
► Emp_No -> {Dname, Mgr_No}
► Emp_Name -> Dept_No.
► Emp_Name -> Dept_Name.
► Emp_Name, Dept_No -> Mgr_No.

Question No: 6 (Marks: 1) - Please choose one
Which of the following is a feature of PRIMARY KEY constraint?
► unique identifier for a row within a database table.  Click here for Detail
► allow any actions that would destroy links between tables
► limit the values that can be placed in a column.
► enforces that the column will only accept null values.

Question No: 7 (Marks: 1) - Please choose one
Structural constraints of a relationship type refer to
► identifying the owner entity type relevant to a given entity type
► whether the existence of an entity depends on it being related to another entity via the relationship type. Click here for detail
► the role that a participating entity from the entity type plays in each relationship instance.
► the constraints applicable in granting access to tables, columns and views in a database schema.
Question No: 8  (Marks: 1) - Please choose one
Which of the following is true about relational schema?

► The sequence of columns is significant
► The sequence of rows is significant.
► Contains only derived attributes.
► Values are atomic. (Page 127) rep

Question No: 9  (Marks: 1) - Please choose one
A ____ relationship exists when an association is maintained within a single entity.

► unary (Page 144)
► ternary
► binary
► weak

Question No: 10  (Marks: 1) - Please choose one
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. Click here for Detail
► 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: 11  (Marks: 1) - Please choose one
Identify the correct statement.

► Entity integrity constraints specify that primary key values can be composite.
► Entity integrity constraints are specified on individual relations. Click here for detail
► Entity integrity constraints are specified between weak entities.
► When entity integrity rules are enforced, a tuple in one relation that refers to another relation must refer to an existing tuple.

Question No: 12  (Marks: 1) - Please choose one
A software package designed to store and manage databases

► Database
► DBMS (Page 18)
► Data model
► Data
Question No: 13 (Marks: 1) - Please choose one
Who is responsible for authorizing access to the database, for coordinating and monitoring its use?
Select correct option:

► Database Designer
► Database Administrator (Page 26)
► End User
► Application Programmer

Question No: 14 (Marks: 1) - Please choose one
Consider the following relation R and its sample data. (Consider that these are the only tuples for the given relation)

<table>
<thead>
<tr>
<th>EmpNo</th>
<th>DeptNo</th>
<th>ProjNo</th>
</tr>
</thead>
<tbody>
<tr>
<td>1001</td>
<td>01</td>
<td>12</td>
</tr>
<tr>
<td>1001</td>
<td>01</td>
<td>13</td>
</tr>
<tr>
<td>1002</td>
<td>01</td>
<td>12</td>
</tr>
<tr>
<td>1003</td>
<td>01</td>
<td>14</td>
</tr>
</tbody>
</table>

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 (Marks: 1) - Please choose one
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: 16 (Marks: 1) - Please choose one
Which feature of database provides conversion from inconsistent state of DB to a consistent state ensuring minimum data loss?
Select correct option:

► User accessible catalog
► Data processing
► Recovery service (Page 47)
► Authorization service
Question No: 1 (Marks: 1)
Consider the following statements.
A. Conceptual schema which is the result of conceptual design is a logical description of all data elements and their relationships.
B. Internal level of the database architecture consists of the physical view of the database.
C. External level of the database architecture provides the user view of the database.

With respect to the ANSI/SPARC three level database architecture, which of the above is/are correct?
► Only A.
► Only C.
► Only A and B.
► Only B and C. (Page 40)

Question No: 2 (Marks: 1)
The ER-data model is an example of:
► Physical database
► Logical database
► Relational database
► Conceptual database

Question No: 3 (Marks: 1)
Which one of the following E-R diagrams most correctly represents the relationship between Student and Grade entities?

Click here for detail

Click here for detail
Question No: 4  (Marks: 1)
Which of the following constraints enforces referential integrity?

► FOREIGN KEY  (Page 134)
► CHECK
► PRIMARY KEY
► UNIQUE

Question No: 5  (Marks: 1)
Given are the relations of student and Instructor

<table>
<thead>
<tr>
<th>Student</th>
<th>Instructor</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>First Name</strong></td>
<td><strong>Last Name</strong></td>
</tr>
<tr>
<td>Saman</td>
<td>Perera</td>
</tr>
<tr>
<td>Romesh</td>
<td>Dias</td>
</tr>
<tr>
<td>Jeeya</td>
<td>Silva</td>
</tr>
<tr>
<td>Nadee</td>
<td>Alwis</td>
</tr>
<tr>
<td>Kumar</td>
<td>Costa</td>
</tr>
<tr>
<td>Geetha</td>
<td>Zoysa</td>
</tr>
<tr>
<td>Prasad</td>
<td>Fernando</td>
</tr>
</tbody>
</table>

Consider the following table obtained using Student and Instructor relations.

<table>
<thead>
<tr>
<th>Fname</th>
<th>Lname</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ajith</td>
<td>Gamage</td>
</tr>
<tr>
<td>Sujith</td>
<td>Hewage</td>
</tr>
<tr>
<td>Kasun</td>
<td>Peiris</td>
</tr>
</tbody>
</table>

Which relational algebra operation could have been applied on the pair of relations Student and Instructor to obtain the above data?

► Instructor – Student
► Student ∩ Instructor
► Instructor ÷ Student
► Student – Instructor

Question No: 6  (Marks: 1)
Consider the relation Interview (CandidateNo, InterviewDate, InterviewTime, StaffNo, RoomNo) and the following functional dependencies.
FD1 : CandidateNo, InterviewDate -> InterviewTime, StaffNo, RoomNo
FD2 : RoomNo, InterviewDate, InterviewTime -> StaffNo, CandidateNo
FD3 : StaffNo, InterviewDate -> RoomNo

Which of the following is correct?
► The relation Interview is in 3NF  [Click here for detail]
► The relation Interview is in BCNF.
► The FD3 violates 3NF.
► The FD2 violates 2NF.
Question No: 7 ( M a r k s: 1 )  
Which of the following is INCORRECT statement concerning the database design process?  
► During requirements collection and analysis phase, one can gather the data requirements of database users.  
► By referring to a high level data model, it is possible to understand the data requirements of the users, entity types, relationships and constraints.  
► Transformation of the high level data model into the implementation data model is called logical design or data model mapping.  
► During the logical design phase of internal storage structures, access paths and file organization for the database files are specified. (Page 53)

Question No: 8 ( M a r k s: 1 )  
Consider the following diagram depicting a kind of a relationship type where X and Z are entities and Y is a relationship type:

Select the correct statement among the following on the above diagram.  
► The relationship type Y is of cardinality ratio 1 : N.  
► The diagram depicts existence dependencies.  
► The participation of X in the Y relationship type is total.  
► The participation of Z in the Y relationship type is partial.

Question No: 9 ( M a r k s: 1 )  
Identify the correct statement.  
► Entity integrity constraints specify that primary key values can be composite.  
► Entity integrity constraints are specified on individual relations.  
► Entity integrity constraints are specified between weak entities.  
► When entity integrity rules are enforced, a tuple in one relation that refers to another relation must refer to an existing tuple.

Question No: 10 ( M a r k s: 1 )  
Identify the correct statement.  
► Referential integrity constraints check whether the primary key values are unique.  
► Referential integrity constraints check whether an attribute value lies in the given range.  
► Referential integrity constraints are specified between entities having recursive relationships.  
► When Referential integrity rules are enforced, a tuple in one relation that refers to another relation must refer to an existing tuple. (Page 134)

Question No: 11 ( M a r k s: 1 )  
Identify the correct way to implement one-to-one relationship in tables?  
► by splitting the data into two tables with primary key and foreign key relationships.  
► as a single table and rarely as two tables with primary 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 creating two separate tables

Question No: 12  (M a r k s: 1)
A collection of related data is

▶ Logical model
▶ Database  (Page 10) rep
▶ Data
▶ Relational model

Question No: 13  (M a r k s: 1)
A collection of concepts that can be used to describe the structure of a database

▶ Database
▶ DBMS
▶ Data model  Click here for Detail  (Page 68)
▶ Data

Question No: 14  (M a r k s: 1)
A superkey that does not contain a subset of attributes that is itself a superkey is called a ____.

▶ candidate key  (Page 82)
▶ primary key
▶ superkey
▶ secondary key

Question No: 15  (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: 16  (M a r k s: 1)
Which of the following concepts is applicable with respect to 2NF?

▶ Full functional dependency  Click here for detail
▶ Any kind of dependency
▶ Transitive dependency
▶ Non-transitive dependency
Question No: 1 (Marks: 1) - Please choose one
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 (Page 26) rep
 ► Allocation of storage locations and data structures

Question No: 2 (Marks: 1) - Please choose one
Identify the factor which enforces a relation in 3NF?
 ► Every non-key attribute is fully functionally dependent on primary key
 ► Every non-key attribute is partially dependent on super key
 ► The domain of attribute must include only atomic values. (Page 167)
 ► Every non-key attribute is non-transitively dependent on primary key.

Question No: 3 (Marks: 1) - Please choose one
Consider two sets A and B. A contains 2 elements and B contains 3. How many elements do their cartesian product contains?
 ► 6 (Page 129)
 ► 9
 ► 5
 ► 4

Question No: 4 (Marks: 1) - Please choose one
Identify the operation which is NOT one of the parts of the five basic set operations in relational algebra?
 ► Join Click here for Detail
 ► Union
 ► Cartesian Product
 ► Set Difference

Question No: 5 (Marks: 1) - Please choose one
Consider the following statements.
A. An entity integrity constraint states that no primary key value can be null.
B. A referential integrity constraint is specified between two relations.
C. A foreign key cannot be used to refer to its own relation.
Identify which of the above statements is/are correct.
► Only A (Page 134) rep
► Only B
► Only B and C
► Only A and B

Question No: 6 (Marks: 1) - Please choose one
User rights information is stored in
► Physical database
► Catalog (Page 46) rep
► Logical database
► Buffer

Question No: 7 (Marks: 1) - Please choose one
Given are the relations of student and Instructor

<table>
<thead>
<tr>
<th>Student</th>
<th>Instructor</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>First Name</strong></td>
<td><strong>Last Name</strong></td>
</tr>
<tr>
<td>Saman</td>
<td>Perera</td>
</tr>
<tr>
<td>Romesh</td>
<td>Dias</td>
</tr>
<tr>
<td>Jeeva</td>
<td>Silva</td>
</tr>
<tr>
<td>Nadee</td>
<td>Alwis</td>
</tr>
<tr>
<td>Kumari</td>
<td>Costa</td>
</tr>
<tr>
<td>Geetha</td>
<td>Zoysa</td>
</tr>
<tr>
<td>Prasad</td>
<td>Fernando</td>
</tr>
</tbody>
</table>

Consider the following table obtained using Student and Instructor relations.

<table>
<thead>
<tr>
<th>Fname</th>
<th>Lname</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ajith</td>
<td>Gamage</td>
</tr>
<tr>
<td>Sujith</td>
<td>Hewage</td>
</tr>
<tr>
<td>Kasun</td>
<td>Peiris</td>
</tr>
</tbody>
</table>

Which relational algebra operation could have been applied on the pair of relations Student and Instructor to obtain the above data?
► Instructor – Student
► Student ∩ Instructor
► Instructor ÷ Student
► Student – Instructor
Question No: 8 (Marks: 1) - Please choose one
Which one is the corrected way to implement M to M relation which designing data base

► using junction table with keys
► By splitting data into tables with PK and FK
► As a single table early as to tables with PK and FK
► By creating three tables and linking them through PK and FK

Question No: 9 (Marks: 1) - Please choose one
Which ensure the a relation into 2NF User rights information is stored in

► Physical database
► Catalog (Page 46) rep
► Logical database
► Buffer

Question No: 10 (Marks: 1) - Please choose one
Which of the following concepts is applicable with respect to 3NF?

► Full functional dependency
► Any kind of dependency
► Transitive dependency (Page 172)
► Partial functional dependency

Question No: 11 (Marks: 1) - Please choose one
Description on particular collection of data using data model

► Schema Click here for Detail (Page 19)
► Relation
► Data base
► None of the above

Question No: 12 (Marks: 1) - Please choose one
Which one is true regarding relation?

► Every attribute value Non atomic
► Attribute in table may not have unique name
► table order of the column is relevant
► the order of the rows is irrelevant Click here for detail
Question No: 1 (Marks: 1) - Please choose one
Which of the following is not a benefit of normalization?

► Minimize insertion anomalies
► Minimize deletion anomalies
► Minimize updation anomalies
► **Maximize redundancy** (Page 162) rep

Question No: 2 (Marks: 1) - Please choose one
Controlling redundancy in a database management system DOES NOT help to

► **avoid duplication** (Page 16) rep
► avoid unnecessary wastage of storage space
► **avoid unauthorized access to data** [Click here for detail]
► avoid inconsistency among data

Question No: 3 (Marks: 1) - Please choose one
In a conceptual database model, which of the following most likely represents a valid identifier for a class grades?

► StudentID
► StudentID, CourseID
► StudentID, CourseID, InstructorID
► **StudentID, CourseSectionID** [Click here for Detail]

Question No: 4 (Marks: 1) - Please choose one
Identify the operation which is NOT one of the parts of the five basic set operations in relational algebra?

► **Join** [Click here for Detail] rep
► Union
► Cartesian Product
► Set Difference

Question No: 5 (Marks: 1) - Please choose one
Making a change to the conceptual schema of a database but not affecting the existing external schemas is an example of

► Physical data independence.
► Concurrency control.
► **Logical data independence.** [Click here for detail]
► Functional dependency
Question No: 6 (Marks: 1) - Please choose one
Select the correct statement among the following on proper naming of schema constructs:
► Entity type name applies to all the entities belonging to that entity type and therefore a plural name is selected for entity type.
► In the narrative description of the database requirements, verbs tend to indicate the names of relationship types. Click here for Detail
► The nouns arising from a database requirement description can be considered as names of attributes.
► Additional nouns which are appearing in the narrative description of the database requirements represent the weak entity type names.

Question No: 7 (Marks: 1) - Please choose one
Identify the constraint that limits the values that can be placed in a column.
► Not null
► Check Click here for Detail rep
► Foreign Key
► Unique

Question No: 8 (Marks: 1) - Please choose one
Identify the INCORRECT statement among the given.
► An entity may be an object with a physical existence like a car, a house or an Employee.
► One cannot consider something which has conceptual existence like a course in a degree program as an entity. (Page 71) rep
► Age can be considered as a single value attribute of a person.
► An entity type describes the schema or intension for a set of entities which share the same structure.

Question No: 9 (Marks: 1) - Please choose one
Select the correct statement among the following.
► Role names are not technically necessary in relationship types when all the participating entity types are distinct.
► When different entity types participate only once in a single relationship type it is called a recursive relationship. (Page 87) rep
► Cardinality ratios for binary relationship are displayed on Entity Relationship Diagrams by using a diamond shape notation .
► Partial participation which is also called existence dependency is displayed as a double line connecting the participating entity type to the relationship.

Question No: 10 (Marks: 1) - Please choose one
If W, X, Y and Z are attributes of a relation, which of the following inference rules for functional dependencies is correct?
► If (X, Z) -> Y then X -> Y and Z -> Y.
► If X -> Y and X -> Z then X -> (Y, Z).
► If X Y then Y -> X
► If X -> Y then (X, Z) -> (Y,W).
Question No: 11 (Marks: 1) - Please choose one
Which of the following is not a benefit of normalization?

- Minimize insertion anomalies
- Minimize deletion anomalies
- Minimize updation anomalies
- **Maximize redundancy** (Page 162)

Question No: 12 (Marks: 1) - Please choose one
A candidate key that does not have a null value and is selected to uniquely identify all other attribute values in any given row is called a.

- superkey
- candidate key
- **primary key** Click here for Detail
- secondary key

Question No: 13 (Marks: 1) - Please choose one
In case of Context-level Diagram, the system is represented by
Select correct option:

- **One process atleast** Click here for Detail
- Two processes atleast
- One process only
- Any number of processes

Question No: 14 (Marks: 1) - Please choose one
A _____ is used to maintain a connection between the users of the database system.

Select correct option:
- Mail server
- **File Server** Click here for detail
- Client-server
- None of the given.
Question No: 1 (Marks: 1) - Please choose one
Which of the following is not a benefit of normalization?
► Minimize insertion anomalies
► Minimize deletion anomalies
► Minimize updation anomalies
► **Maximize redundancy**  (Page 162)  

Question No: 2 (Marks: 1) - Please choose one
Which of the following is NOT a component of a DFD?
► Dataflow
► Datastore
► External entities
► **Relationship between external entities**  (Page 57)

Question No: 3 (Marks: 1) - Please choose one
Which of the following is correct regarding Dataflow diagram?
► Single DFD is required to represent a system
► The dataflow must be bidirectional
► **Created at increasing levels of detail**  Click here for Detail
► Used to represent the relationships among the external entities

Question No: 4 (Marks: 1) - Please choose one
Which of the following is CORRECT about database management system's languages?
► Data definition languages are used to specify the conceptual schema only.
► Data manipulation languages are used to create the databases.
► **Data manipulation languages are used for retrieval, insertion, deletion and modification of data.**  Click here for Detail
► Data definition languages are only used to update data in the DBMS.

Question No: 5 (Marks: 1) - Please choose one
Controlling redundancy in a database management system DOES NOT help to
► avoid duplication
► **avoid unnecessary wastage of storage space**  Click here for detail
► avoid unauthorised access to data
► avoid inconsistency among data
Question No: 6 (Marks: 1) - Please choose one
Which of the following concepts is applicable with respect to 3NF?

► Full functional dependency
► Any kind of dependency
► **Transitive dependency** (Page 172)
► Partial functional dependency

Question No: 7 (Marks: 1) - Please choose one
Consider two sets A and B. A contains 3 elements and B contains 4. How many elements do their Cartesian product contain?

► **12** (Page 129)
► 9
► 16
► 7

Question No: 8 (Marks: 1) - Please choose one
Consider two sets A and B. A contains 2 elements and B contains 3. How many elements do their cartesian product contain?

► **6** (Page 129)
► 9
► 4
► 5

Question No: 9 (Marks: 1) - Please choose one
In a conceptual database model, which of the following most likely represents a valid identifier for a class grades?

► StudentID
► StudentID, CourseID
► StudentID, CourseID, InstructorID
► **StudentID, CourseSectionID**  Click here for Detail

Question No: 10 (Marks: 1) - Please choose one
Identify the correct statement with respect to normalization.

► Normalization is a formal technique that can be used only at the starting phase of the database design.
► **Normalization can be used as a top-down standalone database design technique.**  Click here for detail

rep

► The process of normalization through decomposition must achieve the lossless join property at any cost whereas the dependency reservation property is sometimes sacrificed.
► The process of normalization through decomposition must achieve the dependency reservation property at any cost whereas the lossless join property is sometimes sacrificed.
Question No: 11 (Marks: 1) - Please choose one
Consider the following relation and its sample data. (Consider that these are the only tuples for the given relation)

<table>
<thead>
<tr>
<th>EmpNo</th>
<th>DeptNo</th>
<th>ProjNo</th>
</tr>
</thead>
<tbody>
<tr>
<td>1001</td>
<td>01</td>
<td>12</td>
</tr>
<tr>
<td>1001</td>
<td>01</td>
<td>13</td>
</tr>
<tr>
<td>1002</td>
<td>01</td>
<td>12</td>
</tr>
<tr>
<td>1003</td>
<td>01</td>
<td>14</td>
</tr>
</tbody>
</table>

Which of the following statements is NOT correct?

► The functional dependency 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: 12 (Marks: 1) - Please choose one
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: 13 (Marks: 1) - Please choose one
Identify the operation which is NOT one of the parts of the five basic set operations in relational algebra?

► Join
► Union
► Cartesian Product
► Set Difference

Question No: 14 (Marks: 1) - Please choose one
Consider the following statements.
A. An entity integrity constraint states that no primary key value can be null.
B. A referential integrity constraint is specified between two relations.
C. A foreign key cannot be used to refer to its own relation.

Identify which of the above statements is/are correct.

► Only A (Page 134)
► Only B
► Only B and C
► Only A and B
Question No: 15 (Marks: 1) - Please choose one
If K is a foreign key in relation R1, then
► every tuple of R1 has a distinct value for K.
► K cannot have a null value for tuples in R1.
► **K is a key for some other relation.**  
► K is a primary key for R1.

Question No: 16 (Marks: 1) - Please choose one
Making a change to the conceptual schema of a database but not affecting the existing external schemas is an example of

► Physical data independence.
► Concurrency control.
► **Logical data independence.**  
► Functional dependency
CS403: Quiz 1 ( April 23, 2012 )

Quiz Start Time: 10:46 PM
Time Left 78 sec(s)
Question # 1 of 10 ( Start time: 10:46:50 PM ) Total Marks: 1
A relational database is
Select correct option:
- one that consists of two or more tables
- a database that is able to process tables, queries, forms, reports and macros
- one that consists of two or more tables that are joined in some way
- the same as a flat file database

Quiz Start Time: 10:46 PM
Time Left 88 sec(s)
Question # 2 of 10 ( Start time: 10:47:27 PM ) Total Marks: 1
Which of the following constraints enforces entity integrity?
Select correct option:
- PRIMARY KEY
- FOREIGN KEY
- CHECK
- NOT NULL

Quiz Start Time: 10:46 PM
Time Left 89 sec(s)
Question # 3 of 10 ( Start time: 10:47:46 PM ) Total Marks: 1
A primary key is an attribute (or set of attributes) that has been chosen for an entity, whose values are used to uniquely identify a particular instance of an entity. True or false?
Select correct option:
- True
- False
- Partially True
- None of the given

Quiz Start Time: 10:46 PM
Time Left 89 sec(s)
Question # 4 of 10 ( Start time: 10:48:28 PM ) Total Marks: 1
A table can be logically connected to another table by defining a _____. Select correct option:
- hyperlink
- common attribute
Quiz Start Time: 10:46 PM
Time Left 89 sec(s)
Question # 9 of 10 (Start time: 10:52:20 PM) Total Marks: 1
Within a table, each primary key value ____. Select correct option:
- is a minimal superkey
- is always the first field in each table
- must be numeric
- **must be unique**

Quiz Start Time: 10:46 PM
Time Left 89 sec(s)
Question # 5 of 10 (Start time: 10:48:51 PM) Total Marks: 1
A candidate key that does not have a null value and is selected to uniquely identify all other attribute values in any given row is called a ____. Select correct option:
- superkey
- candidate key
- **primary key**
- secondary key

Quiz Start Time: 10:46 PM
Time Left 86 sec(s)
Question # 6 of 10 (Start time: 10:49:40 PM) Total Marks: 1
Data about data is metadata Select correct option:
- True
- False

Quiz Start Time: 10:46 PM
Time Left 89 sec(s)
Question # 7 of 10 (Start time: 10:50:47 PM) Total Marks: 1
Which of the following is NOT a component of a DFD?
Select correct option:
- Dataflow
- Datastore
- External entities
- **Relationship between external entities**
A________is used to maintain a connection between the users of the database system.

Select correct option:
- mail server
- file server
- client-server
- none of the given

An entity type is__

Select correct option:
- defined when the database is actually constructed
- a specific type such as an integer, text, date, logical etc
- a coherent set of similar objects that we want to store data on (e.g. STUDENT, COURSE, CAR)
- defined by the database designer

Which one of the following is NOT a characteristic of meta data? Select correct option:
- Data about data Describes
- a data dictionary Self-describing
- Includes user data

Which of the following is INCORRECT statement concerning the database design process? Select correct option:
- During requirements collection and analysis phase, one can gather the data requirements of database users.
- By referring to a high level data model, it is possible to understand the data requirements of the users, entity types, relationships and constraints.
Transformation of the high level data model into the implementation data model is called logical design or data model mapping. During the logical design phase of internal storage structures, access paths and file organization for the database files are specified.

Quiz Start Time: 09:49
PM Time Left 88 sec(s)
Question # 3 of 10 ( Start time: 09:50:28 PM ) Total Marks: 1
A primary key is an attribute (or set of attributes) that has been chosen for an entity, whose values are used to uniquely identify a particular instance of an entity. True or false?
Select correct option: True
False
Partially True
None of the given

Quiz Start Time: 09:49
PM Time Left 88 sec(s)
Question # 4 of 10 ( Start time: 09:51:06 PM ) Total Marks: 1
A software package designed to store and manage databases Select correct option:
Database
DBMS
Data model
Data

Quiz Start Time: 09:49
PM Time Left 88 sec(s)
Question # 5 of 10 ( Start time: 09:51:33 PM ) Total Marks: 1
Which of the following is NOT a component of a DFD?
Select correct option:
Dataflow
Datastore
External entities
Relationship between external entities
Question # 6 of 10 (Start time: 09:51:59 PM) Total Marks: 1
Within a table, each primary key value ___.
Select correct option:
is a minimal superkey
is always the first field in each table
must be numeric
must be unique

Question # 7 of 10 (Start time: 09:52:33 PM) Total Marks: 1
Which levels are mostly used for Detailed DFD?
Select correct option:
Level-0, Level-1
Level-1, Level-2
Level-2, Level-3
Level-3, Level-4

Question # 8 of 10 (Start time: 09:52:54 PM) Total Marks: 1
In a three-level DBMS architecture, the ____ level interacts directly with the users.
Select correct option:
external
conceptual
internal
physical

Question # 9 of 10 (Start time: 09:53:32 PM) Total Marks: 1
Database Application is a program which is used for performing certain operations such as Select correct option:
Insertion of data
Extraction of data
Updating the data
All of above
Question # 10 of 10 (Start time: 09:54:14 PM) Total Marks: 1
Data about data is metadata
Select correct option:
True
False

Question # 1 of 10 (Start time: 08:56:04 PM) Total Marks: 1
Which of the following constraints enforces entity integrity?
Select correct option:
PRIMARY KEY
FOREIGN KEY
CHECK
NOT NULL

Question # 2 of 10 (Start time: 08:57:21 PM) Total Marks: 1
Data about data is database
Select correct option:
True
False
Partially True
None of the Above
Question # 3 of 10 ( Start time: 08:58:29 PM ) Total Marks: 1
Which of the following is NOT a component of a DFD?
Select correct option:

- Dataflow
- Datastore
- External entities
- Relationship between external entities

Question # 4 of 10 ( Start time: 08:59:33 PM ) Total Marks: 1
Which of the following describes a database system?
Select correct option:

- A collection of stored operational data used by the application system of some particular enterprise
- A shared collection of logically related data (and a description of this data) designed to meet the information needs of an organisation
- A collection of stored data organised in such a way that all user requirements are satisfied by the database. In general there is only one copy of each item of data although there may be controlled repetition of some data.
- All of the above

Question # 5 of 10 ( Start time: 09:00:14 PM ) Total Marks: 1
Which of the following describes the job of a database administrator?
Select correct option:

Development, implementation operation of the physical database
Creation of the system catalog
Monitoring and controlling database security and authorization: Setting up controls to ensure the quality and integrity of data
All of the above

BC090402200 : Muhammad Waqas

Quiz Start Time: 08:56 PM Time Left 88 sec(s)

Question # 6 of 10 ( Start time: 09:00:34 PM ) Total Marks: 1
A________is used to maintain a connection between the users of the database system.
Select correct option:

mail server
file server
client-server
none of the given

BC090402200 : Muhammad Waqas

Quiz Start Time: 08:56 PM Time Left 88 sec(s)

Question # 7 of 10 ( Start time: 09:01:13 PM ) Total Marks: 1
A primary key is an attribute (or set of attributes) that has been chosen for an entity, whose values are used to uniquely identify a particular instance of an entity. True or false?
Select correct option:

True
False
Partially True
None of the given
Question # 8 of 10 ( Start time: 09:01:36 PM ) Total Marks: 1
Which of the following is INCORRECT statement concerning the database design process? Select correct option:

During requirements collection and analysis phase, one can gather the data requirements of database users.

By referring to a high level data model, it is possible to understand the data requirements of the users, entity types, relationships and constraints.

Transformation of the high level data model into the implementation data model is called logical design or data model mapping.

**During the logical design phase of internal storage structures, access paths and file organization for the database files are specified.**

Question # 9 of 10 ( Start time: 09:01:59 PM ) Total Marks: 1
Which model operates at the lowest level of abstraction? Select correct option:

- conceptual
- internal
- external
- physical
A table can be logically connected to another table by defining a ____.

Select correct option:

- hyperlink
- common attribute primary key
- superkey

User rights information is stored in

Select correct option:

- Physical database
- Catalog
- Logical database
- Buffer

description on a particular collection of data using the given data model

Select correct option:

- Database
- Relation
- Schema
- None

In a three-level DBMS architecture, the _____ level interacts directly with the users.

Select correct option:

- external
- conceptual
- internal
- physical

Data inconsistency leads to a number of problems such as

Select correct option:

- loss of information and incorrect result
- less secure data
- redundant data

A candidate key that does not have a null value and is selected to uniquely identify all other attribute values in any given row is called a ___.

Select correct option:
superkey
candidate key
**primary key**
secondary key

12:51 PM
The database management system (DBMS) is used to Select correct option:

Store the data
Access the data
Manage its users

*All of above*

: Which of the following constraints enforces entity integrity?
Select correct option:

- PRIMARY KEY
- FOREIGN KEY
- CHECK
- NOT NULL

Which model operates at the lowest level of abstraction?
Select correct option:

- conceptual
- internal
- external
- **physical**

AZAHID86: 4
12:54 PM: A candidate key that does not have a null value and is selected to uniquely identify all other attribute values in any given row is called a __.
Select correct option:

superkey
candidate key
**primary key**
secondary key

A Foreign Key is
Select correct option:

**A field in a table that matches a key field in another table**

A field in a table that contains data that is also contained elsewhere in another table

A field in a table that has the same name as a key field in another table
A field in a table that has the same name as a key field in another table

Which one of the following is NOT a characteristic of meta data?
Select correct option:

Data about data
Describes a data dictionary
Self-describing

Includes user data
Entity Relation Model models
Select correct option:

Entities, Relationships and Processes

Entities and Relationships
Relationships
Entities

Within a table, each primary key value ___.
Select correct option:

is a minimal superkey
is always the first field in each table
must be numeric
must be unique

A description on a particular collection of data using the given data model
Select correct option:

Database
Relation
Schema
None

The most widely used conceptual model is the ___ model.
Select correct option:

implementation
ER
Object Oriented
internal

1:03 PM A collection of concepts that can be used to describe the structure of a database Select correct option:

Database
DBMS

Data model

Data

An instance is
Select correct option:

a particular occurrence of an entity
a special type of relation
Which of the following describes the job of a database administrator?
Select correct option:

- Development, implementation operation of the physical database
- Creation of the system catalog
- Monitoring and controlling database security and authorization: Setting up controls to ensure the quality and integrity of data
- All of the above

Which of the following is correct regarding Dataflow diagram?
Select correct option:

- Single DFD is required to represent a system
- Created at increasing levels of detail
- The dataflow must be bidirectional
- Used to represent the relationships among the external entities

The Entity Relation Model models
Select correct option:

- Entities, Relationships and Processes
- Entities and Relationships
- Relationships
- Entities

Which of the following is INCORRECT statement concerning the database design process? Select correct option:

- During requirements collection and analysis phase, one can gather the data requirements of database users.
- By referring to a high level data model, it is possible to understand the data requirements of the users, entity types, relationships and constraints.
- Transformation of the high level data model into the implementation data model is called logical design or data model mapping.
- During the logical design phase of internal storage structures, access paths and file organization for the database files are specified.

A primary key is an attribute (or set of attributes) that has been chosen for an entity, whose values are used to uniquely identify a particular instance of an entity. True or false?
Select correct option:

- True
- False
Partially True
None of the given 1:12 PM

Data Redundancy Means
Select correct option:

Security of data

**Duplication of data**
Management of data
Recovery of data

Which one of the following is NOT a characteristic of meta data?
Select correct option:

Data about data Describes
a data dictionary Self-describing

**Includes user data**

Which of the following is NOT a component of a DFD? Select correct option:

Dataflow
Datastore
External entities

**Relationship between external entities**

Each table must have a ___ key.
Select correct option:

**primary**
secondary
logical
foreign

A software package designed to store and manage databases Select correct option:

Database

**DBMS**

Data model

Data

Controlling redundancy in a database management system DOES NOT help to
Select correct option:

avoid duplication
avoid unnecessary wastage of storage
space avoid unauthorised access to data
avoid inconsistency among data
A relational database system is based on the concept(s) of:
Select correct option:

- A network of data records
- Nested tables
- Tables, rows and columns
- A tree-like structure of data

A relational database is
Select correct option:

- one that consists of two or more tables
- a database that is able to process tables, queries, forms, reports and macros

*one that consists of two or more tables that are joined in some way*

Making a change to the conceptual schema of a database but not affecting the existing external schemas is an example of
Select correct option:

- Physical data independence
- Logical data independence
- Functional dependency
- Concurrency control

An entity type is
Select correct option:

- defined when the database is actually constructed
- a specific type such as an integer, text, date, logical etc
- *a coherent set of similar objects that we want to store data on (e.g. STUDENT, COURSE, CAR)*
- defined by the database designer

Which levels are mostly used for Detailed DFD?
Select correct option:

- Level-0, Level-1
- **Level-1, Level-2**
- Level-2, Level-3
- Level-3, Level-4

Incase of Context-level Diagram, the system is represented by
Select correct option:

- One process atleast
- Two processes atleast
- One process only
- Any number of processes

Which of the following is a feature of CHECK constraint?
Select correct option:

*limit the values that can be placed in a column.*
used to enforce referential integrity.
-enforces the uniqueness of the values in a set of columns.
is a unique identifier for a row within a database table.

Data about data is database
Select correct option:

True
*False*
Partially True
None of the Above

In an ERD, the focus is on the ___ and the relationships between them.
Select correct option:

attributes
entities
keys
indexes

: The entity relationship diagram is used to graphically represent the ___ database model.
Select correct option:

condensed
physical
logical
conceptual

**ANWAR:** in “One to One Relationship” One instance of first entity type is mapped with two instances of second entity type
Select correct option:

true
false

: “Select” and “project” are the examples
of Select correct option:

Unary operations
Binary operations
Ternary operations
All of above

If A -> B and A -> C, then A -> BC The Inference Rule applies is;
Select correct option:

Union
Decomposition
Augmentation
Reflexivity

Unary operations involves
Select correct option:

**Only one relation**
Only two relations
More than two relations
Not more than five relations

Which of the following might be represented with a multi-valued attribute?
Select correct option:

person's name
class location
**bank account**
balance book title

Select correct option:

in "many to many relationship" one instance of first entity can be mapped with many instances of second entity
Select correct option:

true
false

Quiz Start Time: 04:03 PM
Time Left 89 sec(s)
Question # 1 of 8 ( Start time: 04:03:58 PM ) Total Marks: 1
Which of the following might be represented with a single-valued attribute? Select correct option:

person's phone number
car's color
employee's educational background
computer's processor speed

Quiz Start Time: 04:03 PM
Time Left 89 sec(s)
Question # 2 of 8 ( Start time: 04:04:11 PM ) Total Marks: 1
Binary relationships are those, which are established between Select correct option:

One entity type
Two entity type
Three entity type
Unlimited entities

Quiz Start Time: 04:03 PM
Time Left 89 sec(s)
Question # 3 of 8 ( Start time: 04:04:22 PM ) Total Marks: 1
_____ is same as Equi-Join with a slight difference. Select correct option:

Natural Join
Semi Join
Outer Join
Theta Join

Question # 4 of 8 (Start time: 04:05:05 PM) Total Marks: 1
"Select" and "project" are the examples of
Select correct option:
- **Unary operations**
- Binary operations
- Ternary operations
- All of above

Question # 5 of 8 (Start time: 04:05:24 PM) Total Marks: 1
Relational Calculus is a __________ relational data manipulation language.
Select correct option:
- Procedural, Informal
- Non-Procedural, Informal
- Procedural, Formal
- Non-Procedural, Formal

Question # 6 of 8 (Start time: 04:05:49 PM) Total Marks: 1
In "One to Many" cardinality one instance of a relation is mapped with
Select correct option:
- many instances of second entity type
- One instance of second entity type
- Primary key of 2 relations
- none of above

Question # 7 of 8 (Start time: 04:06:08 PM) Total Marks: 1
Atomicity is a feature of _____.
Select correct option:
- **1NF**
- 2NF
- 3NF
- BCNF

Question # 8 of 8 (Start time: 04:06:29 PM) Total Marks: 1
A __ entity has a primary key that is partially or totally derived from the parent entity in the relationship. Select correct option:

strong Weak

Business Relationship

Database Systems, Chapter 1

1. What is a benefit of using a DBMS?

A. ? they provide full security to data using private/public key encryption
B. ? they create automatic backups
C. ? they help create an environment for end users to have access to more data
D. ? they provide seamless Internet access to database data

2. What is the name for an answer to a query that the DBMS sends back to the application?

A. ? DBMS result
B. ? query result set
C. ? question result
D. ? data result

3. A single-user database that runs on a personal computer is called a(n) ____ database.

A. ? workgroup
B. ? distributed
C. ? enterprise
D. ? desktop

4. The content of any given field is the ____.
   A. ? database
   B. ? field value
   C. ? entity
   D. ? table

5. Data processing (DP) specialists are in existence because of _______.
   A. ? the increase in the number of computers
   B. ? the advent of database management systems
   C. ? the need to convert manual files to a matching computer file system
   D. ? the need to speed up processing of data

6. _____ are considered database architects.
   A. ? Database administrators
   B. ? Systems administrators
   C. ? Database designers
   D. ? Systems analysts and programmers

7. Programming in a(n) _____ may be a time-consuming and high-skill activity.
   A. ? COB
   B. ? AIS
C. 3GL
D. DMB

8. The ____ receives all application requests and translates them into the complex operations required to fulfill requests.

A. query
B. workgroup
C. DBMS
D. DP

9. A ____ focuses primarily on storing data used to generate information required to make tactical or strategic decisions.

A. distributed database
B. workgroup database
C. data warehouse
D. production database

10. Accurate, relevant, and timely ____ is the key to good decision making.

A. information
B. processing
C. data
D. relationships

11. The word ____ indicates that the facts have not yet been processed to reveal their meaning.
A. ? raw
B. ? information
C. ? data
D. ? dictionary

12. What is the maximum number of users normally supported by a workgroup database?

A. ? 10
B. ? 30
C. ? 50
D. ? 100

13. Which of the following would result in a data anomaly?

A. ? inconsistent redundant data
B. ? modification of data
C. ? timeliness of data
D. ? obsolescence of data

14. Processed data, or ____, can be used as the basis for decision making.

A. ? raw data
B. ? information
C. ? queries
D. ? DP
15. What is the most common classification applied to a DBMS?

A. ? number of users
B. ? database site location(s)
C. ? expected type and extent of use
D. ? software manufacturer

16. Which of the following products do not provide an enterprise database?

A. ? MS Access
B. ? MS SQL Server
C. ? IBM DB2
D. ? Oracle RDBMS

17. Data _____ exists when the same data are stored unnecessarily at different places.

A. ? dependency
B. ? redundancy
C. ? inconsistency
D. ? fragmentation

18. What is the name for data about data?

A. ? unique data
B. ? raw data
C. ? metadata
D. ? superdata
19. A ____ allows the user to specify what must be done without specifying how it must be done.

A. ? 1GL
B. ? 2GL
C. ? 3GL
D. ? 4GL

20. Database management systems, operating systems, applications and utilities are all examples of ____.

A. ? software
B. ? hardware
C. ? computer infrastructure
D. ? input and output

Chapter 2
Data Models

1. The most widely used conceptual model is the ____ model.

A. ? implementation
B. ? ER
C. ? OO
D. ? internal

2. What model requires the most detail in its internal model?

A. ? network
3. In the OO data model, a class' ____ represents a real-world action such as finding a selected PERSON's name.

   A. ? inheritance
   B. ? hierarchy
   C. ? interface
   D. ? method

4. Using network database terminology, a relationship is called a(n) ____. 

   A. ? member
   B. ? owner
   C. ? set
   D. ? table

5. The ____ model adapts a conceptual model to a specific DBMS.

   A. ? entity
   B. ? internal
   C. ? external
   D. ? database

6. What type of relationship is expressed with the phrase "Employee manages Store"?
7. A ____ is the equivalent of a file system's record type.
   A. ? root
   B. ? child
   C. ? **segment**
   D. ? parent

8. The hierarchical database model is based on a ____.
   A. ? **tree structure**
   B. ? lack of a parent segment
   C. ? lack of a child segment
   D. ? matrix

9. The ERDM is primarily geared to business applications, while the OODM tends to focus on ____ applications.
   A. ? educational
   B. ? **very specialized engineering and scientific**
   C. ? non-commercial Internet
   D. ? personal
10. A(n) ____ model is independent of both hardware and software.

   A. ____ conceptual
   B. ____ external
   C. ____ developmental
   D. ____ logical

11. The network database models have ____.

   A. ____ a navigational system that yields simple design
   B. ____ a simple system that promotes efficiency
   C. ____ an owner/member relationship that promotes database integrity
   D. ____ a great deal of structural independence

12. Data models were developed to ____.

   A. ____ model real-world events or conditions
   B. ____ deposit data within a single file
   C. ____ keep data within multiple data repositories
   D. ____ allow DBMSs to maintain loose control over the database activities

13. A table is a matrix consisting of a series of row and column ____.

   A. ____ links
   B. ____ models
   C. ____ systems
   D. ____ intersections
14. What type of relationship is expressed with the phrase "Student takes Class"?

A. 1:*  
B. 1:1  
C. *:1  
D. *:*  

15. What modern development has drastically changed the role and scope of the database market?

A. object-oriented programming  
B. the Internet  
C. Y2K  
D. mainframes  

16. The object-oriented model ____.

A. adds semantic content  
B. has no standards  
C. has a simple navigational system  
D. has a low system overhead that speeds transactions  

17. One of the advantages of a relational database model is ____.

A. structural dependence  
B. conceptual complexity  
C. complex database design  
D. easier database design
18. What is the fastest and most direct source of business rules?

A. ? company documentation
B. ? interviews with end users
C. ? the Internet
D. ? a database design document

19. Which model operates at the lowest level of abstraction?

A. ? conceptual
B. ? internal
C. ? external
D. ? physical

20. In response to the increasing complexity of applications, two new data models emerged: the object-oriented data model and the ____ relational data model.

A. ? extended
B. ? flat-file
C. ? hierarchical
D. ? entity

The Relational Database Model, Chapter 3

1. A candidate key that does not have a null value and is selected to uniquely identify all other attribute values in any given row is called a ____.

A. ? superkey
B. ? candidate key
2. A ____ functionally determines all of the row’s attributes.

A. ? superkey
B. ? primary key
C. ? foreign key
D. ? combined key

3. ____ are especially useful when you are trying to determine what value(s) in related tables cause(s) referential integrity problems.

A. ? Inner joins
B. ? Natural joins
C. ? Outer joins
D. ? Equijoins

4. Within a table, the primary key must be unique so that it will identify each row. When this is the case, the table is said to exhibit ____ integrity.

A. ? referential
B. ? entity
C. ? enforced
D. ? key

5. A(n) ____ is an orderly arrangement used to logically access rows in a table.

A. ? entity
6. A table can be logically connected to another table by defining a ____.

A. ? hyperlink
B. ? common attribute
C. ? primary key
D. ? superkey

7. A ____ key is defined as a key that is used strictly for data retrieval purposes.

A. ? primary
B. ? foreign
C. ? secondary
D. ? data

8. If a foreign key contains either matching values or nulls, the table(s) that make use of such a foreign key is/are said to exhibit ____ integrity.

A. ? referential
B. ? restrictive
C. ? secondary
D. ? redundant

9. The key's role is based on a concept known as ____.
A. ? consistency
B. ? availability
C. ? determination
D. ? uniqueness

10. A superkey that does not contain a subset of attributes that is itself a superkey is called a ____.

A. ? candidate key
B. ? primary key
C. ? superkey
D. ? secondary key

11. The problems inherent in the many-to-many (:*:) relationship can easily be avoided by creating a ____ entity.

A. ? foreign
B. ? composite
C. ? related
D. ? logical

12. Each table must have a ____ key.

A. ? primary
B. ? secondary
C. ? foreign
D. ? logical
13. Within a table, each primary key value ____.

A. ? is a minimal superkey
B. ? is always the first field in each table
C. ? must be numeric
D. ? must be unique

14. The ____ can be described as a detailed system data dictionary that describes all objects within the database, including data about table names, the table's creator and creation date, the number of columns in each table, the data type corresponding to each column, index filenames, index creators, authorized users and access privileges.

A. ? data dictionary
B. ? system catalog
C. ? index
D. ? rational structure

15. In a relationship, when a primary key from one table is also defined in a second table, the field is referred to as a ____ in the second table.

A. ? a combined key
B. ? redundant field
C. ? primary key
D. ? foreign key

16. A multi-attribute key is known as a ____ key.

A. ? primary
B. ? super
17. We can describe a link by observing that a ____.

A. ? primary key of one table appears again as a primary key in a related table
B. ? foreign key of one table appears again as a foreign key in a related table
C. ? primary key of one table appears again as a foreign key in a related table
D. ? foreign key of one table appears again as a secondary key in a related table

18. ___________ dictates that the foreign key must contain values that match the primary key in the related table or must contain nulls.

A. ? Entity integrity
B. ? Functional dependence
C. ? Referential integrity
D. ? Full functional dependence

19. The __________ of a relation is the number of its attributes.

A. ? degree
B. ? cardinality
C. ? domain
D. ? size

20. The __________ of a relation is the number of its tuples.

A. ? degree
B. ? **cardinality**
C. ? **domain**
D. ? **size**

Which of the following might be represented with a multivalued attribute

**class location**

A primary key is an attribute (or set of attributes) that has been chosen for an entity, whose values are used to uniquely identify a particular instance of an entity. True or false?

**True**

Data about data is database (true Meta data)

**false**

A ____ relationship exists when an association is maintained within a single entity.

**Unary**

Data Redundancy Means

**Duplication of data**

The entity relationship diagram is used to graphically represent the ____ database model

**Physical**

The most widely used conceptual model is the ____ model.

**ER**

ER model meant

**enable detailed descriptions of data query processing**

A candidate key that does not have a null value and is selected to uniquely identify all other attribute values in any given row is called a ____.

**primary key**

A table can be logically connected to another table by defining a ____.

**Common attribute**
Question No: 1 (Marks: 1) - Please choose one
Making a change to the conceptual schema of a database but not affecting the existing external schemas is an example of

► Physical data independence.
► Concurrency control.
► Logical data independence.
► Functional dependency.

Question No: 2 (Marks: 1) - Please choose one
GRANT SELECT, UPDATE(Designation) ON Employee TO Amali, Hiruni WITH GRANT OPTION;
What does this SQL statement do?

► Grant permission to Amali, only to retrieve data from Employee table and grant permission to Hiruni, only to update the designation from Employee table.
► Grant permission to Hiruni in order to grant, select and update permission to Amali.
► Grant permission to Amali & Hiruni to update designation of employees in the Employee table.
► Grant permission to Amali and Hiruni to update all data except designation in Employee table.

Question No: 3 (Marks: 1) - Please choose one
Which key word is available in SQL to enforce referential integrity?

► Check
► Primary Key
► Set Default
► Unique

Question No: 4 (Marks: 1) - Please choose one
Which of the following statements are Data Definition Language command?

► INSERT
► UPDATE
► GRANT
► TRUNCATE

Question No: 5 (Marks: 1) - Please choose one
How many clustered index(es) do each database table have?

► 2
► 3
► 5
► 1

Question No: 6 (Marks: 1) - Please choose one
Which of the following is true about DELETE command?
**Question No: 7 (Marks: 1)**
Which of the following will be deleted relating to a table if you use TRUNCATE command?

- all rows in a table
- indexes
- table structure and its columns
- constraints

**Question No: 8 (Marks: 1)**
Which of the following is not true about De-normalization?

- It is the process of attempting to optimize the performance of a database
- De-normalization is a technique to move from lower to higher normal forms of database modeling
- In de-normalization it is required to add redundant data.
- It enhances the performance of DB

**Question No: 9 (Marks: 1)**
Which of the following is not a feature of TRANSACTION?

- Use should be able to regard the execution of each transaction as atomic.
- Each transaction, run by itself.
- must preserve the consistency of the database
- dependant on other concurrent transactions

**Question No: 10 (Marks: 1)**
Which of the following gives all the fields from employee table named as EMP?

- select * from EMP;
- select emp* from EMP' 
- select emp_id where EMP;
- select * where EMP;

**Question No: 11 (Marks: 1)**
Suppose there are 4 fields in a table named CUST (customer_id, first_name, last_name, phone). Which of the following gives all the information of the customers in the table whose last name is ALI?

- SELECT * FROM CUST WHERE last_name=ALI;
- SELECT * FROM CUST WHERE last_name=ALI;
- SELECT * FROM CUSTOMER WHERE name=ALI;
- SELECT * FROM CUSTOMER WHERE last_name=ALI;

**Question No: 12 (Marks: 1)**
Identify the correct statement with respect to normalization.

- Normalization is a formal technique that can be used only at the starting phase of the database design.
- Normalization can be used as a top-down standalone database design technique.
The process of normalization through decomposition must achieve the lossless join property at any cost whereas the dependency reservation property is sometimes sacrificed.

Question No: 13 (Marks: 1) - Please choose one
Which of the following is not true with respect to denormalization?
► A denormalized data model is not the same as a data model that has not been normalized
► Denormalization takes place before the normalization process
► It is an attempt to optimize the performance of database
► Denormalization process can not be initiated before the Database design

Question No: 14 (Marks: 1) - Please choose one
Which of the following is incorrect with respect to indexed sequential files?
► New records are added to an overflow file
► Record in main file that precedes it is updated to contain a pointer to the new record
► The overflow is merged with the main file during a batch update
► Multiple indexes for the same key field cannot be setup

Question No: 15 (Marks: 1) - Please choose one
Which of the following types of partitioning reduces the chances of unbalanced partitions?
► vertical
► List
► Hash
► Range

Question No: 16 (Marks: 1) - Please choose one
DML commands are used for:
► Inserting data into database
► creating databases
► destroying databases
► creating DB objects

Question No: 17 (Marks: 1) - Please choose one
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: 18 (Marks: 1) - Please choose one
which of the following is correct regarding Dataflow diagram?
► Single DFD is required to represent a system
► The dataflow must be bidirectional
► Created at increasing levels of detail
► Used to represent the relationships among the external entities

Question No: 19 (Marks: 1) - Please choose one
Select the correct statement among the following on proper naming of schema constructs:

► Entity type name applies to all the entities belonging to that entity type and therefore a plural name is selected for entity type.
► In the narrative description of the database requirements, verbs tend to indicate the names of relationship types.
► The nouns arising from a database requirement description can be considered as names of attributes.
► Additional nouns which are appearing in the narrative description of the database requirements represent the weak entity type names.

Question No: 20 (Marks: 1) - Please choose one
Structural constraints of a relationship type refer to:

► identifying the owner entity type relevant to a given entity type
► whether the existence of an entity depends on it being related to another entity via the relationship type.
► the role that a participating entity from the entity type plays in each relationship instance.
► the constraints applicable in granting access to tables, columns and views in a database schema.

Question No: 21 (Marks: 1) - Please choose one
Identify the correct statement.
► Entity integrity constraints specify that primary key values can be composite.
► Entity integrity constraints are specified on individual relations.
► Entity integrity constraints are specified between weak entities.
► When entity integrity rules are enforced, a tuple in one relation that refers to another relation must refer to an existing tuple.

Question No: 22 (Marks: 1) - Please choose one
What is the impact of setting multiple indexes for the same key, in index sequential files?
► Multiple indexes for the same key can not be set
► It increases efficiency
► It decreases efficiency
► It will increase complexity as the access time will be increased

Question No: 23 (Marks: 1) - Please choose one
Which of the following is not true regarding Indexes?
► Index can be defined even when there is no data in the table
► It support Range selections
► It can be created using ‘Create Index’ statement
► It can not be created on composite attributes
Question No: 24 (Marks: 1) - Please choose one
While recovering data, which of the following files does a recovery manager examines at first?

► A system file
► Log file
► Data dictionary
► Metadata

Question No: 25 (Marks: 1) - Please choose one
The main memory of a computer system is also known as

► ROM
► RAM
► PROM
► Hard disk

Question No: 26 (Marks: 1) - Please choose one
_______ is a control that enables users to select one option from an associated list; users can also type an option.

► Combo box
► Button
► Text box
► Static area

Question No: 27 (Marks: 1) - Please choose one
_______ records data by burning microscopic holes in the surface of the disk with a laser.

► Hard disk
► RAM
► Optical disk
► Floppy disk

Question No: 28 (Marks: 1) - Please choose one
Which of following is NOT generally the aim of data partitioning and placement of data?

► Reduce Workload
► Balance Workload
► Merging different relations
► Speed up rate of useful works.

Question No: 29 (Marks: 1) - Please choose one
ALTER TABLE exams
RENAME COLUMN Q_description TO Question_Descp, Std_ID to Student_ID.

Syntax of ALTER TABLE is NOT correct.
Question No: 30 ( Marks: 1 ) - Please choose one
Which of the following is true regarding Index?
► Index can only be created for a single table in database
► Index can maximum be created for two tables in database
► Index should be created for every table in the database
► Index can be created for every table in the database

Question # 1 of 10 ( Start time: 09:52:41 PM ) Total Marks: 1
Which of the following is used with INSERT command to insert values in a DB table?
Select correct option:
ONTO
INTO
UPTO
WITH

Which of the following is a correct way of selecting all the columns from a table called PERSONS?
Select correct option:
SELECT FROM * Persons
SELECT * FROM Persons
SELECT * WHERE Persons
SELECT WHERE * Persons

Question # 3 of 10 ( Start time: 09:53:51 PM ) Total Marks: 1
The ________ operator allows to use wild cards in the where clause of an SQL statement.
Select correct option:
IN
FROM
LIKE
None of the above.

Question # 4 of 10 (Start time: 09:54:15 PM) Total Marks: 1
Which of the following statements creates a database named IMDB.
Select correct option:
CREATE DATABASE IMDB;
CREATE DB IMDB;
ADD DATABASE named IMDB;
CREATE IMDB DATABASE;

Question # 5 of 10 (Start time: 09:54:31 PM) Total Marks: 1
Which of the following is not true regarding clustering?
Select correct option:
It increases the efficiency since related records are placed close to each other
Clustering makes records, difficult to access
suitable to relatively static situations.
It is a process, which means to place records from different tables to place in adjacent physical locations.

Question # 6 of 10 (Start time: 09:54:55 PM) Total Marks: 1
Which of the following is used to filter rows according to some condition(s)?
Select correct option:
SELECT
FROM
WHERE
UPDATE

Question # 7 of 10 (Start time: 09:55:14 PM) Total Marks: 1
Which of the following is not an aggregate function
Select correct option:
AVG
SUM
UPPER
MAX

CREATE TABLE and CREATE index belongs to which type of SQL commands
Select correct option:
DML
DDL
DCL
DQL

Question # 9 of 10 ( Start time: 09:55:59 PM ) Total Marks: 1
In SQL, which command is used to modify the rows of tables.
Select correct option:
UPDATE
INSERT
BROWSE
APPEND

Question # 1 of 10
Which of the following statements creates a database named IMDB.
Select correct option:
CREATE DATABASE IMDB;
CREATE DB IMDB;
ADD DATABASE named IMDB;
CREATE IMDB DATABASE;
**Question # 2 of 10**

Which of the following is a correct way of selecting all the columns from a table called PERSONS?

Select correct option:

- SELECT FROM * Persons
- SELECT * FROM Persons
- SELECT * WHERE Persons
- SELECT WHERE * Persons

**Question # 3 of 10**

Which of the following is not a part of an INSERT statement?

Select correct option:

- INTO
- VALUES
- INSERT
- MODIFY

**Question # 4 of 10**

In SQL, which command is used to delete rows from table.

Select correct option:

- DELETE
- REMOVE
- TRUNCATE
- Both I and II
Question # 5 of 10
Which of the following is the correct syntax for adding a new column into an existing table.
Select correct option:
ALTER TABLE table_name { ALTER [COLUMN] column type [(size)] [DEFAULT default] }
ALTER TABLE table_name { ADD [COLUMN] column type [(size)] [DEFAULT default] }
Both I and II.
None of the above.

Question # 6 of 10
GRANT belongs to which type of SQL commands classification
Select correct option:
DML
DDL
DCL
DQL

Question # 7 of 10
What happens if the WHERE clause is omitted from a DELETE statement?
Select correct option:
All records from the table are deleted
No record from the table will be deleted
First record of the table will be deleted
The statement will not be executed and will give a syntax error

Question # 8 of 10
What does the abbreviation DBMS stand for?
Select correct option:
Database Manipulation Software.
Data Borrowing and Movement Software
Digital Base Mapping System.
**Database Management System.**

**Question # 9 of 10**
Which of the following is used to filter rows according to some condition(s)?
Select correct option:
SELECT
FROM
**WHERE**
UPDATE

**Question # 10 of 10**
REATE TABLE and CREATE index belongs to which type of SQL commands
Select correct option:
DML
DDL
**DCL**
DQL

Which of the following is a service provided by a DBMS?

- A) It ensures and enforces data integrity at all levels
- B) It maintains an environment in which security is created and enforced
- C) It manages the metadata in the data dictionary
- **D) All of the above are services of a DBMS**
2

What is the difference between a DBMS and an RDBMS?

A) A RDBMS uses metadata while a DBMS does not.

B) A DBMS is used for data warehousing.

C) **Because a relational database is more complicated than a conventional database, the RDBMS requires much more computing power than the conventional DBMS requires.**

D) Because a conventional database is less complicated than a relational database, the DBMS is used more often for transactional databases.

www..net

3

Which of the following statements best describes a data warehouse?

A) **A data storage facility dedicated to using the existing data to generate information.**

B) Frequent and complex transactions characterize its use.

C) The most common type of database in use today.

D) Generally used in environments with large inventories, thus the term warehouse.

www..net

4

Which of the following justifies the inclusion of derived attributes in a database?

A) Inclusion of derived attributes is a standard procedure and does not require justification.

B) Derived attributes should be used when they add to design elegance.

C) **Query speed is enhanced by not computing derived attributes.**
D) Poor design is the only excuse for the inclusion of derived attributes.

Select the statement that best defines a candidate key.

A) An attribute or combination of attributes that allows the user to search for non-unique data.
B) An attribute or combination of attributes that is calculated from existing data.
C) An attribute or combination of attributes that establishes relationships between tables.
D) **An attribute or combination of attributes that could be, but is not, used as a PK**

**Normalizing the Database table Structures**

1

A __________ is established when the value of one attribute is dependent on the value of another attribute.

A) primary key
B) data anomaly
C) **dependency**
D) transitive relationship

2

The room ID + building ID determines the room schedule. This is written:

A) **ROOM_ID, BUILD_ID ? ROOM_SCH**
B) ROOM_ID + BUILD_ID ? ROOM_SCH
C) ROOM_ID, ROOM_SCH ? BUILD_ID
D) ROOM_ID, BUILD_ID ? ROOM_SCH
The database data storage standard requires that, with some exceptions, data must occur in only one place at one time. What are the exceptions?

A) Foreign key and replicated data requirements
B) Transitive dependencies and foreign keys
C) Replicated data and primary keys
D) Transitive dependencies and primary keys

Data redundancies produce unusual and undesirable data management problems caused by __________.

A) transitive requirements
B) dependencies
C) normalization
D) data anomalies

Removing the __________ is part of the database design process.

A) foreign keys
B) primary key dependencies
C) recursive relationships
D) partial and transitive dependencies

The POS Database Design Process
1
In a POS system, what do the major transaction modules define?

A) Inventory management, shipping, invoice calculations, and product returns
B) **Sales, inventory management, shipping, back ordering, and product returns**
C) Sales, invoice calculations, back ordering, and product returns
D) Inventory management, shipping, invoice calculations, back ordering, and product returns

2
What are the fourth and fifth steps in developing a POS?

A) Define the entities, attributes, relationships, connectivities, cardinalities, and constraints. **Create the initial ERD segments.**
B) Develop business rules. Create the initial ERD segments.
C) Develop business rules. Define the entities, attributes, relationships, connectivities, cardinalities, and constraints.
D) Define the major transaction modules. Create the initial ERD segments.

3
After creating the initial ERD segments, the next step is to

A) define the major transaction modules.
B) perform the appropriate normalization checks based on the data dictionary contents.
C) **create a basic data dictionary for all the components found in each ERD segment.**
D) define the entities, attributes, relationships, connectivities, cardinalities, and constraints.
What will the following questions help you define? What types of transactions take place? How many different types of transactions are there?

A) Available resources
B) Data environment
C) Current operations
D) Business objectives

Which of the following is an advantage of having a precisely written set of current operations.

A) It clarifies the assignment of data types.
B) It highlights the best possible way to perform each task.
C) It forces careful assessment of the procedures.
D) It makes the creation of the data dictionary much easier.

Implementing the Database Design

You have created a table in Access, but not yet designated a PK. What happens if you save the table now?

A) The save fails because no PK is defined.
B) The save works as usual.
C) Access warns you that no primary key is defined, and forces you to define a PK before saving.
D) Access warns you that no primary key is defined, but lets you save the table if you want to.
2
You want to create a composite PK using the first and third fields in the table. How is this done?

A) Hold down the Shift key and click the first and third fields. Click the Key icon on the toolbar.
B) Hold down the Ctrl key and click the first and third fields. Click the Key icon on the toolbar.
C) Hold down the Shift key and click the first and third fields. Select Primary Key under the Table.
D) Hold down the Ctrl key and click the first and third fields. Select Primary Key under the Table.

3
What is required to establish a 1:1 relationship between two tables that do not contain a supertype and subtype?

A) 1:1 relationships are only possible if the tables contain a supertype and subtype.
B) Make sure that the PK in the related table has unique values.
C) Make sure that the FK in the related table has an index property that specifies unique values.
D) Nothing special is required.

4
In Access, how do you tell if referential integrity is enforced for a relationship?

A) The relationship lines are thick and dark, and the nature of the relationships is labeled.
B) The relationship lines are thin, and the nature of the relationships is labeled.
C) Right-click the relationship line to see if enforce referential integrity is checked.
D) Right-click the relationship line, select referential integrity, and look at the relationship's properties.
The relationship between STORE and EMPLOYEE is defaulted to mandatory, that is, the FK value in EMPLOYEE is required. How do you eliminate a record from STORE?

A) Delete the employees from the STORE to be deleted.
B) Permanently remove the referential integrity enforcement.
C) Open the EMPLOYEE table in the design format; then change the Required property of the EMPLOYEE's FK to No and make sure that its default value is set to null.
D) Delete all relationships between STORE and EMPLOYEE. Redesign the database to work without them.

**Queries**

1. **www..net**
   
   What does Access use to handle SQL code generation?

   A) SQL forms
   B) Query Code Generator
   C) **Query by Example**
   D) SQL compiler

2. Two basic query types exist. They are

   A) static and change queries.
   B) static and action queries.
   C) **select and action queries.**
   D) select and change queries.
What criteria matches dates from January 1, 1996 to the present?

A) \[ \geq "01/01/1996" \]
B) \[ \geq 01/01/1996 \]
C) \[ \geq \#01/01/1996\# \]
D) \[ \geq '01/01/1996' \]

EMP_DOB holds employee birth dates. Which format will display the month in number format, such as 01 or 11?

A) Month: Format([EMP_DOB],"m")
B) **Month: Format([EMP_DOB],"mm")**
C) Month: Format([EMP_DOB],"mmm")
D) Month: Format([EMP_DOB],"mmmm")

What does the wildcard ? match?

A) Zero or more of the preceding character
B) **Any one character in the position held by the ?**
C) Multiple characters in the position held by the ?
D) Any letter in the position held by the ?

**Form Development**

[www.net]
Which of the following are not functions of forms?

A) Forms are used to tie together the database components through menu structures.
B) Forms extend data validation rules through queries, value lists, and other input control devices.
C) Forms are used to enter new data and to edit existing data.
D) **Forms program and control user responses.**

2

Which of the following correctly describes the relationship between forms and tables?

A) A form is based on exactly one table. The table must exist before the form is created.
B) A form is based on exactly one table. The table may be created before or after the form is created.
C) **A form may be based on one or more tables. The table(s) must exist before the form is created.**
D) A form may be based on one or more tables. The table(s) may be created before or after the form is created.

3

What is the most common form type?

A) **A single-source form, based on a tabular format**
B) A single-source form, based on a columnar format
C) A multi-source form, based on a tabular format
D) A multi-source form, based on a columnar format

4

What are the advantages of form-based dialog boxes?

A) They have more prompting options than dialog boxes generated by Access.
B) They allow the use of combo boxes.
C) Access-generated dialog boxes are likely to disrupt interface layout schemes, while form-based dialog boxes are not.
D) All of the above.

5

Which of the following is not an advantage of a menu driven database system?

A) Help make the database applications system user-friendly by eliminating the need to remember command languages.
B) Provide security though user-level logins.
C) Control access by providing only those options that allow people to do their jobs.
D) Create an environment that is tailored to specific types of applications and end users.

Reports and Labels

1

You want month names to be sorted in order (Jan, Feb, Mar, etc.) when they appear on a report. What do you need to do?

A) Sort by month name.
B) Sort by month number.
C) Define the field with the data type month and sort Ascending.
D) Define the field with the data type month and sort Descending.

2

What functions would you use to put the current time and data output in a report header?
A) **Time() and Now()**  
B) **Time() and CurrentDate()**  
C) **CurrentTime() and Now()**  
D) **CurrentTime() and CurrentDate()**

3
Which syntax will concatenate employee first and last names, with a space in between the names?

A) \([[\text{EMP\_FNAME}\] & " " & \[\text{EMP\_FNAME}\])  
B) \([[\text{EMP\_FNAME}\] & " " & \[\text{EMP\_FNAME}\])  
C) \([[\text{EMP\_FNAME}\] " " & \[\text{EMP\_FNAME}\])  
D) \([[\text{EMP\_FNAME}\] " " & \[\text{EMP\_FNAME}\])

4
Which of the following accurately describes a crosstab query?

A) Crosstab queries have very limited summary capabilities.  
B) Crosstab queries are seldom used to generate reports.  
C) **If you select row totals in the crosstab query, you cannot also select column totals.**  
D) You can select row totals and also column totals.

5
What kind of query works best with the Chart Wizard?

A) Append  
B) Update  
C) Action  
D) **Select**
Macros and Macro Groups

1
Which of the following best describes a macro?

A) An SQL script
B) An instruction or a set of instructions that triggers one or more actions
C) A VBA program
D) A detailed set of actions that Access will invoke whenever a mouse click occurs

2
Macros are best placed in logical modules known as

A) macro sets.
B) macro groups.
C) code sets.
D) modules.

3
Which of the following statements best describes the use of freestanding macros?

A) They are best used for conditional statements.
B) They are best used for menu items.
C) They are best used to enter temporary values in a form.
D) Do not use freestanding macros.
What action hides or shows the results of a macro while it runs.

A) Reveal
B) **Echo**
C) Hide
D) Show

What macro will be executed automatically when you open the database?

A) **Autoexec**
B) AutoStart
C) Startup
D) AutoRun

**Access and the Internet**

What standard must a basic HTML-based web page conform to?

A) TCP/IP
B) **ASCII**
C) XML
D) SQL

Which cannot be dragged to a Data Access Page using the Controls Wizard?
3
When inserting a field in the footer, what is the default prefix is

A) TotalOf <Fieldname>
B) SumOf <Fieldname>
C) MaximumOf <Fieldname>
D) MinimumOf <Fieldname>

4
A record set is exactly the same as

A) a query
B) a data access page
C) a table
D) a macro

5
What's the maximum number of different fields that can you sort in the Page Wizard?

A) 1
B) 2
C) 3
D) 4
Database Security

1
In a database security environment, a form, table, query, report, macro, or module in the database is a(n)

A) object.
B) permission.
C) operation.
D) group.

2
What file does Access use to lock a database in a shared environment?

A) The LDB file
B) The PID file
C) The MDE file
D) The MDB file

3
Which of the following accurately describes workgroup files?

A) You can only create one workgroup file per computer.
B) You can create many workgroup files, but you can use only one workgroup file at a time.
C) You can create many workgroup files, and you can use more than one workgroup file at a time.
D) You can create many workgroup files, but are limited to using two at a time.
What does Access use to manage database locking in a multiuser database environment?

A) Jet Database Engine  
B) PID files  
C) MDW files  
D) Access Lockout Protocol (ALP)

5

What permission allows the user to open a database, form or report, or run a macro?

A) Open  
B) Open/Run  
C) Administer  
D) Run

SQL stands for ______________.

I - Structured Query Language
II – Standard Query Language
III- Status Query Language

Select correct option: Only I

Only II
Both I and II
Only III

Making a change to the conceptual schema of a database but not affecting the existing external schemas is an example of

Physical data independence.
Concurrency control.
Logical data independence.
Functional dependency
Truncate is an alternative of Delete command.

Select correct option:
**True**

False

What happens if the WHERE clause is omitted from a DELETE statement?
Select correct option:

- All records from the table are deleted
- No record from the table will be deleted
- First record of the table will be deleted
- The statement will not be executed and will give a syntax error

Query Analyzer is used to practice SQL in MS-Access and MS-SQL Server.
Select correct option:
**True**

False

Which of the following is used to retrieve and insert information from database?
Select correct option:
**DML**

DDL

DCL

Both DML and DDL

**SQL commands that allow for the manipulation of data in the database, such as SELECT, INSERT, DELETE, and UPDATE.**

Which of the following can not be included into CREATE TABLE statement?
Select correct option:

Data types
Constraints
Attributes
**Cardinalities**

Which of the following is NOT a DDL command?
Select correct option:
Create DB
Create table
**Delete**
Drop

Which of the following SQL statements used to control access to the data and to the database?
Select correct option:
GRANT
REVOKE
**Both GRANT and REVOKE**
SELECT

A relational database is
Select correct option:
one that consists of two or more tables
a database that is able to process tables, queries, forms, reports and macros
**one that consists of two or more tables that are joined in some way**
the same as a flat file database
Which model operates at the lowest level of abstraction?

Select correct option:
conceptual
internal
external
physical

A________is used to maintain a connection between the users of the database system.
Select correct option:

mail server
file server
client-server
none of the given

A file server is used to maintain a connection between the users of the database system. Each client of the network runs its own copy of the DBMS and the database resides on the file server.

A collection of concepts that can be used to describe the structure of a database

Select correct option:
Database
DBMS
Data model
Data

Data model is a set or collection of construct used for creating a database and producing designs for the databases

Data about data is metadata

Select correct option:
Database is a data structure that stores metadata, i.e. data about data. More generally we can say an organized collection of information.

A primary key is an attribute (or set of attributes) that has been chosen for an entity, whose values are used to uniquely identify a particular instance of an entity.

Which of the following is INCORRECT statement concerning the database design process?

Select correct option:

True
False
Partially True
None of the given

These things are done at physical design stage not at logical design stage. At logical design stage we are concerned about schema structures.

Which feature of database provides conversion from inconsistent state of DB to a consistent state ensuring minimum data loss?

Select correct option:
Who is responsible for authorizing access to the database, for coordinating and monitoring its use?

Select correct option:

Database Designer

Database Administrator

End User

Application Programmer

A primary key is an attribute (or set of attributes) that has been chosen for an entity, whose values are used to uniquely identify a particular instance of an entity. True or False?

Select correct option:

True

False

Partially True

None of the given

Which of the following describes the job of a database administrator?

Select correct option:

Development, implementation operation of the physical database

Creation of the system catalog

Monitoring and controlling database security and authorization: Setting up controls to ensure the quality and integrity of data

All of the above
Which of the following is NOT a component of a DFD?
Select correct option:
Dataflow
Datastore
External entities

**Relationship between external entities**
The Entity Relation Model models
Select correct option:
Entities, Relationships and Processes

**Entities and Relationships**
Relationships
Entities

Data about data is database
Select correct option:

True
False
Partially True
None of the Above

Database is a data structure that stores metadata, i.e. data about data. More generally we can say an organized collection of information
Not sure

A relational database system is based on the concept(s) of:
Select correct option:
A network of data records
Nested tables
Tables, rows and columns
A tree-like structure of data

Most commercial DBMS are based on the record-based data models, like Hierarchical, Network or Relational.

Data Manipulation Language (DML) is the set of commands used to maintain and query a database including updating, inserting, modifying and retrieving data.

Select correct option:
True

Question # 4 of 10 (Start time: 11:21:13 AM) Total Marks: 1
Within a table, each primary key value ___.
Select correct option:

is a minimal superkey
is always the first field in each table
must be numeric
must be unique

Question # 3 of 10 (Start time: 11:20:08 AM) Total Marks: 1
Which levels are mostly used for Detailed DFD?
Select correct option:

Level-0, Level-1
Level-1, Level-2
Level-2, Level-3
Level-3, Level-4

Question # 10 of 10 (Start time: 11:26:04 AM) Total Marks: 1
Which feature of database provides conversion from inconsistent state of DB to a consistent state ensuring minimum data loss?
Select correct option:

User accessible catalog
Data processing
Recovery service
Authorization service
A primary key is an attribute (or set of attributes) that has been chosen for an entity, whose values are used to uniquely identify a particular instance of an entity. True or false?
Select correct option:

**True**
False
Partially True
None of the given

Question # 6 of 10 (Start time: 11:22:28 AM) Total Marks: 1
Who is responsible for authorizing access to the database, for coordinating and monitoring its use?
Select correct option:

Database Designer
**Database Administrator**
End User
Application Programmer

Question # 8 of 10 (Start time: 11:24:50 AM) Total Marks: 1
In case of Context-level Diagram, the system is represented by
Select correct option:

One process at least
Two processes at least
**One process only**
Any number of processes

Question # 3 of 10 (Start time: 11:29:11 AM) Total Marks: 1
User rights information is stored in
Select correct option:

Physical database
**Catalog**
Logical database
Buffer

Question # 4 of 10 (Start time: 11:30:04 AM) Total Marks: 1
The Entity Relation Model models
Select correct option:
Entities, Relationships and Processes

**Entities and Relationships**

Relationships

Entities

Question # 6 of 10 (Start time: 11:30:35 AM) Total Marks: 1

Which of the following is NOT a component of a DFD?

Select correct option:

- Dataflow
- Datastore
- External entities

**Relationship between external entities**

A ______ is used to maintain a connection between the users of the database system.

Select correct option:

- mail server
- **file server**
- client-server
- none of the given

An instance is

Select correct option:

**a particular occurrence of an entity**

- a special type of relation
- an attribute of an entity
- any particular entity

A primary key is an attribute (or set of attributes) that has been chosen for an entity, whose values are used to uniquely identify a particular instance of an entity. True or false?

**True**
- False
- Partially True
- None of the given

In case of Context-level Diagram, the system is represented by

- One process at least
- Two processes at least

**One process only**

- Any number of processes
- An entity type is
defined when the database is actually constructed
a specific type such as an integer, text, date, logical etc
a coherent set of similar objects that we want to store data on (e.g. STUDENT, COURSE, CAR)
defined by the database designer
Data about data is database
**True**
False
Partially True
None of the Above
A software package designed to store and manage databases
Database
**DBMS**
Data model
Data
A relational database is
one that consists of two or more tables
a database that is able to process tables, queries, forms, reports and macros
one that consists of two or more tables that are joined in some way
the same as a flat file database

Which model operates at the lowest level of abstraction?
conceptual
internal
external
**physical**
An entity type is
defined when the database is actually constructed
a specific type such as an integer, text, date, logical etc
a coherent set of similar objects that we want to store data on (e.g. STUDENT, COURSE, CAR)
defined by the database designer
Data about data is database
**True**
False
Partially True
None of the Above
A table can be logically connected to another table by defining a __.
hyperlink
**common attribute**
Which of the following is INCORRECT statement concerning the database design process?
During requirements collection and analysis phase, one can gather the data requirements of database users.

By referring to a high level data model, it is possible to understand the data requirements of the users, entity types, relationships and constraints.

Transformation of the high level data model into the implementation data model is called logical design or data model mapping.
During the logical design phase of internal storage structures, access paths and file organization for the database files are specified.
Which of the following is correct regarding Dataflow diagram?
Single DFD is required to represent a system
Created at increasing levels of detail
The dataflow must be bidirectional

**Used to represent the relationships among the external entities**
A collection of concepts that can be used to describe the structure of a database

**Database**
**DBMS**

**Data model**
**Data**

A relational database is
Select correct option:

**one that consists of two or more tables**
a database that is able to process tables, queries, forms, reports and macros
one that consists of two or more tables that are joined in some way
the same as a flat file database
Self-describing

Includes user data

An entity type is

a. defined when the database is actually constructed
b. a specific type such as an integer, text, date, logical etc
c. a coherent set of similar objects that we want to store data on (e.g. STUDENT, COURSE, CAR)
d. defined by the database designer

Question # 4 of 10 ( Start time: 05:08:26 PM ) Total Marks: 1
Which of the following is INCORRECT statement concerning the database design process?
Select correct option:
During requirements collection and analysis phase, one can gather the data requirements of database users.

By referring to a high level data model, it is possible to understand the data requirements of the users, entity types, relationships and constraints.
Transformation of the high level data model into the implementation data model is called logical design or data model mapping.
During the logical design phase of internal storage structures, access paths and file organization for the database files are specified.

Making a change to the conceptual schema of a database but not affecting the existing external schemas is an example of
Select correct option:
Physical data independence

Logical data independence

Functional dependency
Concurrency control

Question # 7 of 10 ( Start time: 05:11:48 PM ) Total Marks: 1
Which feature of database provides conversion from inconsistent state of DB to a consistent state ensuring minimum data loss?
Select correct option:
User accessible catalog
Data processing

Recovery service
Authorization service

Quiz Start Time: 03:56 PM
Time Left 89
A Foreign Key is
Select correct option:
**A field in a table that matches a key field in another table**
A field in a table that contains data that is also contained elsewhere in another table
A field in a table that has the same name as a key field in another table
A field in a table that has the same name as a key field in another table

Which model operates at the lowest level of abstraction?
Select correct option:
conceptual
total
external
**physical**
Who is responsible for authorizing access to the database, for coordinating and monitoring its use?
Select correct option:
Database Designer
**Database Administrator**
End User
Application Programmer

A software package designed to store and manage databases
Select correct option:
Database
DBMS
**Data model**
Data
The main software package that supports a database management approach is called
Select correct option:
Data Dictionary
Report Generator
**Database Management System**
Distributed database
A primary key is an attribute (or set of attributes) that has been chosen for an entity, whose values are used to uniquely identify a particular instance of an entity. True or
false?
Select correct option:

**True**
False
Partially True
None of the given
The ER model is meant to
Select correct option:

replace relational design
be close to a users perception of the data
enable low level descriptions of data
**enable detailed descriptions of data query processing**
Which feature of database provides conversion from inconsistent state of DB to a consistent state ensuring minimum data loss?
Select correct option:

User accessible catalog
Data processing
**Recovery service**
Authorization service
A relational database system is based on the concept(s) of:
Select correct option:

A network of data records
Nested tables
**Tables, rows and columns**
A tree-like structure of datas

Question # 1 of 10 ( Start time: 05:35:55 PM ) Total Marks: 1
Controlling redundancy in a database management system DOES NOT help to
Select correct option:
avoid duplication
avoid unnecessary wastage of storage space
**avoid unauthorised access to data**
avoid inconsistency among data
Making a change to the conceptual schema of a database but not affecting the existing external schemas is an example of
Select correct option:
Physical data independence

**Logical data independence**

Functional dependency

Concurrency control

A description on a particular collection of data using the given data model

Select correct option:

Database

Relation

**Schema**

None

Which of the following functions are NOT performed by a database administrator?

Select correct option:

Planning, designing and implementing database systems

Establishing standards and procedures for database systems

Communicating with database users

Allocation of storage locations and data structures

A collection of concepts that can be used to describe the structure of a database

Select correct option:

Database

DBMS

**Data model**

Data

A candidate key that does not have a null value and is selected to uniquely identify all other attribute values in any given row is called a ___.

Select correct option:

superkey

candidate key

**primary key**

secondary key

ns case of Context-level Diagram, the system is represented by

Select correct option:

One process at least

Two processes at least

**One process only**

Any number of processes

---

1. A collection of programs that manages the database structure and controls access to the data stored in the database is called a ____________________________.

**DBMS**
2. A DBMS that supports more than one user is classified as a ________________ user.  

Multi

3. __________________, or data about data, through which the end-user data and are integrated and managed.

MetaData

4. _________________ exists when different versions of the same data appear in different places.

Data inconsistency

5. _________________ refers to the activities that focus on the design of the database structure that will be used to store and manage end-user data.

Database design

6. The relationship described by the phrase “the Customer generates the Invoice” is ________________.

one-to-many

7. A(n) _________________ is a brief, concise, and unambiguous description of a policy.

business rule

8. The query language for a relational database is ____________________________.

SQL, structured query language

9. A(n) _________________ consists of one or more attributes that determine other attributes.

key

10. Another form of JOIN, known as ________________, links tables on the basis of an equality condition that compares columns of each table.

equijoin

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: 2 ( Marks: 1 ) - Please choose one**

Identify the factor which enforces a relation in 3NF?

► Every non-key attribute is fully functionally dependent on primary key
► Every non-key attribute is partially dependent on super key
► The domain of attribute must include only atomic values.
► Every non-key attribute is non-transitively dependent on primary key.

**Question No: 3 ( Marks: 1 ) - Please choose one**

Consider two sets A and B. A contains 2 elements and B contains 3. How many elements do their cartesian product contains?

► 6
► 9
► 5
► 4

**Question No: 4 ( Marks: 1 ) - Please choose one**
Identify the operation which is NOT one of the parts of the five basic set operations in relational algebra?
► Join
► Union
► Cartesian Product
► Set Difference

**Question No: 5 ( Marks: 1 ) - Please choose one**
Consider the following statements.
A. An entity integrity constraint states that no primary key value can be null.
B. A referential integrity constraint is specified between two relations.
C. A foreign key cannot be used to refer to its own relation.
Identify which of the above statements is/are correct.
► Only A (may be this)
► Only B
► Only B and C
► Only A and B

**Question No: 6 ( Marks: 1 ) - Please choose one**
User rights information is stored in
► Physical database
► Catalog
► Logical database
► Buffer

**Question No: 7 ( Marks: 1 ) - Please choose one**
Given are the relations of student and Instructor
Which relational algebra operation could have been applied on the pair of relations Student and Instructor to obtain the above data?
► Instructor – Student
► Student ∩ Instructor
► Instructor ÷ Student
► Student – Instructor

**Question No: 8 ( Marks: 1 ) - Please choose one**
Which one is the corrected way to implement M to M relation which designing data base
► using junction table with keys
► By splitting data into tables with PK and FK
► As a single table rarely as to tables with PK and FK
► By creating three tables and linking them through PK and FK

**Question No: 9 ( Marks: 1 ) - Please choose one**
Which enforce the a relation into 2NF User rights information is stored in
► ------------
► -------
► ------------
► ----
Making a change to the conceptual schema of a database but not affecting the existing external schemas is an example of

- Physical data independence.
- Concurrency control.
- Logical data independence.
- Functional dependency

Question No: 3  ( Marks: 1 )  - Please choose one

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: 4  ( Marks: 1 )  - Please choose one

A relation (from the relational database model) consists of a set of tuples, which implies that
all tuples in a relation must be distinct.

relational model supports multi-valued attributes whose values can be represented in sets.

for any two tuples, the values associated with all of their attributes may be the same.

all tuples in a particular relation may have different attributes.

**Question No: 5  ( Marks: 1 )** - Please choose one

Choose the symbol that corresponds to a discriminator attributes.

- attribute
- attribute
- attribute
- attribute

**Question No: 6  ( Marks: 1 )** - Please choose one
Identify the constraint that limits the values that can be placed in a column.

- **NOT NULL**
- **CHECK**
- **FOREIGN KEY**
- **UNIQUE**

Question No: 7  ( Marks: 1 ) - Please choose one

Given are the relations of student and Instructor

<table>
<thead>
<tr>
<th>Student</th>
<th>Instructor</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>First Name</strong></td>
<td><strong>Last Name</strong></td>
</tr>
<tr>
<td>Saman</td>
<td>Perera</td>
</tr>
<tr>
<td>Romesh</td>
<td>Dias</td>
</tr>
<tr>
<td>Jeeva</td>
<td>Silva</td>
</tr>
<tr>
<td>Nadee</td>
<td>Alwis</td>
</tr>
<tr>
<td>Kumari</td>
<td>Costa</td>
</tr>
<tr>
<td>Geetha</td>
<td>Zoysa</td>
</tr>
<tr>
<td>Prasad</td>
<td>Femando</td>
</tr>
</tbody>
</table>

Consider the following table obtained using Student and Instructor relations.
Which relational algebra operation could have been applied on the pair of relations Student and Instructor to obtain the above data?

- Instructor – Student
- Student ∩ Instructor
- Instructor ÷ Student
- Student – Instructor

Question No: 8 (Marks: 1) - Please choose one

Identify the correct statement with respect to normalization.

- Normalization is a formal technique that can be used only at the starting phase of the database design.

- **Normalization can be used as a top-down standalone database design technique.**

- The process of normalization through decomposition must achieve the lossless join property at any cost whereas the dependency reservation property is sometimes sacrificed.

- The process of normalization through decomposition must achieve the dependency
reservation property at any cost whereas the lossless join property is sometimes sacrificed.

Question No: 9  (Marks: 1) - Please choose one

Consider the relation Interview (CandidateNo, InterviewDate, InterviewTime, StaffNo, RoomNo) and the following functional dependencies.

FD1 : CandidateNo, InterviewDate -> InterviewTime, StaffNo, RoomNo
FD2 : RoomNo, InterviewDate, InterviewTime -> StaffNo, CandidateNo
FD3 : StaffNo, InterviewDate -> RoomNo

Which of the following is correct?

► The relation Interview is in 3NF
► The relation Interview is in BCNF.
► The FD3 violates 3NF.
► The FD2 violates 2NF.

Question No: 10  (Marks: 1) - Please choose one

Identify the INCORRECT statement among the given.

► An entity may be an object with a physical existence like a car, a house or an Employee.
► One cannot consider something which has conceptual existence like a course in a degree program as an entity.
Age can be considered as a single value attribute of a person.

An entity type describes the schema or intension for a set of entities which share the same structure.

Question No: 11 (Marks: 1) - Please choose one

Structural constraints of a relationship type refer to

- identifying the owner entity type relevant to a given entity type
- whether the existence of an entity depends on it being related to another entity via the relationship type.
- the role that a participating entity from the entity type plays in each relationship instance.
- the constraints applicable in granting access to tables, columns and views in a database schema.

Question No: 12 (Marks: 1) - Please choose one

A collection of concepts that can be used to describe the structure of a database
Question No: 13  ( Marks: 1 )  - Please choose one

An entity can be logically connected to another by defining a ____.

► hyperlink  
► common attribute  
► primary key  
► superkey

Question No: 14  ( Marks: 1 )  - Please choose one

The ____ constraint specifies whether each entity supertype occurrence must also be a member of at least one subtype.

► specialization  
► uniqueness  
► inheritance  
► completeness

Question No: 15  ( Marks: 1 )  - Please choose one
Database management systems, operating systems, applications and utilities are all examples of _____.

► hardware
► software
► computer infrastructure
► input and output

Question No: 16  ( Marks: 1 ) - Please choose one

Which of the following concepts is applicable with respect to 2NF?

► Full functional dependency
► Any kind of dependency
► Transitive dependency
► Non-transitive dependency

Controlling redundancy in a database management system DOES NOT help to

Select correct option:

avoid duplication

avoid unnecessary wastage of storage space

avoid unauthorised access to data

avoid inconsistency among data
Question # 2 of 10 ( Start time: 11:18:38 AM )

User rights information is stored in

Select correct option:

- Physical database
- Catalog
- Logical database
- Buffer
Which levels are mostly used for Detailed DFD?

Select correct option:

- Level-0, Level-1
- Level-1, Level-2
- Level-2, Level-3
- Level-3, Level-4

Within a table, each primary key value _____.
Select correct option:

- is a minimal superkey
- is always the first field in each table
- must be numeric
- must be unique

A primary key is an attribute (or set of attributes) that has been chosen for an entity, whose values are used to uniquely identify a particular instance of an entity. True or false?

Select correct option:

- True
- False
- Partially True
- None of the given
Who is responsible for authorizing access to the database, for coordinating and monitoring its use?

Select correct option:

- Database Designer
- **Database Administrator**
- End User
- Application Programmer

In case of Context-level Diagram, the system is represented by

Select correct option:
In a three-level DBMS architecture, the ______ level interacts directly with the users.

Select correct option:

- external
- conceptual
- internal
- physical
Question # 10 of 10 (Start time: 11:26:04 AM)  Total Marks: 1

Which feature of database provides conversion from inconsistent state of DB to a consistent state ensuring minimum data loss?

Select correct option:

- User accessible catalog
- Data processing
- Recovery service
- Authorization service

Quiz Start Time: 11:27 AM  Time Left: 60 sec(s)

Question # 1 of 10 (Start time: 11:27:14 AM)  Total Marks: 1

Which of the following describes a database system?

Select correct option:

- A collection of stored operational data used by the application system of some particular enterprise
A shared collection of logically related data (and a description of this data) designed to meet the information needs of an organisation.

A collection of stored data organised in such a way that all user requirements are satisfied by the database. In general there is only one copy of each item of data although there may be controlled repetition of some data.

All of the above

Question # 2 of 10 (Start time: 11:27:53 AM) Total Marks: 1

Which of the following is INCORRECT statement concerning the database design process?

Select correct option:

During requirements collection and analysis phase, one can gather the data requirements of database users.

By referring to a high level data model, it is possible to understand the data requirements of the users, entity types, relationships and constraints.

Transformation of the high level data model into the implementation data model is called logical design or data model mapping.

During the logical design phase of internal storage structures, access paths and file organization for the database files are specified.

Question # 3 of 10 (Start time: 11:29:11 AM) Total Marks: 1

User rights information is stored in

Select correct option:
Physical database
Catalog
Logical database
Buffer
The Entity Relation Model models

Select correct option:

- **Entities, Relationships and Processes**
- Entities and Relationships
- Relationships
- Entities

Which of the following is NOT a component of a DFD?

Select correct option:

- Dataflow
- Datastore
- **External entities**
- Relationship between external entities
Making a change to the conceptual schema of a database but not affecting the existing external schemas is an example of

Select correct option:

- Physical data independence
- Logical data independence
- Functional dependency
- Concurrency control
Select correct option:

One process atleast
Two processes atleast
One process only
Any number of processes

An instance is
Select correct option:

a particular occurrence of an entity
a special type of relation
an attribute of an entity
any particular entity
Question # 10 of 10 ( Start time: 11:34:22 AM )       Total Marks: 1

A________is used to maintain a connection between the users of the database system.

Select correct option:

- mail server
- file server
- **client-server**
- none of the given

---

Question # 1 of 10 ( Start time: 10:58:28 AM )       Total Marks: 1

The _________ function helps reduce the need to use multiple OR conditions.

Select correct option:

- Like
- IN
- AND
- BETWEEN

---

Question # 2 of 10 ( Start time: 10:59:54 AM )       Total Marks: 1

Columns used to uniquely identify individual rows of a given table, may be specified to be not
Question # 3 of 10 ( Start time: 11:01:06 AM )

In SQL, which command is used to delete rows from table.

Select correct option:

- True
- False

Question # 4 of 10 ( Start time: 11:02:48 AM )

Which of the following clauses allows to sort the records in result set?

Select correct option:

- DELETE
- REMOVE
- TRUNCATE
- Both I and II
Question # 5 of 10 ( Start time: 11:03:50 AM )

Which of the following statements creates a database named IMDB.

Select correct option:

- where
- order by
- from
- having

Question # 6 of 10 ( Start time: 11:05:29 AM )

Which of the following SQL statements used to control access to the data and to the database?

Select correct option:

- GRANT
- REVOKE
- Both GRANT and REVOKE
Question # 7 of 10 (Start time: 11:06:30 AM) Total Marks: 1

Which of the following is used with INSERT command to insert values in a DB table?

Select correct option:

- ONTO
- INTRO
- UPTO
- WITH

Question # 8 of 10 (Start time: 11:08:05 AM) Total Marks: 1

Which of the following is used to retrieve and insert information from database?

Select correct option:

- DML
- DDL
- DCL
- Both DML and DDL
In SQL queries, while creating tables or relations in database, key columns may be specified by

Select correct option:

- Null
- Not Null
- Data Type
- None of the above

Which of the following is not an aggregate function

Select correct option:

- AVG
- SUM
- UPPER
- MAX

Which one of the following E-R diagrams most correctly represents the relationship between Student and Grade entities?
Question No: 2 \ ( Marks: 1 \) - Please choose one

Which of the following statements are Data Definition Language command?

\> INSERT
Question No: 3  (Marks: 1) - Please choose one

Which of the following statements is true about the views?

- view is always a complete set of all the tables in a database
- View can not be used for retrieving data
- The results of using a view are not permanently stored in the database.
Rows can not be updated or deleted in the view

Question No: 4  ( Marks: 1 ) - Please choose one

How many clustered index(es) do each database table have?

► 2

► 3

► 5

► 1

Question No: 5  ( Marks: 1 ) - Please choose one
Suppose there are 4 rows and 3 columns in TABLE1 and 6 rows and 5 columns in TABLE2; what is the size of the cartesian product in case of CROSS JOIN between these two tables?

- 24
- 20
- 18
- 15

**Question No: 6**  (Marks: 1) - Please choose one

Which of the following is not one of the properties of Transaction?

- atomicity
- consistency
- redundancy
- durability
Question No: 7  ( Marks: 1 ) - Please choose one

Which of the following is INCORRECT about VIEWS?

► It is not possible to left out the data which is not required for a specific view.

► A database view displays one or more database records on the same page.

► Views can be used as security mechanisms

► Views are generally used to focus the perception each user has of the database.

Question No: 8  ( Marks: 1 ) - Please choose one
Which of the following gives all the fields from employee table named as EMP?

► `select * from EMP;`

► `select emp* from EMP';`

► `select emp_id where EMP;`

► `select * where EMP;`

**Question No: 9  (Marks: 1) - Please choose one**

Consider the relation Interview(CandidateNo, InterviewDate, InterviewTime, StaffNo, RoomNo) and the following functional dependencies.

FD1 : CandidateNo, InterviewDate -> InterviewTime, StaffNo, RoomNo
FD2 : RoomNo, InterviewDate, InterviewTime -> StaffNo, CandidateNo
FD3 : StaffNo, InterviewDate -> RoomNo

Which of the following is correct?

► The relation Interview is in 3NF
The relation Interview is in BCNF.

The FD3 violates 3NF.

The FD2 violates 2NF.

Question No: 10  (Marks: 1) - Please choose one

Which of the following types of partitioning reduces the chances of unbalanced partitions?

- vertical
- List
- Hash
- Range

Question No: 11  (Marks: 1) - Please choose one
Which of the following is one of the purposes of using DDL commands?

► inserting records into databases

► updating records into databases

► manipulating databases

► creating and destroying databases

Question No: 12 ( Marks: 1 ) - Please choose one

Which of the following statements creates a database named COMPANY.

► CREATE DATABASE company

► CREATE DB company
Question No: 13  ( Marks: 1 ) - Please choose one

What is the impact of setting multiple indexes for the same key, in index sequential files?

▶ Multiple indexes for the same key can not be set

▶ It increases efficiency

▶ It decreases efficiency

▶ It will increase complexity as the access time will be increased
Consider a transaction which includes following operations

...  
Z= Z + 10  
Write Z  
...

Suppose that the value of Z after addition and the execution of this operation is 17. Now against the write operation the entry made in the log file will be 

<Tn, Z, 33>

What does Z reflects in the above entry?

- Object being updated
- Identity of the transaction
- Object value
- Identity of the next transaction to be executed
Question No: 15  ( Marks: 1 ) - Please choose one

Which of the following is not true regarding DB transactions?

- A set of database operations that are processed partly
- A database transaction is a logical unit of database operations
- A database transaction must be atomic
- A database transaction must contain the ACID property

Question No: 16  ( Marks: 1 ) - Please choose one

Which of the following is not true about input forms?
► Provide an easy, effective, efficient way to enter data into a table

► Especially useful when the person entering the data is not familiar with the inner workings

► Provide different controls to add data into the tables

► One input forms can populate one table at a time

Question No: 17  ( Marks: 1 ) - Please choose one

Which of the following is an example of volatile memory?

► RAM
Question No: 18   ( Marks: 1 ) - Please choose one

Which of following is NOT generally the aim of data partitioning and placement of data?

► Reduce Workload

► Balance Workload

► Merging different relations

► Speed up rate of useful works.
Question No: 19  ( Marks: 1 ) - Please choose one

ALTER TABLE exams

   RENAME COLUMN Q_description TO Question_Descp, Std_ID to Student_ID.

Syntax of ALTER TABLE is **NOT** correct.

► True

► False

Question No: 20  ( Marks: 1 ) - Please choose one

Which of the following is Advantage of **Re-Hashing** technique to handle the collisions?

► Collisions don’t use primary table space

► Unlimited number of elements
Fast access through use of main table space

Overhead of multiple linked lists

Question No: 21  ( Marks: 1 ) - Please choose one

Materialized views and Indexes are **NOT** similar by the following way(s).

- They consume storage space
- They must be refreshed when the data in their master tables changes.
- They can be accessed directly using a SELECT statement
- All of the Given

Question No: 22  ( Marks: 1 ) - Please choose one
Select 'NORTH', CUSTOMER From CUST_DTLS Where REGION = 'N' Order By CUSTOMER Union Select 'EAST', CUSTOMER From CUST_DTLS Where REGION = 'E' Order By CUSTOMER

The above statement:

► Has an error - the string should be in double quotes.

► Has an error - ORDER BY clause.

► Does not have an error.

► Has an error - the string in single quotes 'NORTH' and 'SOUTH'.

Question No: 23 (Marks: 1) - Please choose one

A software package designed to store and manage databases

► Database

► DBMS
Question No: 24  ( Marks: 1 ) - Please choose one

Who is responsible for authorizing access to the database, for coordinating and monitoring its use?

- Database Designers
- Database Administrators
- End Users
- Application Programmers

Question No: 25  ( Marks: 1 ) - Please choose one
A superkey that does not contain a subset of attributes that is itself a superkey is called a ____.

► candidate key

► primary key

► superkey

► secondary key

**Question No: 26  ( Marks: 1 ) - Please choose one**

A ____ entity has a primary key that is partially or totally derived from the parent entity in the relationship.

► strong

► weak

► business
Question # 1 of 10 (Start time: 01:13:48 PM) Total Marks: 1

A ____ relationship exists when an association is maintained within a single entity.

Select correct option:

Unary
Binary
Ternary
Weak

Question # 2 of 10 (Start time: 01:14:33 PM) Total Marks: 1

A collection of concepts that can be used to describe the structure of a database

Select correct option:

Database
DBMS
Data model
Question # 3 of 10 (Start time: 01:16:00 PM) Total Marks: 1

Which of the following is NOT a component of a DFD?
Select correct option:

- Dataflow
- Datastore
- **External entities**
- Relationship between external entities

Question # 4 of 10 (Start time: 01:17:27 PM) Total Marks: 1

A candidate key that does not have a null value and is selected to uniquely identify all other attribute values in any given row is called a ____.
Select correct option:

- superkey
- candidate key
- **primary key**
- secondary key
A candidate key that does not have a null value and is selected to uniquely identify all other attribute values in any given row is called a ____.

Select correct option:

- superkey
- candidate key
- primary key
- secondary key

A primary key is an attribute (or set of attributes) that has been chosen for an entity, whose values are used to uniquely identify a particular instance of an entity. True or false?

Select correct option:

- True
- False
- Partially True
- None of the given
In case of Context-level Diagram, the system is represented by

Select correct option:

One process at least
Two processes at least
One process only
Any number of processes

Data Redundancy Means

Select correct option:

Security of data
Duplication of data
Management of data
Recovery of data
Question # 9 of 10 ( Start time: 01:23:29 PM ) Total Marks: 1

Which levels are mostly used for Detailed DFD?

Select correct option:

Level-0, Level-1
Level-1, Level-2
Level-2, Level-3
Level-3, Level-4

Question # 10 of 10 ( Start time: 01:23:42 PM ) Total Marks: 1

In a three-level DBMS architecture, the ______ level interacts directly with the users.

Select correct option:

external
conceptual
internal
physical
The ER model is meant to

Select correct option:

replace relational design

be close to a user's perception of the data

enable low level descriptions of data

enable detailed descriptions of data query processing
Which of the following constraints enforces entity integrity?

Select correct option:

- PRIMARY KEY
- FOREIGN KEY
- CHECK
- NOT NULL
Question # 3 of 10 (Start time: 06:31:18 PM) Total Marks: 1

Which of the following describes the job of a database administrator?

Select correct option:

Development, implementation operation of the physical database

Creation of the system catalog

**Monitoring and controlling database security and authorization:** Setting up controls to ensure the quality and integrity of data

All of the above

Quiz Start Time: 06:29 PM Time Left 88 sec(s)

Question # 4 of 10 (Start time: 06:31:53 PM) Total Marks: 1

Data Redundancy Means

Select correct option:
Quiz Start Time: 06:29 PM  Time Left  83 sec(s)

Question # 5 of 10 ( Start time: 06:32:25 PM ) Total Marks: 1

A ____ relationship exists when an association is maintained within a single entity.

Select correct option:

Unary
Binary
Ternary
Question # 6 of 10 ( Start time: 06:33:11 PM ) Total Marks: 1

Which of the following functions are NOT performed by a database administrator?

Select correct option:

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 # 7 of 10 ( Start time: 06:34:28 PM ) Total Marks: 1

Which feature of database provides conversion from inconsistent state of DB to a consistent state ensuring minimum data loss?

Select correct option:

- User accessible catalog
- **Data processing**
- Recovery service
- Authorization service
Question # 8 of 10 ( Start time: 06:35:39 PM ) Total Marks: 1

Which of the following might be represented with a multivalued attribute?

Select correct option:

- person's name
- **class location**
- bank account balance
- book title

Question # 9 of 10 ( Start time: 06:35:56 PM ) Total Marks: 1

A ____ entity has a primary key that is partially or totally derived from the parent entity in the relationship.

Select correct option:

- strong
- Weak
- Business
- **Relationship**
Question # 10 of 10 (Start time: 06:36:27 PM) Total Marks: 1

Which levels are mostly used for Detailed DFD?

Select correct option:

Level-0, Level-1
Level-1, Level-2
Level-2, Level-3
Level-3, Level-4

Question # 1 of 10 (Start time: 06:38:34 PM) Total Marks: 1

Which of the following might be represented with a multivalued attribute?

Select correct option:

person's name
class location
bank account balance
In case of Context-level Diagram, the system is represented by

Select correct option:

- One process atleast
- Two processes atleast
- **One process only**
- Any number of processes

Which of the following is a feature of CHECK constraint?

Select correct option:
limit the values that can be placed in a column.

used to enforce referential integrity.

enforces the uniqueness of the values in a set of columns.

is a unique identifier for a row within a database table.

Question # 4 of 10 ( Start time: 06:40:22 PM ) Total Marks: 1

Within a table, each primary key value ____.

Select correct option:

is a minimal superkey

is always the first field in each table

must be numeric

must be unique
In a three-level DBMS architecture, the ______ level interacts directly with the users.

Select correct option:

- external
- conceptual
- internal
- physical

Each table must have a ____ key.

Select correct option:

- primary
- secondary
- logical
- foreign
Question # 7 of 10  ( Start time: 06:41:41 PM  )  Total Marks: 1

A collection of concepts that can be used to describe the structure of a database

Select correct option:

Database

DBMS

Data model

Data

Question # 8 of 10  ( Start time: 06:42:01 PM  )  Total Marks: 1

In case of Context-level Diagram, the system is represented by

Select correct option:
One process at least

Two processes at least

**One process only**

Any number of processes

---

Question # 9 of 10 (Start time: 06:42:23 PM) Total Marks: 1

A primary key is an attribute (or set of attributes) that has been chosen for an entity, whose values are used to uniquely identify a particular instance of an entity. True or false?

Select correct option:

- True
- False
- Partially True
- None of the given

---

Question # 10 of 10 (Start time: 06:43:47 PM) Total Marks: 1

Controlling redundancy in a database management system DOES NOT help to

Select correct option:
avoid duplication
avoid unnecessary wastage of storage space
**avoid unauthorised access to data**
avoid inconsistency among data

**Question # 1 of 10 ( Start time: 06:45:28 PM ) Total Marks: 1**

User rights information is stored in
Select correct option:

- Physical database
- Catalog
- Logical database
- Buffer
Question # 2 of 10 (Start time: 06:45:58 PM) Total Marks: 1

A candidate key that does not have a null value and is selected to uniquely identify all other attribute values in any given row is called a ____.

Select correct option:

- superkey
- candidate key
- primary key
- secondary key

Question # 3 of 10 (Start time: 06:46:31 PM) Total Marks: 1

Controlling redundancy in a database management system DOES NOT help to

Select correct option:

- avoid duplication
- avoid unnecessary wastage of storage space
- avoid unauthorised access to data
- avoid inconsistency among data
Question # 4 of 10 ( Start time: 06:47:44 PM ) Total Marks: 1

Data about data is database

Select correct option:

True
False
Partially True
None of the Above

Question # 5 of 10 ( Start time: 06:48:15 PM ) Total Marks: 1

Which of the following might be represented with a single-valued attribute?

Select correct option:

person's phone number
car's color
Question # 6 of 10 ( Start time: 06:49:27 PM ) Total Marks: 1

A software package designed to store and manage databases

Select correct option:

Database

**DBMS**

Data model

Data
In case of Context-level Diagram, the system is represented by
Select correct option:

One process atleast
Two processes atleast
One process only
Any number of processes

A candidate key that does not have a null value and is selected to uniquely identify all other attribute values in any given row is called a ____.
Select correct option:

superkey
candidate key
primary key
secondary key
Question # 9 of 10 (Start time: 06:51:27 PM) Total Marks: 1

Each table must have a ____ key.

Select correct option:

- primary
- secondary
- logical
- foreign

Question # 10 of 10 (Start time: 06:51:53 PM) Total Marks: 1

In an ERD, the focus is on the ____ and the relationships between them.

Select correct option:

- attributes
- entities
- keys
- indexes

Question # 1 of 10 (Start time: 09:52:41 PM) Total Marks: 1

Which of the following is used with INSERT command to insert values in a DB table?
Which of the following is a correct way of selecting all the columns from a table called PERSONS?

Select correct option:

SELECT FROM * Persons

SELECT * FROM Persons

SELECT * WHERE Persons

SELECT WHERE * Persons

Question # 3 of 10 ( Start time: 09:53:51 PM ) Total Marks: 1

The ________ operator allows to use wild cards in the where clause of an SQL statement.

Select correct option:

IN

FROM

LIKE

None of the above.

Question # 4 of 10 ( Start time: 09:54:15 PM ) Total Marks: 1

Which of the following statements creates a database named IMDB.

Select correct option:

CREATE DATABASE IMDB;

CREATE DB IMDB;

ADD DATABASE named IMDB;
CREATE IMDB DATABASE;

Question # 5 of 10 ( Start time: 09:54:31 PM ) Total Marks: 1
Which of the following is not true regarding clustering?
Select correct option:
It increases the efficiency since related records are placed close to each other
**Clustering makes records, difficult to access**
suitable to relatively static situations.
It is a process, which means to place records from different tables to place in adjacent physical locations

Question # 6 of 10 ( Start time: 09:54:55 PM ) Total Marks: 1
Which of the following is used to filter rows according to some condition(s)?
Select correct option:
SELECT
FROM
**WHERE**
UPDATE

Question # 7 of 10 ( Start time: 09:55:14 PM ) Total Marks: 1
Which of the following is not an aggregate function
Select correct option:
AVG
SUM
**UPPER**
MAX

CREATE TABLE and CREATE index belongs to which type of SQL commands
Select correct option:
Question # 9 of 10 (Start time: 09:55:59 PM) Total Marks: 1

In SQL, which command is used to modify the rows of tables.
Select correct option:

UPDATE

INSERT

BROWSE

APPEND

Question # 1 of 10

Which of the following statements creates a database named IMDB.
Select correct option:

CREATE DATABASE IMDB;

CREATE DB IMDB;

ADD DATABASE named IMDB;

CREATE IMDB DATABASE;

Question # 2 of 10

Which of the following is a correct way of selecting all the columns from a table called PERSONS?
Select correct option:

SELECT FROM * Persons

SELECT * FROM Persons

SELECT * WHERE Persons

SELECT WHERE * Persons
Question # 3 of 10
Which of the following is not a part of an INSERT statement?
Select correct option:
INTO
VALUES
INSERT
MODIFY

Question # 4 of 10
In SQL, which command is used to delete rows from table.
Select correct option:
DELETE
REMOVE
TRUNCATE
Both I and II

Question # 5 of 10
Which of the following is the correct syntax for adding a new column into an existing table?
Select correct option:
ALTER TABLE table_name { ALTER [COLUMN] column type [(size)] [DEFAULT default] }
ALTER TABLE table_name { ADD [COLUMN] column type [(size)] [DEFAULT default] }
Both I and II.
None of the above.
Question # 6 of 10
GRANT belongs to which type of SQL commands classification
Select correct option:
DML
DDL
DCL
DQL

Question # 7 of 10
What happens if the WHERE clause is omitted from a DELETE statement?
Select correct option:
All records from the table are deleted
No record from the table will be deleted
First record of the table will be deleted
The statement will not be executed and will give a syntax error

Question # 8 of 10
What does the abbreviation DBMS stand for?
Select correct option:
Database Manipulation Software.
Data Borrowing and Movement Software
Digital Base Mapping System.
Database Management System.

Question # 9 of 10
Which of the following is used to filter rows according to some condition(s)?
Question # 10 of 10

CREATE TABLE and CREATE index belong to which type of SQL commands

Select correct option:

DML
DDL
DCL
DQL

1

Which of the following is a service provided by a DBMS?

A) It ensures and enforces data integrity at all levels
B) It maintains an environment in which security is created and enforced
C) It manages the metadata in the data dictionary
D) All of the above are services of a DBMS

2

What is the difference between a DBMS and an RDBMS?

A) A RDBMS uses metadata while a DBMS does not.
B) A DBMS is used for data warehousing.
C) Because a relational database is more complicated than a conventional database, the RDBMS requires much more computing power than the conventional DBMS requires.

D) Because a conventional database is less complicated than a relational database, the DBMS is used more often for transactional databases.

Which of the following statements best describes a data warehouse?

A) A data storage facility dedicated to using the existing data to generate information.
B) Frequent and complex transactions characterize its use.
C) The most common type of database in use today.
D) Generally used in environments with large inventories, thus the term warehouse.

Which of the following justifies the inclusion of derived attributes in a database?

A) Inclusion of derived attributes is a standard procedure and does not require justification.
B) Derived attributes should be used when they add to design elegance.
C) Query speed is enhanced by not computing derived attributes.
D) Poor design is the only excuse for the inclusion of derived attributes.

Select the statement that best defines a candidate key.

A) An attribute or combination of attributes that allows the user to search for non-unique data.
B) An attribute or combination of attributes that is calculated from existing data.
C) An attribute or combination of attributes that establishes relationships between tables.

D) An attribute or combination of attributes that could be, but is not, used as a **PK**

**Normalizing the Database table Structures**

1

A __________ is established when the value of one attribute is dependent on the value of another attribute.

A) primary key
B) data anomaly
C) dependency
D) transitive relationship

2

The room ID + building ID determines the room schedule. This is written:

A) ROOM_ID, BUILD_ID ? ROOM_SCH
B) ROOM_ID + BUILD_ID ? ROOM_SCH
C) ROOM_ID, ROOM_SCH ? BUILD_ID
D) ROOM_ID, BUILD_ID ? ROOM_SCH

3

The database data storage standard requires that, with some exceptions, data must occur in only one place at one time. What are the exceptions?

A) **Foreign key and replicated data requirements**
B) Transitive dependencies and foreign keys
C) Replicated data and primary keys
D) Transitive dependencies and primary keys
Data redundancies produce unusual and undesirable data management problems caused by _________.

A) transitive requirements  
B) dependencies  
C) normalization  
D) data anomalies

Removing the __________ is part of the database design process.

A) foreign keys  
B) primary key dependencies  
C) recursive relationships  
D) partial and transitive dependencies

**The POS Database Design Process**

In a POS system, what do the major transaction modules define?

A) Inventory management, shipping, invoice calculations, and product returns  
B) **Sales, inventory management, shipping, back ordering, and product returns**  
C) Sales, invoice calculations, back ordering, and product returns  
D) Inventory management, shipping, invoice calculations, back ordering, and product returns
What are the fourth and fifth steps in developing a POS?

A) **Define the entities, attributes, relationships, connectivities, cardinalities, and constraints. Create the initial ERD segments.**

B) Develop business rules. Create the initial ERD segments.

C) Develop business rules. Define the entities, attributes, relationships, connectivities, cardinalities, and constraints.

D) Define the major transaction modules. Create the initial ERD segments.

After creating the initial ERD segments, the next step is to

A) define the major transaction modules.

B) perform the appropriate normalization checks based on the data dictionary contents.

C) **create a basic data dictionary for all the components found in each ERD segment.**

D) define the entities, attributes, relationships, connectivities, cardinalities, and constraints.

What will the following questions help you define? What types of transactions take place? How many different types of transactions are there?

A) Available resources

B) Data environment

C) **Current operations**

D) Business objectives
Which of the following is an advantage of having a precisely written set of current operations.

A) It clarifies the assignment of data types.
B) It highlights the best possible way to perform each task.
C) **It forces careful assessment of the procedures.**
D) It makes the creation of the data dictionary much easier.

**Implementing the Database Design**

1
You have created a table in Access, but not yet designated a PK. What happens if you save the table now?

A) The save fails because no PK is defined.
B) The save works as usual.
C) Access warns you that no primary key is defined, and forces you to define a PK before saving.
D) **Access warns you that no primary key is defined, but lets you save the table if you want to.**

2
You want to create a composite PK using the first and third fields in the table. How is this done?

A) Hold down the Shift key and click the first and third fields. Click the Key icon on the toolbar.
B) **Hold down the Ctrl key and click the first and third fields. Click the Key icon on the toolbar.**
C) Hold down the Shift key and click the first and third fields. Select Primary Key under the Table.
D) Hold down the Ctrl key and click the first and third fields. Select Primary Key under the Table.

3

What is required to establish a 1:1 relationship between two tables that do not contain a supertype and subtype?

A) 1:1 relationships are only possible if the tables contain a supertype and subtype.
B) Make sure that the PK in the related table has unique values.
C) Make sure that the FK in the related table has an index property that specifies unique values.
D) Nothing special is required.

4

In Access, how do you tell if referential integrity is enforced for a relationship?

A) The relationship lines are thick and dark, and the nature of the relationships is labeled.
B) The relationship lines are thin, and the nature of the relationships is labeled.
C) Right-click the relationship line to see if enforce referential integrity is checked.
D) Right-click the relationship line, select referential integrity, and look at the relationship's properties.

5

The relationship between STORE and EMPLOYEE is defaulted to mandatory, that is, the FK value in EMPLOYEE is required. How do you eliminate a record from STORE?

A) Delete the employees from the STORE to be deleted.
B) Permanently remove the referential integrity enforcement.
C) Open the EMPLOYEE table in the design format; then change the Required property of the EMPLOYEE’s FK to No and make sure that its default value is set to null.
D) Delete all relationships between STORE and EMPLOYEE. Redesign the database to work without them.

Queries

1. www..net

What does Access use to handle SQL code generation?

A) SQL forms
B) Query Code Generator
C) Query by Example
D) SQL compiler

2.

Two basic query types exist. They are

A) static and change queries.
B) static and action queries.
C) select and action queries.
D) select and change queries.

3.

What criteria matches dates from January 1, 1996 to the present?

A) \(\geq "01/01/1996"\)
B) \(\geq 01/01/1996\)
C) \(\geq #01/01/1996#\)
D) \(\geq '01/01/1996'\)
EMP_DOB holds employee birth dates. Which format will display the month in number format, such as 01 or 11?

A) Month: Format([EMP_DOB],"m")
B) Month: Format([EMP_DOB],"mm")
C) Month: Format([EMP_DOB],"mmm")
D) Month: Format([EMP_DOB],"mmmm")

What does the wildcard ? match?

A) Zero or more of the preceding character
B) Any one character in the position held by the ?
C) Multiple characters in the position held by the ?
D) Any letter in the position held by the ?

Form Development

www.net

1

Which of the following are not functions of forms?

A) Forms are used to tie together the database components through menu structures.
B) Forms extend data validation rules through queries, value lists, and other input control devices.
C) Forms are used to enter new data and to edit existing data.
D) Forms program and control user responses.
Which of the following correctly describes the relationship between forms and tables?

A) A form is based on exactly one table. The table must exist before the form is created.
B) A form is based on exactly one table. The table may be created before or after the form is created.
C) A form may be based on one or more tables. The table(s) must exist before the form is created.
D) A form may be based on one or more tables. The table(s) may be created before or after the form is created.

3
What is the most common form type?

A) A single-source form, based on a tabular format
B) A single-source form, based on a columnar format
C) A multi-source form, based on a tabular format
D) A multi-source form, based on a columnar format

4
What are the advantages of form-based dialog boxes?

A) They have more prompting options than dialog boxes generated by Access.
B) They allow the use of combo boxes.
C) Access-generated dialog boxes are likely to disrupt interface layout schemes, while form-based dialog boxes are not.
D) All of the above.

5
Which of the following is not an advantage of a menu driven database system?
A) Help make the database applications system user-friendly by eliminating the need to remember command languages.

B) **Provide security though user-level logins.**

C) Control access by providing only those options that allow people to do their jobs.

D) Create an environment that is tailored to specific types of applications and end users.

**Reports and Labels**

1

You want month names to be sorted in order (Jan, Feb, Mar, etc.) when they appear on a report. What do you need to do?

A) Sort by month name.

**B) Sort by month number.**

C) Define the field with the data type month and sort Ascending.

D) Define the field with the data type month and sort Descending.

2

What functions would you use to put the current time and data output in a report header?

A) **Time() and Now()**

B) Time() and **CurrentDate()**

C) **CurrentTime() and Now()**

D) CurrentTime() and **CurrentDate**()

3

Which syntax will concatenate employee first and last names, with a space in between the names?
4

Which of the following accurately describes a crosstab query?

A) Crosstab queries have very limited summary capabilities.
B) Crosstab queries are seldom used to generate reports.
C) **If you select row totals in the crosstab query, you cannot also select column totals.**
D) You can select row totals and also column totals.

5

What kind of query works best with the Chart Wizard?

A) Append
B) Update
C) Action
D) Select

**Macros and Macro Groups**

1

Which of the following best describes a macro?
A) An SQL script
B) An instruction or a set of instructions that triggers one or more actions
C) A VBA program
D) A detailed set of actions that Access will invoke whenever a mouse click occurs

2

Macros are best placed in logical modules known as

A) macro sets.
B) **macro groups.**
C) code sets.
D) modules.

3

Which of the following statements best describes the use of freestanding macros?

A) They are best used for conditional statements.
B) They are best used for menu items.
C) They are best used to enter temporary values in a form.
D) **Do not use freestanding macros.**

4

What action hides or shows the results of a macro while it runs.

A) Reveal
B) **Echo**
C) Hide
D) Show
What macro will be executed automatically when you open the database?

A) Autoexec  
B) AutoStart  
C) Startup  
D) AutoRun

**Access and the Internet**

1
What standard must a basic HTML-based web page conform to?

A) TCP/IP  
B) ASCII  
C) XML  
D) SQL

2
Which cannot be dragged to a Data Access Page using the Controls Wizard?

A) Tables  
B) Controls  
C) Macros  
D) Queries

3
When inserting a field in the footer, what is the default prefix is
A) TotalOf <Fieldname>
B) SumOf <Fieldname>
C) MaximumOf <Fieldname>
D) MinimumOf <Fieldname>

4

A record set is exactly the same as

A) a query
B) a data access page
C) a table
D) a macro

5

What's the maximum number of different fields that can you sort in the Page Wizard?

A) 1
B) 2
C) 3
D) 4

**Database Security**

1

In a database security environment, a form, table, query, report, macro, or module in the database is a(n)
A) object.  
B) permission.  
C) operation.  
D) group.

2.
What file does Access use to lock a database in a shared environment?

A) The **LDB** file  
B) The PID file  
C) The MDE file  
D) The MDB file

3.
Which of the following accurately describes workgroup files?

A) You can only create one workgroup file per computer.  
B) **You can create many workgroup files, but you can use only one workgroup file at a time.**  
C) You can create many workgroup files, and you can use more than one workgroup file at a time.  
D) You can create many workgroup files, but are limited to using two at a time.

4.
What does Access use to manage database locking in a multiuser database environment?

A) Jet Database Engine  
B) PID files  
C) MDW files  
D) Access Lockout Protocol (ALP)
What permission allows the user to open a database, form or report, or run a macro?

A) Open
B) Open/Run
C) Administer
D) Run

SQL stands for ______________.
I - Structured Query Language
II – Standard Query Language
III- Status Query Language

Select correct option:
Only I
Only II
Both I and II
Only III

Making a change to the conceptual schema of a database but not affecting the existing external schemas is an example of

Physical data independence.
Concurrency control.
Logical data independence.
Functional dependency

Question No: 1 (Marks: 1) - Please choose one

Which of the following statements is true about the views?
► view is always a complete set of all the tables in a database
► View can not be used for retrieving data
► The results of using a view are not permanently stored in the database.
► Rows can not be updated or deleted in the view
Question No: 2 (Marks: 1) - Please choose one

What is the alternate name of Data Dictionary?
► Index
► Metadata
► Data
► System Catalog

Question No: 3 (Marks: 1) - Please choose one

IN function helps reduce the need to use multiple AND conditions.
► True
► False

Question No: 4 (Marks: 1) - Please choose one

Browser based forms are developed in the following tools EXCEPT
► HTML
► Scripting language
► Front Page
► Web-based Forms

Question No: 5 (Marks: 1) - Please choose one

Which of the following are the general activities, which are performed during the development of application programs?
► Data input programs
► Editing
► Display
► All of given

Question No: 6 (Marks: 1) - Please choose one

Which of the following is not true about De-normalization?
► It is the process of attempting to optimize the performance of a database
► De-normalization is a technique to move from lower to higher normal forms of database modeling
► It enhances the performance of DB
In de-normalization it is required to add redundant data.

Question No: 9  (Marks: 1) - Please choose one

While recovering data, which of the following files does a recovery manager examines at first?
► A system file
► **Log file**
► Data dictionary
► Metadata

Question No: 10  (Marks: 1) - Please choose one

Which of the following is NOT a feature of Indexed sequential files?
► Records are stored in sequence and index is maintained.
► Dense and nondense types of indexes are maintained.
► **Track overflows and file overflow areas can not be ensured.**
► Cylinder index increases the efficiency

ALTER TABLE exams
RENAME COLUMN Q_description TO Question_Descp, Std_ID to Student_ID.
Syntax of ALTER TABLE is NOT correct.
► True
► **False**

Question No: 14  (Marks: 1) - Please choose one
Which of the following SQL commands deletes a record of an employee with the employee_id 12345, from a table named PERSON.
► **DELETE FROM person WHERE employee_id = '12345'**
► DELETE WHERE person FROM employee_id = 12345
► DROP FROM person WHERE employee_id = 12345
► DELETE WHERE person WHERE employee_id = 12345

Question No: 15  (Marks: 1) - Please choose one
Which of the following is not a form of optical disk?
► CD ROM
► WORM
► Erasable Optical
Question No: 16  (Marks: 1) - Please choose one
Which of the following is the correct description of cache hit?
► **When data is found in the cache**
► When data is removed in the cache
► The number of times the cache is accessed directly by the processor
► When data is lost from the cache

Question No: 17  (Marks: 1) - Please choose one
In which of the following situations, Clustering is suitable:
► Frequently updating
► **Relatively static**
► Relatively deletion
► Relatively dynamic

Question No: 18  (Marks: 1) - Please choose one
Which of the following is disadvantage of chaining technique to handle the collisions?
► Unlimited Number of elements
► Fast re-hashing
► **Overhead of multiple linked lists**
► Maximum number of elements must be known

Question No: 19  (Marks: 1) - Please choose one
Which of the following is NOT a component of a DFD? Select correct option:
► Dataflow
► Datastore
► External entities
► **Relationship between external entities**

Question No: 20  (Marks: 1) - Please choose one
Laser records data by burning microscopic holes in the surface of the disk with a

► Hard disk
► RAM
► **Optical disk**
► Floppy disk
Which of the following concepts is applicable with respect to 3NF?
► Full functional dependency
► Any kind of dependency
► **Transitive dependency**
► Partial functional dependency

Question No: 22  (Marks: 1) - Please choose one

Which of the following is NOT a feature of a good interface?
► Consistency
► Process based
► **Data structure based**
► User friendly

**Question No: 2**  (Marks: 1) - Please choose one
Which of the following statements are Data Definition Language command?
► INSERT
► UPDATE
► GRANT
► **TRUNCATE**

**Question No: 3**  (Marks: 1) - Please choose one
Which of the following statements is true about the views?
► View is always a complete set of all the tables in a database
► View can not be used for retrieving data
► **The results of using a view are not permanently stored in the database.**
► Rows can not be updated or deleted in the view

**Question No: 4**  (Marks: 1) - Please choose one
How many clustered index(es) do each database table have?
► 2
► 3
► 5
► **1**

**Question No: 5**  (Marks: 1) - Please choose one
Suppose there are 4 rows and 3 columns in TABLE1 and 6 rows and 5 columns in TABLE2; what is the size of the cartesian product incase of CROSS JOIN between these two tables?
► 24
► 20
► 18
► **15**
Question No: 6  (Marks: 1) - Please choose one
Which of the following is not one of the properties of Transaction?
► atomicity
► consistency
► **redundancy**
► durability

Question No: 7  (Marks: 1) - Please choose one
Which of the following is INCORRECT about VIEWS?
► It is not possible to left out the data which is not required for a specific view.
► A database view displays one or more database records on the same page.
► Views can be used as security mechanisms
► Views are generally used to focus the perception each user has of the database.

Question No: 8  (Marks: 1) - Please choose one
Which of the following gives all the fields from employee table named as EMP?
► select * from EMP;
► select emp* from EMP'
► select emp_id where EMP;
► select * where EMP;

Question No: 9  (Marks: 1) - Please choose one
Consider the relation Interview(CandidateNo, InterviewDate, InterviewTime, StaffNo, RoomNo)
and the following functional dependencies.
FD1 : CandidateNo, InterviewDate -> InterviewTime, StaffNo, RoomNo
FD2 : RoomNo, InterviewDate, InterviewTime -> StaffNo, CandidateNo
FD3 : StaffNo, InterviewDate -> RoomNo
Which of the following is correct?
► The relation Interview is in 3NF
► **The relation Interview is in BCNF.**
► The FD3 violates 3NF.
► The FD2 violates 2NF.

Question No: 10  (Marks: 1) - Please choose one
Which of the following types of partitioning reduces the chances of unbalanced partitions?

- vertical
- List
- **Hash**
- Range

**Hash Partitioning:**
It is a type of horizontal partitioning. In this type particular algorithm is applied and DBMS knows that algorithm. So hash partitioning reduces the chances of unbalanced partitions to a large extent **Question No: 11 (Marks: 1) - Please choose one**

Which of the following is one of the purposes of using DDL commands?

- inserting records into databases
- updating records into databases
- manipulating databases
- **creating and destroying databases**

**Question No: 12 (Marks: 1) - Please choose one**

Which of the following statements creates a database named COMPANY.

- CREATE DATABASE **company**
- CREATE DB **company**
- ADD DATABASE **company**
- CREATE **company** DATABASE

**Question No: 13 (Marks: 1) - Please choose one**

What is the impact of setting multiple indexes for the same key, in index sequential files?

- Multiple indexes for the same key can not be set
- **It increases efficiency**
  - It decreases efficiency
  - It will increase complexity as the access time will be increased

New records are added to an overflow file
Record in main file that precedes it is updated to contain a pointer to the new record
The overflow is merged with the main file during a batch update
Multiple indexes for the same key field can be set up to increase efficiency

**Question No: 14 (Marks: 1) - Please choose one**

Consider a transaction which includes following operations

...  
Z= Z + 10  
Write Z  
...

Suppose that the value of Z after addition and the execution of this operation is 17. Now against the write operation the entry made in the log file will be

What does Z reflects in the above entry?

- **Object being updated**
- Identity of the transaction
In the entry, Tn reflects the identity of the transaction, Z is the object being updated and 33 is the value that has to be placed in Z.

Question No: 15  ( Marks: 1 ) - Please choose one

Which of the following is not true regarding DB transactions?

- A set of database operations that are processed partly
- A database transaction is a logical unit of database operations
- A database transaction must be atomic
- A database transaction must contains the ACID property

Which of the following is not true about input forms?

- Provide an easy, effective, efficient way to enter data into a table
- Especially useful when the person entering the data is not familiar with the inner workings
- Provide different controls to add data into the tables
- One input forms can populate one table at a time

Question No: 17  ( Marks: 1 ) - Please choose one

Which of the following is an example of volatile memory?

- RAM
- ROM
- Flash memory
- CPU

Question No: 18  ( Marks: 1 ) - Please choose one

Which of following is NOT generally the aim of data partitioning and placement of data?

- Reduce Workload
- Balance Workload
- Merging different relations
- Speed up rate of useful works.

Question No: 19  ( Marks: 1 ) - Please choose one

ALTER TABLE exams
RENAME COLUMN Q_description TO Question_Descp, Std_ID to Student_ID.
Syntax of ALTER TABLE is NOT correct.

- True
- False

Question No: 20  ( Marks: 1 ) - Please choose one

Which of the following is Advantage of Re-Hashing technique to handle the collisions?

- Collisions don’t use primary table space
- Unlimited number of elements
- Fast access through use of main table space (page 29)
- Overhead of multiple linked lists

Question No: 21  ( Marks: 1 ) - Please choose one

Materialized views and Indexes are NOT similar by the following way(s).

- They consume storage space
- They must be refreshed when the data in their master tables changes.
- They can be accessed directly using a SELECT statement
All of the Given

Unlike indexes, materialized views can be accessed directly using a SELECT statement.

Question No: 22  (Marks: 1) - Please choose one
Select 'NORTH', CUSTOMER From CUST_DTLS Where REGION = 'N' Order By CUSTOMER Union Select 'EAST', CUSTOMER From CUST_DTLS Where REGION = 'E' Order By CUSTOMER

The above statement:

► Has an error - the string should be in double quotes.
► Has an error - ORDER BY clause.
► Does not have an error.
► Has an error - the string in single quotes 'NORTH' and 'SOUTH'.

Question No: 23  (Marks: 1) - Please choose one
A software package designed to store and manage databases

► Database
► DBMS
► Data model
► Data

A Database Management System (DBMS) is a software package designed to store and manage databases. Database Management Systems

Question No: 24  (Marks: 1) - Please choose one
Who is responsible for authorizing access to the database, for coordinating and monitoring its use?

► Database Designers
► Database Administrators
► End Users
► Application Programmers

Question No: 25  (Marks: 1) - Please choose one
A superkey that does not contain a subset of attributes that is itself a superkey is called a ______.

► candidate key
► primary key
► superkey
► secondary key

Question No: 26  (Marks: 1) - Please choose one
A ______ entity has a primary key that is partially or totally derived from the parent entity in the relationship.

► strong
► weak
► business
► relationship

Question No: 1  (Marks: 1) - Please choose one
Which feature of database provides conversion from inconsistent state of DB to a consistent state ensuring minimum data loss?
Question No: 2  (Marks: 1) - Please choose one
Which of the following statements is true about the views?
► view is always a complete set of all the tables in a database
► view can not be used for retrieving data
► the results of using a view are not permanently stored in the database.
► rows can not be updated or deleted in the view

Question No: 3  (Marks: 1) - Please choose one
Which of the following is true about TRUNCATE?
► Can be Rolled back.
► Activates Triggers.
► is DML Command.
► Resets identity of the table.

Question No: 5  (Marks: 1) - Please choose one
Suppose there are 8 rows and 4 columns in TABLE1 and 3 rows and 4 columns in TABLE2; what is the size of the cartesian product in case of CROSS JOIN between these two tables?
► 24
► 32
► 12
► 16

Question No: 6  (Marks: 1) - Please choose one
Which of the following is not one of the properties of Transaction?
► atomicity
► consistency
► redundancy
► durability
Question No: 7 (Marks: 1) - Please choose one
Which of the following is INCORRECT about VIEWS?
► It is not possible to left out the data which is not required for a specific view.
  ► A database view displays one or more database records on the same page.
  ► Views can be used as security mechanisms
  ► Views are generally used to focus the perception each user has of the database.

Question No: 8 (Marks: 1) - Please choose one
Each course section is assigned a particular faculty member, and each course section corresponds to a particular course. Conceptually, what is the relationship between faculty and course (not course section).
► 1:1
► 1:M
► M:M
► Ternary
http://odin.lcb.uoregon.edu/pangburn/dbms/Test1samples_a.pdf

Question No: 9 (Marks: 1) - Please choose one
Which of the following is used to add or drop columns in an existing table?
► ALTER
► HAVING
► SELECT
► THEN

Question No: 10 (Marks: 1) - Please choose one
Which of the following is a correct way of selecting all the columns from a table called PERSONS?
► SELECT FROM * Persons
► SELECT * FROM Persons
► SELECT * WHERE Persons
► SELECT WHERE * Persons

Question No: 11 (Marks: 1) - Please choose one
Which of the following is NOT a feature of Indexed sequential files?
► Records are stored in sequence and index is maintained.
► Dense and nondense types of indexes are maintained.
► Track overflows and file overflow areas can not be ensured.
► Cylinder index increases the efficiency

Indexed Sequential Summary:
Following are salient features of Indexed sequential file structure:
Records are stored in sequence and index is maintained.
Dense and nondense types of indexes are maintained.
Track overflows and file overflow areas are ensured. Cylinder index increases the efficiency.

Question No: 12 (Marks: 1) - Please choose one

Consider the given relations Student and Instructor as given below. Please note that Fname and Lname also denote the First Name and Last Name respectively. Which of the following statements is correct with respect to the two relations given above?

- The two relations are not union-compatible since their attribute names differ.
- The two relations are union-compatible since they have the same type of tuples.
- The set operations such as CARTESIAN PRODUCT and DIVISION can be applied on these two relations.
- To find out the students who are not instructors, it is necessary to perform the operation Student \ Div Instructor.

Question No: 13 (Marks: 1) - Please choose one

Which of the following serves as a milestone or reference point in the log file?
- Constraints
- Relations
- Check points
- Transactions identities

Question No: 18 (Marks: 1) - Please choose one

Which of the following is the correct description of cache hit?

- When data is found in the cache
- When data is removed in the cache
- The number of times the cache is accessed directly by the processor
- When data is lost from the cache

When data is found in the cache, it is called a cache hit, and the effectiveness of a cache is judged by its hit rate.

Question No: 19 (Marks: 1) - Please choose one

In which of the following situations, Clustering is suitable:
- Frequently updating
- Relatively static
- Relatively deletion
- Relatively dynamic

Question No: 20 (Marks: 1) - Please choose one

Only one type of constraint can be enforced in any table by CREATE command
- True
- False

Question No: 21 (Marks: 1) - Please choose one

Which of the following is disadvantage of chaining technique to handle the collisions?
- Unlimited Number of elements
Question No: 22  ( Marks: 1 ) - Please choose one

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 ProjNo -> DeptNo holds over R.
► The functional dependency (EmpNo, ProjNo) -> DeptNo holds over R.
► The functional dependency DeptNo -> ProjNo holds over R.
► The functional dependency EmpNo -> DeptNo holds over R.

This example illustrates the concept of functional dependency. The situation modeled is that of college students visiting one or several lectures in each which they are assigned a teaching assistant (TA). Let's further assume that every student is in some semester and is identified by an unique integer ID.

<table>
<thead>
<tr>
<th>StudentID</th>
<th>Semester</th>
<th>Lecture</th>
<th>TA</th>
</tr>
</thead>
<tbody>
<tr>
<td>1234</td>
<td>6</td>
<td>Numerical Methods</td>
<td>John</td>
</tr>
<tr>
<td>1200</td>
<td>4</td>
<td>Numerical Methods</td>
<td>Peter</td>
</tr>
<tr>
<td>1234</td>
<td>6</td>
<td>Visual Computing</td>
<td>Thomas</td>
</tr>
<tr>
<td>1201</td>
<td>4</td>
<td>Numerical Methods</td>
<td>Peter</td>
</tr>
<tr>
<td>1201</td>
<td>4</td>
<td>Physics II</td>
<td>Simone</td>
</tr>
</tbody>
</table>

We notice that whenever two rows in this table feature the same StudentID, they also necessarily have the same Semester values. This basic fact can be expressed by a functional dependency:

 StudentID → Semester.

Other nontrivial functional dependencies can be identified, for example:

 {StudentID, Lecture} → TA
 {StudentID, Lecture} → {TA, Semester}

The latter expresses the fact that the set {StudentID, Lecture} is a superkey of the relation.

Question No: 23  ( Marks: 1 ) - Please choose one
An entity type is

► defined when the database is actually constructed
► a specific type such as an integer, text, date, logical etc
a coherent set of similar objects that we want to store data on (e.g. STUDENT, COURSE, CAR)

Entity Type
The entity type can be defined as a name/label assigned to items/objects that exist in an environment and that have similar properties.

http://www.edugrid.ac.in/iitmk/dbms/dbms_quiz02.htm

Question No: 24  (Marks: 1) - Please choose one
An entity can be logically connected to another by defining a ____.
► hyperlink
► common attribute
► primary key
► superkey


Question No: 25  (Marks: 1) - Please choose one
You can’t modify more than one table at a time through a view.
► True
► False

You can’t modify more than one table at a time through a view.
If your view is based on aggregate functions, you can’t use it to modify data.
If your view is based on a table that contains fields that don’t allow null values yet your view doesn’t display those fields, then you won’t be able to insert new data.

Question No: 26  (Marks: 1) - Please choose one
Which of the following is one of the purposes of using DML commands?
► Creating databases
► Destroying databases
► Inserting data in tables
► Non of the above

Question No: 1  (Marks: 1) - Please choose one
Consider the following statements.
A. Conceptual schema which is the result of conceptual design is a logical description of all data elements and their relationships.
B. Internal level of the database architecture consists of the physical view of the database.
C. External level of the database architecture provides the user view of the database.
With respect to the ANSI/SPARC three level database architecture, which of the above is/are correct?

► Only A.
► Only C.
► Only A and B.
► Only B and C.

Question No: 2  (Marks: 1) - Please choose one
The ER- data model is an example of:
Question No: 3  (Marks: 1) - Please choose one
Which one of the following E-R diagrams most correctly represents the relationship between Student and Grade entities?

right answer is 4

Question No: 4  (Marks: 1) - Please choose one
Which of the following constraints enforces referential integrity?

FOREIGN KEY

CHECK

PRIMARY KEY

UNIQUE

Question No: 5  (Marks: 1) - Please choose one
Given are the relations of student and Instructor

Consider the following table obtained using Student and Instructor relations.
Which relational algebra operation could have been applied on the pair of relations Student and Instructor to obtain the above data?

- Instructor – Student
- Student ∩ Instructor
- Instructor ÷ Student
- Student – Instructor

Question No: 6 (Marks: 1) - Please choose one
Consider the relation Interview(CandidateNo, InterviewDate, InterviewTime, StaffNo, RoomNo)
and the following functional dependencies.
FD1 : CandidateNo, InterviewDate -> InterviewTime, StaffNo, RoomNo
FD2 : RoomNo, InterviewDate, InterviewTime -> StaffNo, CandidateNo
FD3 : StaffNo, InterviewDate -> RoomNo
Which of the following is correct?

- The relation Interview is in 3NF
- The relation Interview is in BCNF.
- The FD3 violates 3NF.
- The FD2 violates 2NF.

Question No: 7 (Marks: 1) - Please choose one
Which of the following is INCORRECT statement concerning the database design process?
- During requirements collection and analysis phase, one can gather the data requirements of database users.
- By referring to a high level data model, it is possible to understand the data requirements of the users, entity types, relationships and constraints.
- Transformation of the high level data model into the implementation data model is called logical design or data model mapping.
During the logical design phase of internal storage structures, access paths and file organization for the database files are specified.

Question No: 8 (Marks: 1) - Please choose one
Consider the following diagram depicting a kind of a relationship type where X and Z are entities and Y is a relationship type:

Select the correct statement among the following on the above diagram:

► The relationship type Y is of cardinality ratio 1 : N.
► The diagram depicts existence dependencies.
► The participation of X in the Y relationship type is total.
► The participation of Z in the Y relationship type is partial.

Question No: 9 (Marks: 1) - Please choose one
Identify the correct statement.
► Entity integrity constraints specify that primary key values can be composite.

► Entity integrity constraints are specified on individual relations.

► Entity integrity constraints are specified between weak entities.

► When entity integrity rules are enforced, a tuple in one relation that refers to another relation must refer to an existing tuple.

Question No: 10 (Marks: 1) - Please choose one
Identify the correct statement.
► Referential integrity constraints check whether the primary key values are unique.
► Referential integrity constraints check whether an attribute value lies in the given range.

► Referential integrity constraints are specified between entities having recursive relationships.
► When Referential integrity rules are enforced, a tuple in one relation that refers to another relation must refer to an existing tuple.
Question No: 11 (Marks: 1) - Please choose one
Identify the correct way to implement one-to-one relationship in tables?
► by splitting the data into two tables with primary key and foreign key relationships.
► as a single table and rarely as two tables with primary 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 creating two separate tables

Question No: 12 (Marks: 1) - Please choose one
A collection of related data is
► Logical model
► Database
► Data
► Relational model

Question No: 13 (Marks: 1) - Please choose one
A collection of concepts that can be used to describe the structure of a database
► Database
► DBMS
► Data model
► Data

Question No: 14 (Marks: 1) - Please choose one
A superkey that does not contain a subset of attributes that is itself a superkey is called a ____.
► candidate key
► primary key
► superkey
► secondary key
Question No: 15  (Marks: 1) - Please choose one
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: 16  (Marks: 1) - Please choose one
Which of the following concepts is applicable with respect to 2NF?
► Full functional dependency
► Any kind of dependency
► Transitive dependency
► Non-transitive dependency

Question No: 1  (Marks: 1) - Please choose one
Which feature of database provides change from incompatible state of DB to a consistent state make sure minimum data loss?

► User accessible catalog

► Data processing

► Authorization service

► Recovery service

Question No: 2  (Marks: 1) - Please choose one
Which of the following statements is true about the views?
► view is always a complete set of all the tables in a database
View can not be used for retrieving data

The results of using a view are not permanently stored in the database.

Rows cannot be updated or deleted in the view

Question No: 3  ( Marks: 1 )  - Please choose one

Which of the following is true about TRUNCATE?

- Can be Rolled back.
- Activates Triggers.
- is DML Command.
- Resets identity of the table.

Question No: 4  ( Marks: 1 )  - Please choose one

Which of the following is the correct way to find out the size of cartesian product in case of CROSS JOIN?

- the number of columns in the first table multiplied by the number of columns in the second table.
the number of columns in the first table multiplied by the number of rows in the second table.

the number of rows in the first table multiplied by the number of columns in the first table.

the number of rows in the first table multiplied by the number of rows in the second table.

Question No: 5  (Marks: 1) - Please choose one

Suppose there are 8 rows and 4 columns in TABLE1 and 3 rows and 4 columns in TABLE2; what is the size of the cartesian product in case of CROSS JOIN between these two tables?

► 24
► 32
► 12
► 16

Question No: 6  (Marks: 1) - Please choose one

Which of the following is not one of the properties of Transaction?

► atomicity
► consistency
► redundancy
► durability
Question No: 7  ( Marks: 1 )  - Please choose one

Which of the following is INCORRECT about VIEWS?

► It is not possible to left out the data which is not required for a specific view.

► A database view displays one or more database records on the same page.

► Views can be used as security mechanisms

► Views are generally used to focus the perception each user has of the database.

Question No: 8  ( Marks: 1 )  - Please choose one

Each course section is assigned a particular faculty member, and each course section corresponds to a particular course. Conceptually, what is the relationship between faculty and course (not course section).

► 1:1

► 1:M

► M:M

► Ternary

Question No: 9  ( Marks: 1 )  - Please choose one

Which of the following is used to add or drop columns in an existing table?
Question No: 10  ( Marks: 1 ) - Please choose one

Which of the following is a correct way of selecting all the columns from a table called PERSONS?

► SELECT FROM * Persons

► SELECT * FROM Persons

► SELECT * WHERE Persons

► SELECT WHERE * Persons

Question No: 11  ( Marks: 1 ) - Please choose one

Which of the following is NOT a feature of Indexed sequential files?

► Records are stored in sequence and index is maintained.

► Dense and nondense types of indexes are maintained.

► Track overflows and file overflow areas can not be ensured.
Question No: 12  (Marks: 1) - Please choose one

Consider the given relations \textit{Student} and \textit{Instructor} as given below. Please note that 
Fname and Lname also denote the First Name and Last Name respectively.

\begin{center}
\begin{tabular}{|l|l|}
\hline
\textit{Student} & \textit{Instructor} \\
\hline
First Name & First Name \\
Saman & Ajith \\
Romesh & Sujith \\
Jeeva & Saman \\
Nadee & Kasun \\
Kumari & Romesh \\
Geetha & Zoysa \\
Prasad & Fernando \\
\hline
Last Name & Lname \\
Perera & Gamage \\
Dias & Hewage \\
Silva & Perera \\
Alwis & Peiris \\
Costa & \\
\end{tabular}
\end{center}

Which of the following statements is correct with respect to the two relations given above?

\begin{itemize}
\item The two relations are not union-compatible since their attribute names differ.
\item The two relations are union-compatible since they have the same type of tuples.
\item The set operations such as CARTESIAN PRODUCT and DIVISION can be applied on these two relations.
\end{itemize}
To find out the students who are not instructors, it is necessary to perform the operation

\[ \text{Student} \div \text{Instructor} \].

**Question No: 13 (Marks: 1) - Please choose one**

Which of the following serves as a milestone or reference point in the log file?

- Constraints
- Relations
- Check points
- Transactions identities

**Question No: 14 (Marks: 1) - Please choose one**

Which of the following is not true regarding DB transactions?

- A set of database operations that are processed partly
- A database transaction is a logical unit of database operations
- A database transaction must be atomic
A database transaction must contain the ACID property.

Question No: 15 (Marks: 1) - Please choose one

Which of the following are the general activities, which are performed during the development of application programs?

- Data input programs
- Editing
- Display
- All of given

Question No: 16 (Marks: 1) - Please choose one

Browser based forms are developed in the following tools EXCEPT

- HTML
- Scripting language
- Front Page
Question No: 17  ( Marks: 1 )  - Please choose one

Which of the following is not a form of optical disk?

► CD ROM
► WORM
► Erasable Optical
► EEPROM

Question No: 18  ( Marks: 1 )  - Please choose one

Which of the following is the correct description of *cache hit*?

► When data is found in the cache
► When data is removed in the cache
► The number of times the cache is accessed directly by the processor
► When data is lost from the cache
Question No: 19  ( Marks: 1 )  - Please choose one

In which of the following situations, Clustering is suitable:

► Frequently updating
► Relatively static
► Relatively deletion
► Relatively dynamic

Question No: 20  ( Marks: 1 )  - Please choose one

Only one type of constraint can be enforced in any table by CREATE command

► True
► False

Question No: 21  ( Marks: 1 )  - Please choose one

Which of the following is disadvantage of chaining technique to handle the collisions?

► Unlimited Number of elements
► Fast re-hashing
► Overhead of multiple linked lists
► Maximum number of elements must be known

Question No: 22  ( Marks: 1 )  - Please choose one

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 ProjNo -> DeptNo holds over R.
► The functional dependency (EmpNo, ProjNo) -> DeptNo holds over R.
► The functional dependency DeptNo -> ProjNo holds over R.
► The functional dependency EmpNo -> DeptNo holds over R.

Question No: 23 (Marks: 1) - Please choose one

______________________________ An entity type is

► defined when the database is actually constructed
► a specific type such as an integer, text, date, logical etc
► a coherent set of similar objects that we want to store data on (e.g. STUDENT, COURSE, CAR)
► defined by the database designer

Question No: 24 (Marks: 1) - Please choose one

______________________________ An entity can be logically connected to another by defining a ____.

► hyperlink
common attribute
► primary key
► superkey

Question No: 25 ( Marks: 1 ) - Please choose one

You can’t modify more than one table at a time through a view.
► True
► False

Question No: 26 ( Marks: 1 ) - Please choose one

Which of the following is one of the purposes of using DML commands?

► Creating databases
► Destroying databases
► Inserting data in tables
► None of the above

Question No: 1 ( Marks: 1 ) - Please choose one
Making a change to the conceptual schema of a database but not affecting the existing external schemas is an example of

► Physical data independence.
► Concurrency control.
► Logical data independence.
► Functional dependency

Question No: 2 ( Marks: 1 ) - Please choose one
GRANT SELECT, UPDATE(Designation) ON Employee TO Amali, Hiruni WITH GRANT
OPTION;
What does this SQL statement do?

► Grant permission to Amali, only to retrieve data from Employee table and grant permission to Hiruni, only to update the designation from Employee table.
► Grant permission to Hiruni in order to grant, select and update permission to Amali.
► Grant permission to Amali & Hiruni to update designation of employees in the Employee table.
► Grant permission to Amali and Hiruni to update all data except designation in Employee table.

Question No: 3 (Marks: 1) - Please choose one
Which key word is available in SQL to enforce referential integrity?

► Check
► Primary Key
► Set Default
► Unique

Question No: 4 (Marks: 1) - Please choose one
Which of the following statements are Data Definition Language command?

► INSERT
► UPDATE
► GRANT
► TRUNCATE

Question No: 5 (Marks: 1) - Please choose one
How many clustered index(es) do each database table have?

► 2
► 3
► 5
► 1

Question No: 6 (Marks: 1) - Please choose one
Which of the following is true about DELETE command?

► is DDL Command.
► Resets identity of the table.
► cannot activate a trigger.
► Can be Rolled back.

Question No: 7 (Marks: 1) - Please choose one
Which of the following will be deleted relating to a table if you use TRUNCATE command?
Question No: 8 ( Marks: 1 ) - Please choose one
Which of the following is not true about De-normalization?
► It is the process of attempting to optimize the performance of a database
► De-normalization is a technique to move from lower to higher normal forms of database modeling
► In de-normalization it is required to add redundant data.
► It enhances the performance of DB

Question No: 9 ( Marks: 1 ) - Please choose one
Which of the following is not a feature of TRANSACTION?
► Users should be able to regard the execution of each transaction as atomic.
► Each transaction, run by itself.
► must preserve the consistency of the database
► dependant on other concurrent transactions

Question No: 10 ( Marks: 1 ) - Please choose one
Which of the following gives all the fields from employee table named as EMP?
► select * from EMP;
► select emp* from EMP'
► select emp_id where EMP;
► select * where EMP;

Question No: 11 ( Marks: 1 ) - Please choose one
Suppose there are 4 fields in a table named CUST (customer_id, first_name, last_name, phone). Which of the following gives all the information of the customers in the table whose last name is ALI?
► SELECT * FROM CUST WHERE last_name='ALI';
► SELECT * FROM CUST WHERE last_name=ALI;
► SELECT * FROM CUSTOMER WHERE name=ALI;
► SELECT * FROM CUSTOMER WHERE last_name=ALI;

Question No: 12 ( Marks: 1 ) - Please choose one
Identify the correct statement with respect to normalization.
► Normalization is a formal technique that can be used only at the starting phase of the database design.
► Normalization can be used as a top-down standalone database design technique.
► The process of normalization through decomposition must achieve the lossless join property at any cost whereas the dependency reservation property is sometimes sacrificed.
The process of normalization through decomposition must achieve the dependency reservation property at any cost whereas the lossless join property is sometimes sacrificed.

Question No: 13 ( Marks: 1 ) - Please choose one
Which of the following is not true with respect to denormalization?
► A denormalized data model is not the same as a data model that has not been normalized
► Denormalization takes place before the normalization process
► It is an attempt to optimize the performance of database
► Denormalization process can not be initiated before the Database design

Question No: 14 ( Marks: 1 ) - Please choose one
Which of the following is incorrect with respect to indexed sequential files?
► New records are added to an overflow file
► Record in main file that precedes it is updated to contain a pointer to the new record
► The overflow is merged with the main file during a batch update
► Multiple indexes for the same key field cannot be setup

Question No: 15 ( Marks: 1 ) - Please choose one
Which of the following types of partitioning reduces the chances of unbalanced partitions?
► vertical
► List
► Hash
► Range

Question No: 16 ( Marks: 1 ) - Please choose one
DML commands are used for:
► inserting data into databases
► creating databases
► destroying databases
► creating DB objects

Question No: 17 ( Marks: 1 ) - Please choose one
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: 18 (Marks: 1) - Please choose one
which of the following is correct regarding Dataflow diagram?

► **Single DFD is required to represent a system**
► The dataflow must be bidirectional
► Created at increasing levels of detail
► Used to represent the relationships among the external entities

Question No: 19 (Marks: 1) - Please choose one
Select the correct statement among the following on proper naming of schema constructs:

► Entity type name applies to all the entities belonging to that entity type and therefore a plural name is selected for entity type.
► In the narrative description of the database requirements, verbs tend to indicate the names of relationship types.
► The nouns arising from a database requirement description can be considered as names of attributes.
► Additional nouns which are appearing in the narrative description of the database requirements represent the weak entity type names.

Question No: 20 (Marks: 1) - Please choose one
Structural constraints of a relationship type refer to

► identifying the owner entity type relevant to a given entity type
► whether the existence of an entity depends on it being related to another entity via the relationship type.
► the role that a participating entity from the entity type plays in each relationship instance.
► the constraints applicable in granting access to tables, columns and views in a database schema.

Question No: 21 (Marks: 1) - Please choose one
Identify the correct statement.

► **Entity integrity constraints specify that primary key values can be composite.**
► Entity integrity constraints are specified on individual relations.
► Entity integrity constraints are specified between weak entities.
► When entity integrity rules are enforced, a tuple in one relation that refers to another relation must refer to an existing tuple.

Question No: 22 (Marks: 1) - Please choose one
What is the impact of setting multiple indexes for the same key, in index sequential
files?
► Multiple indexes for the same key can not be set
► It increases efficiency
► It decreases efficiency
► It will increase complexity as the access time will be increased

Question No: 23 ( Marks: 1 ) - Please choose one
Which of the following is not true regarding Indexes?
► Index can be defined even when there is no data in the table
► It support Range selections
► It can be created using ‘Create Index’ statement
► **It can not be created on composite attributes**

Question No: 24 ( Marks: 1 ) - Please choose one
While recovering data, which of the following files does a recovery manager examines at first?
► A system file
► Log file
► Data dictionary
► Metadata

Question No: 25 ( Marks: 1 ) - Please choose one
The main memory of a computer system is also known as
► ROM
► RAM
► PROM
► Hard disk

Question No: 26 ( Marks: 1 ) - Please choose one
________is a control that enables users to select one option from an associated list; users can also type an option.
► Combo box
► Button
► Text box
► Static area

Question No: 27 ( Marks: 1 ) - Please choose one
________ records data by burning microscopic holes in the surface of the disk with a laser.
► Hard disk
► RAM
Optical disk
Floppy disk

Question No: 28 ( Marks: 1 ) - Please choose one
Which of following is NOT generally the aim of data partitioning and placement of data?
► Reduce Workload
► Balance Workload
► Merging different relations
► Speed up rate of useful works.

Question No: 29 ( Marks: 1 ) - Please choose one
ALTER TABLE exams
RENAME COLUMN Q_description TO Question_Descp, Std_ID to Student_ID.

Syntax of ALTER TABLE is NOT correct.

► True
► False

Question No: 30 ( Marks: 1 ) - Please choose one
Which of the following is true regarding Index?
► Index can only be created for a single table in database
► Index can maximum be created for two tables in database
► Index should be created for every table in the database
► Index can be created for every table in the database

Note: Solve these papers by yourself

CS403 100% Solved MCQ from Quiz2
Question # 1 of 10 ( Start time: 09:52:41 PM ) Total Marks: 1
Which of the following is used with INSERT command to insert values in a DB table?
Select correct option:
INTO
WITH

Which of the following is a correct way of selecting all the columns from a table called PERSONS?
Select correct option:
SELECT FROM * Persons
SELECT * FROM Persons
SELECT * WHERE Persons
SELECT WHERE * Persons
Question # 3 of 10 (Start time: 09:53:51 PM) Total Marks: 1
The ________ operator allows to use wild cards in the where clause of an SQL statement.
Select correct option:
IN

Note: Solve these papers by yourself

FROM
LIKE
None of the above.
Question # 4 of 10 (Start time: 09:54:15 PM) Total Marks: 1
Which of the following statements creates a database named IMDB.
Select correct option:
CREATE DATABASE IMDB;
CREATE DB IMDB;
ADD DATABASE named IMDB;
CREATE IMDB DATABASE;

Question # 5 of 10 (Start time: 09:54:31 PM) Total Marks: 1
Which of the following is not true regarding clustering?
Select correct option:
It increases the efficiency since related records are placed close to each other
Clustering makes records, difficult to access
suitable to relatively static situations.
It is a process, which means to place records from different tables to place in adjacent physical locations.

Question # 6 of 10 (Start time: 09:54:55 PM) Total Marks: 1
Which of the following is used to filter rows according to some condition(s)?
Select correct option:
SELECT
FROM
WHERE
UPDATE

Note: Solve these papers by yourself

Select correct option:
SELECT
FROM
WHERE
UPDATE

Question # 7 of 10 (Start time: 09:55:14 PM) Total Marks: 1
Which of the following is not an aggregate function
Select correct option:
AVG
SUM
**UPPER**
MAX

CREATE TABLE and CREATE index belongs to which type of SQL commands
Select correct option:
DML
DDL
DCL
DQL

Question # 9 of 10 ( Start time: 09:55:59 PM ) Total Marks: 1

In SQL, which command is used to modify the rows of tables.
Select correct option:
**UPDATE**
INSERT
BROWSE
APPEND

---

**Note:** Solve these papers by yourself

CS403 MCQ Solved Bank Solved by
Solved by
SQL stands for ______________.
I - Structured Query Language
II – Standard Query Language
III- Status Query Language
Select correct option:
**Only I**
Only II
Both I and II
Only III
Making a change to the conceptual schema of a database but not affecting the existing external schemas is an example of
Physical data independence.
Concurrency control.
**Logical data independence.**
Functional dependency
Logical data independence
Logical data independence provides the independence in a way that
Note: Solve these papers by yourself

changes in conceptual model do not affect the external views. Or simply it can be stated at the Immunity of external level from changes at conceptual level.
SQL data types do not have support for storing multi-media objects directly.
Select correct option:
True
False
Truncate is an alternative of Delete command.
Select correct option:
True
False
What happens if the WHERE clause is omitted from a DELETE statement?
Select correct option:
All records from the table are deleted
No record from the table will be deleted
First record of the table will be deleted
The statement will not be executed and will give a syntax error

Note: Solve these papers by yourself

Query Analyzer is used to practice SQL in MS-Access and MS-SQL Server.
Select correct option:
True
False
Which of the following is used to retrieve and insert information from database?
Select correct option:
DML
DDL
DCL
Both DML and DDL
SQL commands that allow for the manipulation of data in the database, such as SELECT, INSERT, DELETE, and UPDATE.
Which of the following can not be included into CREATE TABLE statement?
Select correct option:
Data types
Constraints
Attributes
Cardinalities
Note: Solve these papers by yourself

Which of the following is NOT a DDL command?
Select correct option:
Create DB
Create table
Delete
Drop
Which of the following SQL statements used to control access to the data and to the database?
Select correct option:
GRANT
REVOKE
Both GRANT and REVOKE
SELECT
A relational database is
Select correct option:
one that consists of two or more tables
a database that is able to process tables, queries, forms, reports and macros
one that consists of two or more tables that are joined in some way
the same as a flat file database

Note: Solve these papers by yourself

Which model operates at the lowest level of abstraction?
Select correct option:
conceptual
internal
external
physical
A ______ is used to maintain a connection between the users of the database system.
Select correct option:
mail server
file server
client-server
none of the given
A file server is used
to maintain a connection between the users of the database system.
Each client of the network runs its own copy of the DBMS and the database resides on the file server.
A collection of concepts that can be used to describe the structure of a database

**Note:** Solve these papers by yourself

Select correct option:
Database
DBMS
**Data model**
Data
Data model is a set or collection of construct used for creating a database and producing designs for the databases
Data about data is metadata
Select correct option:
**True**
False
Database is a data structure that stores metadata, i.e. data about data. More generally we can say an organized collection of information.
A primary key is an attribute (or set of attributes) that has been chosen for an entity, whose values are used to uniquely identify a particular instance of an entity.
Select correct option:
**True**
False
Partially True
None of the given

**Note:** Solve these papers by yourself

Which of the following is INCORRECT statement concerning the database design process?
Select correct option:
During requirements collection and analysis phase, one can gather the data requirements of database users.
By referring to a high level data model, it is possible to understand the data requirements of the users, entity types, relationships and constraints.
Transformation of the high level data model into the implementation data model is called logical design or data model mapping.
During the logical design phase of internal storage structures, access paths and file organization for the database files are specified. These things are done at physical design stage not at logical design stage. At logical design stage we are concerned about schema structures.

Which feature of database provides conversion from inconsistent state of DB to a consistent state ensuring minimum data loss?
Select correct option:
User accessible catalog
Data processing
Recovery service
Authorization service

**Note: Solve these papers by yourself**

Who is responsible for authorizing access to the database, for coordinating and monitoring its use?
Select correct option:
Database Designer
Database Administrator
End User
Application Programmer

A primary key is an attribute (or set of attributes) that has been chosen for an entity, whose values are used to uniquely identify a particular instance of an entity. True or False?
Select correct option:
True
False
Partially True
None of the given

Which of the following describes the job of a database administrator?
Select correct option:
Development, implementation operation of the physical database
Creation of the system catalog

**Note: Solve these papers by yourself**

Monitoring and controlling database security and authorization: Setting up controls to ensure the quality and integrity of data
All of the above
Which of the following is NOT a component of a DFD?
Select correct option:
Dataflow
Datastore
External entities
Relationship between external entities
The Entity Relation Model models
Select correct option:
Entities, Relationships and Processes
Entities and Relationships
Relationships
Entities
Data about data is database
Select correct option:
True
False

Note: Solve these papers by yourself

Partially True
None of the Above
Database is a data structure that stores metadata, i.e. data about data. More generally we can say an organized collection of information
Not sure
A relational database system is based on the concept(s) of:
Select correct option:
A network of data records
Nested tables
Tables, rows and columns
A tree-like structure of data
most commercial DBMS are based on the record-based data models, like Hierarchical, Network or Relational.
Data Manipulation Language (DML) is the set of commands used to maintain and query a database including updating, inserting, modifying and retrieving data.
Select correct option:
True

Section 3: Fill up the empty space with most appropriate word
1. A collection of programs that manages the database structure and controls access to the data stored in the database is called a ______________________________.
   DBMS
2. A DBMS that supports more than one user is classified as a ________________ user.

Multi

3. ________________, or data about data, through which the end-user data and are integrated and managed.

MetaData

4. ________________ exists when different versions of the same data appear in different places.

Data inconsistency

5. ________________ refers to the activities that focus on the design of the database structure that will be used to store and manage end-user data.

Database design

6. The relationship described by the phrase “the Customer generates the Invoice” is ________________.

one-to-many

7. A(n) ________________ is a brief, concise, and unambiguous description of a policy.

business rule

8. The query language for a relational database is ________________.

SQL, structured query language

Note: Solve these papers by yourself

9. A(n) ________________ consists of one or more attributes that determine other attributes.

key

10. Another form of JOIN, known as ________________, links tables on the basis of an equality condition that compares columns of each table.

equijoin

Question # 1 of 10 ( Start time: 06:29:35 PM ) Total Marks: 1

The ER model is meant to

Select correct option:

replace relational design

be close to a users perception of the data

enable low level descriptions of data

enable detailed descriptions of data query processing
Which of the following constraints enforces entity integrity?
Select correct option:

**PRIMARY KEY**
FOREIGN KEY
CHECK
NOT NULL

Which of the following describes the job of a database administrator?
Select correct option:

Development, implementation operation of the physical database
Creation of the system catalog
**Monitoring and controlling database security and authorization: Setting up controls to ensure the quality and integrity of data**
All of the above

Data Redundancy Means
Select correct option:

Security of data
**Duplication of data**
Management of data
Recovery of data

A ____ relationship exists when an association is maintained within a single entity.

Select correct option:

Unary

Binary

Ternary

Weak

Which of the following functions are NOT performed by a database administrator?

Select correct option:

Planning, designing and implementing database systems

Establishing standards and procedures for database systems

Communicating with database users

Allocation of storage locations and data structures

Which feature of database provides conversion from inconsistent state of DB to a consistent state ensuring minimum data loss?

Select correct option:

User accessible catalog

Data processing

Recovery service
Authorization service

Which of the following might be represented with a multivalued attribute?
Select correct option:

person's name

class location

bank account balance

book title

A ____ entity has a primary key that is partially or totally derived from the parent entity in the relationship.
Select correct option:

strong

Weak

Business

Relationship

Which levels are mostly used for Detailed DFD?
Select correct option:

Level-0, Level-1

Level-1, Level-2
Level-2, Level-3
Level-3, Level-4

Which of the following might be represented with a multivalued attribute?
Select correct option:

person’s name
class location
bank account balance
book title

In case of Context-level Diagram, the system is represented by
Select correct option:

One process at least
Two processes at least
**One process only**
Any number of processes

Which of the following is a feature of CHECK constraint?
Select correct option:

limit the values that can be placed in a column.
used to enforce referential integrity.
enforces the uniqueness of the values in a set of columns.

**is a unique identifier for a row within a database table.**

Question # 4 of 10 (Start time: 06:40:22 PM) Total Marks: 1

Within a table, each primary key value ____.

Select correct option:

- is a minimal superkey
- is always the first field in each table
- must be numeric
- **must be unique**

Question # 5 of 10 (Start time: 06:40:49 PM) Total Marks: 1

In a three-level DBMS architecture, the ______ level interacts directly with the users.

Select correct option:

- external
- conceptual
- internal
- **physical**

Question # 6 of 10 (Start time: 06:41:22 PM) Total Marks: 1

Each table must have a ____ key.

Select correct option:
primary
secondary
logical
foreign

Question # 7 of 10 (Start time: 06:41:41 PM) Total Marks: 1
A collection of concepts that can be used to describe the structure of a database
Select correct option:

Database

DBMS

Data model

Data

Question # 8 of 10 (Start time: 06:42:01 PM) Total Marks: 1
In case of Context-level Diagram, the system is represented by
Select correct option:

One process at least
Two processes at least
One process only
Any number of processes

Question # 9 of 10 ( Start time: 06:42:23 PM ) Total Marks: 1
A primary key is an attribute (or set of attributes) that has been chosen for an entity, whose values are used to uniquely identify a particular instance of an entity. True or false?

Select correct option:

True
False

Partially True
None of the given

Question # 10 of 10 ( Start time: 06:43:47 PM ) Total Marks: 1
Controlling redundancy in a database management system DOES NOT help to

Select correct option:

avoid duplication
avoid unnecessary wastage of storage space

avoid unauthorised access to data
avoid inconsistency among data

Question # 1 of 10 ( Start time: 06:45:28 PM ) Total Marks: 1
User rights information is stored in
Select correct option:

**Physical database**
- Catalog
- Logical database
- Buffer

Question # 2 of 10  (Start time: 06:45:58 PM) Total Marks: 1

A candidate key that does not have a null value and is selected to uniquely identify all other attribute values in any given row is called a ____.

Select correct option:

**superkey**
- candidate key
- primary key
- secondary key

Question # 3 of 10  (Start time: 06:46:31 PM) Total Marks: 1

Controlling redundancy in a database management system DOES NOT help to

Select correct option:

- avoid duplication
- avoid unnecessary wastage of storage space
- **avoid unauthorised access to data**
avoid inconsistency among data

Question # 4 of 10 ( Start time: 06:47:44 PM ) Total Marks: 1

Data about data is database

Select correct option:

- True
- False
- Partially True
- None of the Above

Question # 5 of 10 ( Start time: 06:48:15 PM ) Total Marks: 1

Which of the following might be represented with a single-valued attribute?

Select correct option:

- person's phone number
- car's color
- employee's educational background
- computer's processor speed

Question # 6 of 10 ( Start time: 06:49:27 PM ) Total Marks: 1

A software package designed to store and manage databases

Select correct option:
Question # 7 of 10 (Start time: 06:49:53 PM) Total Marks: 1
In case of Context-level Diagram, the system is represented by
Select correct option:

One process at least
Two processes at least
**One process only**
Any number of processes

Question # 8 of 10 (Start time: 06:50:20 PM) Total Marks: 1
A candidate key that does not have a null value and is selected to uniquely identify all other attribute values in any given row is called a ____.
Select correct option:

**superkey**
candidate key
primary key

secondary key

Question # 9 of 10 ( Start time: 06:51:27 PM ) Total Marks: 1

Each table must have a ____ key.

Select correct option:

primary

secondary

logical

foreign

Question # 10 of 10 ( Start time: 06:51:53 PM ) Total Marks: 1

In an ERD, the focus is on the ____ and the relationships between them.

Select correct option:

attributes

entities

keys

indexes

Question No: 1 ( Marks: 1 ) - Please choose one

Consider the following statements.

A. Conceptual schema which is the result of conceptual design is a logical description of all
data elements and their relationships.

B. Internal level of the database architecture consists of the physical view of the database.

C. External level of the database architecture provides the user view of the database.

With respect to the ANSI/SPARC three level database architecture, which of the above is/are correct?

► Only A.

► Only C.

► **Only A and B.**

► Only B and C.

**Question No: 2 ( Marks: 1 ) - Please choose one**

The ER data model is an example of:

► Physical database

► Logical database

► Relational database

► **Conceptual database**

**Question No: 3 ( Marks: 1 ) - Please choose one**

Which one of the following E-R diagrams most correctly represents the relationship between Student and Grade entities?

right answer is 4

**Question No: 4 ( Marks: 1 ) - Please choose one**

Which of the following constraints enforces referential integrity?

► **FOREIGN KEY**

► CHECK

► PRIMARY KEY

► UNIQUE

**Question No: 5 ( Marks: 1 ) - Please choose one**

Given are the relations of student and Instructor
Consider the following table obtained using Student and Instructor relations.

Which relational algebra operation could have been applied on the pair of relations Student and Instructor to obtain the above data?

► Instructor – Student
► Student ∩ Instructor
► Instructor ÷ Student
► Student – Instructor

**Question No: 6 ( Marks: 1 ) - Please choose one**

Consider the relation Interview(CandidateNo, InterviewDate, InterviewTime, StaffNo, RoomNo) and the following functional dependencies.

FD1 : CandidateNo, InterviewDate -> InterviewTime, StaffNo, RoomNo

FD2 : RoomNo, InterviewDate, InterviewTime -> StaffNo, CandidateNo

FD3 : StaffNo, InterviewDate -> RoomNo

Which of the following is correct?

► The relation Interview is in 3NF
► The relation Interview is in BCNF.
► The FD3 violates 3NF.
► The FD2 violates 2NF.

**Question No: 7 ( Marks: 1 ) - Please choose one**

Which of the following is INCORRECT statement concerning the database design process?

► During requirements collection and analysis phase, one can gather the data requirements of database users.

► By referring to a high level data model, it is possible to understand the data requirements of the users, entity types, relationships and constraints.

► Transformation of the high level data model into the implementation data model is called logical design or data model mapping.

► During the logical design phase of internal storage structures, access paths and file
organization for the database files are specified.

Question No: 8 ( Marks: 1 ) - Please choose one

Consider the following diagram depicting a kind of a relationship type where X and Z are entities and Y is a relationship type:

Select the correct statement among the following on the above diagram.

► The relationship type Y is of cardinality ratio 1 : N.
► The diagram depicts existence dependencies.
► **The participation of X in the Y relationship type is total.**
► The participation of Z in the Y relationship type is partial.

Question No: 9 ( Marks: 1 ) - Please choose one

Identify the correct statement.

► Entity integrity constraints specify that primary key values can be composite.
► **Entity integrity constraints are specified on individual relations.**
► Entity integrity constraints are specified between weak entities.
► When entity integrity rules are enforced, a tuple in one relation that refers to another relation must refer to an existing tuple.

Question No: 10 ( Marks: 1 ) - Please choose one

Identify the correct statement.

► Referential integrity constraints check whether the primary key values are unique.
► Referential integrity constraints check whether an attribute value lies in the given range.
► Referential integrity constraints are specified between entities having recursive relationships.
► **When Referential integrity rules are enforced, a tuple in one relation that refers to another relation must refer to an existing tuple.**

Question No: 11 ( Marks: 1 ) - Please choose one

Identify the correct way to implement one-to-one relationship in tables?

► by splitting the data into two tables with primary key and
foreign key relationships.

► as a single table and rarely as two tables with primary 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 creating two separate tables

Question No: 12 (Marks: 1) - Please choose one

A collection of related data is

► Logical model

► **Database**

► Data

► Relational model

Question No: 13 (Marks: 1) - Please choose one

A collection of concepts that can be used to describe the structure of a database

► Database

► DBMS

► **Data model**

► Data

Question No: 14 (Marks: 1) - Please choose one

A superkey that does not contain a subset of attributes that is itself a superkey is called a

► candidate key

► primary key

► superkey

► secondary key

Question No: 15 (Marks: 1) - Please choose one

As part of database naming conventions, attribute names should use suffixes such as ID,
Question No: 16 (Marks: 1) - Please choose one
Which of the following concepts is applicable with respect to 2NF?
► Full functional dependency
► Any kind of dependency
► Transitive dependency
► Non-transitive dependency

Question No: 1 (Marks: 1) - Please choose one
User rights information is stored in
► Physical database
► Catalog
► Logical database
► Buffer

Question No: 2 (Marks: 1) - Please choose one
Making a change to the conceptual schema of a database but not affecting the existing external schemas is an example of
► Physical data independence.
► Concurrency control.
► Logical data independence.
► Functional dependency

Question No: 3 (Marks: 1) - Please choose one
Identify the constraint that limits the values that can be placed in a column.
► NOT NULL
Question No: 4 (Marks: 1) - Please choose one

Which of the following enforces a relation into 1st normal form?

- The domain of attribute must include only atomic values.
- Every non-key attribute is fully functionally dependent on primary key.
- Non-key attribute is non-transitively dependent on primary key.
- Every non-key attribute is partially dependent on super key.

Question No: 5 (Marks: 1) - Please choose one

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: 6 (Marks: 1) - Please choose one

Which of the following is CORRECT about database management system's languages?

- Data definition languages are used to specify the conceptual schema only.
- Data manipulation languages are used to create the databases.
- Data manipulation languages are used for retrieval, insertion, deletion and modification of data.
- Data definition languages are only used to update data in the DBMS.

Question No: 7 (Marks: 1) - Please choose one

Which of the following is INCORRECT statement concerning the database design process?

- During requirements collection and analysis phase, one can gather the data requirements of database users.
- By referring to a high level data model, it is possible to understand the data requirements of the users, entity types, relationships and constraints.
Transformation of the high level data model into the implementation data model is called logical design or data model mapping.

During the logical design phase of internal storage structures, access paths and file organization for the database files are specified.

**Question No: 8 (Marks: 1) - Please choose one**

Identify the INCORRECT statement among the given.

► An entity may be an object with a physical existence like a car, a house or an Employee.
► One cannot consider something which has conceptual existence like a course in a degree program as an entity.
► Age can be considered as a single value attribute of a person.
► An entity type describes the schema or intension for a set of entities which share the same structure.

**Question No: 9 (Marks: 1) - Please choose one**

Select the correct statement among the following.

► Role names are not technically necessary in relationship types when all the participating entity types are distinct.
► When different entity types participate only once in a single relationship type it is called a recursive relationship.
► Cardinality ratios for binary relationship are displayed on Entity Relationship Diagrams by using a diamond shape notation.
► Partial participation which is also called existence dependency is displayed as a double line connecting the participating entity type to the relationship.

**Question No: 10 (Marks: 1) - Please choose one**

In a relation, which of the following refers by the Structural constraints?

► finding the owner entity type relevant to a given entity type.
► the number of relationship instances which an entity can participate in.
► the role that a participating entity from the entity type plays in each relationship instance.
► the constraints applicable in granting access to tables, columns and views in a database schema

**Question No: 11 (Marks: 1) - Please choose one**
Identify the correct statement.

► Entity integrity constraints specify that primary key values can be composite.
► Entity integrity constraints are specified on individual relations.
► Entity integrity constraints are specified between weak entities.
► When entity integrity rules are enforced, a tuple in one relation that refers to another relation must refer to an existing tuple.

Question No: 12 ( Marks: 1 ) - Please choose one

Which of the following is true about relational schema?

► The sequence of columns is significant
► The sequence of rows is significant.
► Contains only derived attributes.
► Values are atomic.

Question No: 13 ( Marks: 1 ) - Please choose one

Identify the factor which enforces a relation in 3NF?

► Every non-key attribute is fully functionally dependent on primary key
► Every non-key attribute is partially dependent on super key
► The domain of attribute must include only atomic values.
► Every non-key attribute is non-transitively dependent on primary key.

Question No: 14 ( Marks: 1 ) - Please choose one

If W, X, Y and Z are attributes of a relation, which of the following inference rules for functional dependencies is correct?

► If (X, Z) -> Y then X -> Y and Z -> Y.
► If X -> Y and X -> Z then X -> (Y, Z).
► If X Y then Y -> X
► If X -> Y then (X, Z) -> (Y,W).

Question No: 15 ( Marks: 1 ) - Please choose one

Which of the following is not a benefit of normalization?

► Minimize insertion anomalies
Minimize deletion anomalies
Minimize updation anomalies
Maximize redundancy

Question No: 16 (Marks: 1) - Please choose one

A candidate key that does not have a null value and is selected to uniquely identify all other attribute values in any given row is called a ____.

► superkey
► candidate key
► primary key
► secondary key

User rights information is stored in
Select correct option:

- Physical database
- Catalog
- Logical database
- Buffer

description on a particular collection of data using the given data model
Select correct option:

- Database
- Relation
- Schema
- None

In a three-level DBMS architecture, the ____ level interacts directly with the users.
Select correct option:

- external
- conceptual
- internal
- physical

Data inconsistency leads to a number of problems such as
Select correct option:

- loss of information and incorrect results
- less secure data
redundant data
Slow database development
12:50 PM Inconsistency means, data at one place is changed and not at other, it results wrong
A candidate key that does not have a null value and is selected to uniquely identify all other attribute values in any given row is called a __.
Select correct option:

**superkey**
candidate key
primary key
secondary key
12:51 PM
The database management system (DBMS) is used to
Select correct option:

Store the data
Access the data
Manage its users
**All of above**

: Which of the following constraints enforces entity integrity?
Select correct option:

**PRIMARY KEY**
FOREIGN KEY
CHECK
NOT NULL

Which model operates at the lowest level of abstraction?
Select correct option:

conceptual
internal
external
**physical**
azahid86: 4
12:54 PM: A candidate key that does not have a null value and is selected to uniquely identify all other attribute values in any given row is called a __.
Select correct option:

**superkey**
candidate key
primary key
secondary key
A Foreign Key is
Select correct option:

A field in a table that matches a key field in another table
A field in a table that contains data that is also contained elsewhere in another table
A field in a table that has the same name as a key field in another table
A field in a table that has the same name as a key field in another table

Which one of the following is NOT a characteristic of meta data?
Select correct option:

Data about data
Describes a data dictionary
Self-describing
Includes user data
Entity Relation Model models
Select correct option:

Entities, Relationships and Processes
Entities and Relationships
Relationships
Entities

Within a table, each primary key value __.
Select correct option:

is a minimal superkey
is always the first field in each table
must be numeric
must be unique

A description on a particular collection of data using the given data model
Select correct option:

Database
Relation
Schema
None

The most widely used conceptual model is the __ model.
Select correct option:

implementation
ER
*Object Oriented*
internal

1:03 PM A collection of concepts that can be used to describe the structure of a database
Select correct option:

Database

DBMS

*Data model*

Data

An instance is
Select correct option:

*a particular occurrence of an entity*
a special type of relation
an attribute of an entity
any particular entity

Which of the following describes the job of a database administrator?
Select correct option:

Development, implementation operation of the physical database
Creation of the system catalog
*Monitoring and controlling database security and authorization: Setting up controls to ensure the quality and integrity of data*
All of the above

1:05 PM Which of the following is correct regarding Dataflow diagram?
Select correct option:

*Single DFD is required to represent a system*
Created at increasing levels of detail
The dataflow must be bidirectional
Used to represent the relationships among the external entities
The Entity Relation Model models
Select correct option:

Entities, Relationships and Processes

*Entities and Relationships*
Relationships
Entities

Which of the following is INCORRECT statement concerning the database design process?
Select correct option:

During requirements collection and analysis phase, one can gather the data requirements of database users.

By referring to a high level data model, it is possible to understand the data requirements of the users, entity types, relationships and constraints.

Transformation of the high level data model into the implementation data model is called logical design or data model mapping.

*During the logical design phase of internal storage structures, access paths and file organization for the database files are specified.*

A primary key is an attribute (or set of attributes) that has been chosen for an entity, whose values are used to uniquely identify a particular instance of an entity. True or false?
Select correct option:

True
False
*Partially True*
None of the given
1:12 PM

Data Redundancy Means
Select correct option:

Security of data
*Duplication of data*
Management of data
Recovery of data

Which one of the following is NOT a characteristic of meta data?
Select correct option:

Data about data
Describes a data dictionary
Self-describing
Includes user data

Which of the following is NOT a component of a DFD?
Select correct option:

Dataflow
Datastore
External entities
Relationship between external entities

Each table must have a __ key.
Select correct option:

primary
secondary
logical
foreign

A software package designed to store and manage databases
Select correct option:

Database

DBMS

Data model

Data
Controlling redundancy in a database management system DOES NOT help to
Select correct option:

avoid duplication
avoid unnecessary wastage of storage space
avoid unauthorised access to data
avoid inconsistency among data
A relational database system is based on the concept(s) of:
Select correct option:

- A network of data records
- Nested tables
- Tables, rows and columns
- A tree-like structure of data

A relational database is
Select correct option:

- one that consists of two or more tables
- a database that is able to process tables, queries, forms, reports and macros

one that consists of two or more tables that are joined in some way

the same as a flat file database

Making a change to the conceptual schema of a database but not affecting the existing external schemas is an example of
Select correct option:

- Physical data independence
- Logical data independence
- Functional dependency
- Concurrency control

An entity type is
Select correct option:

- defined when the database is actually constructed
- a specific type such as an integer, text, date, logical etc

a coherent set of similar objects that we want to store data on (e.g. STUDENT, COURSE, CAR)

defined by the database designer
Which levels are mostly used for Detailed DFD?
Select correct option:

- Level-0, Level-1
- Level-1, Level-2
- Level-2, Level-3
- Level-3, Level-4

In case of Context-level Diagram, the system is represented by
Select correct option:
One process atleast
Two processes atleast
One process only
Any number of processes

Which of the following is a feature of CHECK constraint?

Select correct option:

*limit the values that can be placed in a column.*
used to enforce referential integrity.
enforces the uniqueness of the values in a set of columns.
is a unique identifier for a row within a database table.

Data about data is database

Select correct option:

True
**False**
Partially True
None of the Abov

**Question No: 1 ( Marks: 1 )**

Consider the following statements.

A. Conceptual schema which is the result of conceptual design is a logical description of all data elements and their relationships.

B. Internal level of the database architecture consists of the physical view of the database.

C. External level of the database architecture provides the user view of the database.

With respect to the ANSI/SPARC three level database architecture, which of the above is/are correct?
Question No: 2  (M a r k s: 1)

The ER-data model is an example of:

- Physical database
- Logical database
- Relational database
- Conceptual database

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

Which one of the following E-R diagrams most correctly represents the relationship between Student and Grade entities?

right answer is 4
Question No: 4  (M a r k s: 1)  [http://vuzs.net](http://vuzs.net)

Which of the following constraints enforces referential integrity?

- ⬤ FOREIGN KEY
- ⬤ CHECK
- ⬤ PRIMARY KEY
- ⬤ UNIQUE

Question No: 5  (M a r k s: 1)

Given are the relations of student and Instructor

Consider the following table obtained using Student and Instructor relations.

Which relational algebra operation could have been applied on the pair of relations Student and Instructor to obtain the above data?

<table>
<thead>
<tr>
<th>Fname</th>
<th>Lname</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ajith</td>
<td>Gamage</td>
</tr>
<tr>
<td>Sujith</td>
<td>Hewage</td>
</tr>
<tr>
<td>Kasun</td>
<td>Peiris</td>
</tr>
</tbody>
</table>

- ⬤ Instructor – Student
- ⬤ Student ∩ Instructor
- ⬤ Instructor ÷ Student
- ⬤ Student – Instructor

Question No: 6  (M a r k s: 1)

Consider the relation Interview(CandidateNo, InterviewDate, InterviewTime, StaffNo, RoomNo)

and the following functional dependencies.
FD1 : CandidateNo, InterviewDate -> InterviewTime, StaffNo, RoomNo
FD2 : RoomNo, InterviewDate, InterviewTime -> StaffNo, CandidateNo
FD3 : StaffNo, InterviewDate -> RoomNo

Which of the following is correct?

► The relation Interview is in 3NF
► The relation Interview is in BCNF.
► The FD3 violates 3NF.
► The FD2 violates 2NF.

**Question No: 7 ( Marks: 1 )**

Which of the following is INCORRECT statement concerning the database design process?

► During requirements collection and analysis phase, one can gather the data requirements of database users.

► By referring to a high level data model, it is possible to understand the data requirements of the users, entity types, relationships and constraints.

► Transformation of the high level data model into the implementation data model is called logical design or data model mapping.

► During the logical design phase of internal storage structures, access paths and file organization for the database files are specified.

**Question No: 8 ( Marks: 1 )**

Consider the following diagram depicting a kind of a relationship type where X and Z are entities and Y is a relationship type:
Select the correct statement among the following on the above diagram.

- The relationship type Y is of cardinality ratio 1 : N.
- The diagram depicts existence dependencies.
- The participation of X in the Y relationship type is total.
- The participation of Z in the Y relationship type is partial.

Question No: 9 ( Marks: 1 )

Identify the correct statement.

- Entity integrity constraints specify that primary key values can be composite.

- Entity integrity constraints are specified on individual relations.
- Entity integrity constraints are specified between weak entities.
- When entity integrity rules are enforced, a tuple in one relation that refers to another relation must refer to an existing tuple.

Question No: 10 ( Marks: 1 )

Identify the correct statement.

- Referential integrity constraints check whether the primary key values are unique.
- Referential integrity constraints check whether an attribute value lies in the given range.

- Referential integrity constraints are specified between entities having recursive relationships.
- When Referential integrity rules are enforced, a tuple in one relation that refers to another relation must refer to an existing tuple.
Question No: 11  ( M a r k s: 1 )

Identify the correct way to implement one-to-one relationship in tables?

► by splitting the data into two tables with primary key and foreign key relationships.

► as a single table and rarely as two tables with primary 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 creating two separate tables

Question No: 12  ( M a r k s: 1 )

A collection of related data is

► Logical model

► Database

► Data

► Relational model

Question No: 13  ( M a r k s: 1 )

A collection of concepts that can be used to describe the structure of a database

► Database

► DBMS

► Data model

► Data

Question No: 14  ( M a r k s: 1 )

A superkey that does not contain a subset of attributes that is itself a superkey is called a ____.

► candidate key

► primary key
As part of database naming conventions, attribute names should use suffixes such as ID, NUMBER or CODE for the _______.

Question No: 15  ( M a r k s: 1 )

Which of the following concepts is applicable with respect to 2NF?

- Full functional dependency
- Any kind of dependency
- Transitive dependency
- Non-transitive dependency

What does the abbreviation DBMS stand for?

- Digital Base Mapping System.
- Data Borrowing and Movement Software.
- Database Management System.
- Database Manipulation Software.

The advantages of Standard Query Language (SQL) include which of the following in relation to GIS databases?
It is simple and easy to understand.

It is widely used.

**It is good at handling geographical concepts.**

It uses a pseudo-English style of questioning.

Which of the following are characteristics of an RDBMS?

1. It cannot use SQL.
2. **Tables are linked by common data known as keys.**
3. Keys may be unique or have multiple occurrences in the database.
4. Data are organized in a series of two-dimensional tables each of which contains records for one entity.
5. Queries are possible on individual or groups of tables.

What is a ‘tuple’?

An attribute attached to a record.

**A row or record in a database table.**

Another name for the key linking different tables in a database.

Another name for a table in an RDBMS.

Which of the following are issues to be considered by users of large corporate GIS databases?

http://vustudents.ning.com

The need for manual transfer of records to paper.

The need for multiple copies of the same data and subsequent merging after separate updates.
The need to manage long transactions.

The need for concurrent access and multi-user update.

**The need for multiple views or different windows into the same databases.**

Which of the following are features of the object-oriented approach to databases?

- The ability to develop database models based on location rather than state and behaviour.
- The ability to represent the world in a non-geometric way.
- The need to split objects into their component parts.
- **The ability to develop more realistic models of the real world.**
- The ability to develop databases using natural language approaches.

Question # 1 of 10 ( Start time: 11:17:22 AM )  Total Marks: 1

Controlling redundancy in a database management system DOES NOT help to

Select correct option:

- avoid duplication
- *avoid unnecessary wastage of storage space*
- avoid unauthorised access to data
- avoid inconsistency among data

Quiz Start Time: 11:17 AM  Time Left: 43 sec(s)

Question # 2 of 10 ( Start time: 11:18:38 AM )  Total Marks: 1
User rights information is stored in

Select correct option:

- Physical database
- Catalog
- Logical database
- Buffer
Question # 3 of 10 ( Start time: 11:20:08 AM ) Total Marks: 1

Which levels are mostly used for Detailed DFD?

Select correct option:

- Level-0, Level-1
- Level-1, Level-2
- Level-2, Level-3
- Level-3, Level-4

Quiz Start Time: 11:17 AM Time Left 76 sec(s)

Question # 4 of 10 ( Start time: 11:21:13 AM ) Total Marks: 1

Within a table, each primary key value ____.

Select correct option:

- is a minimal superkey
- is always the first field in each table
- must be numeric
- must be unique
A primary key is an attribute (or set of attributes) that has been chosen for an entity, whose values are used to uniquely identify a particular instance of an entity. True or false?

Select correct option:

**True**

False

Partially True

None of the given

Who is responsible for authorizing access to the database, for coordinating and monitoring its use?

Select correct option:
In case of Context-level Diagram, the system is represented by

Select correct option:

- One process at least
- Two processes at least
- One process only
- Any number of processes

In a three-level DBMS architecture, the ______ level interacts directly with the users.
Select correct option:

- external
- conceptual
- internal
- physical

Quiz Start Time: 11:17 AM     Time Left 68 sec(s)

Question # 10 of 10 (Start time: 11:26:04 AM) Total Marks: 1

Which feature of database provides conversion from inconsistent state of DB to a consistent state ensuring minimum data loss?

Select correct option:

- User accessible catalog
- Data processing
- Recovery service
- Authorization service
Which of the following describes a database system?

Select correct option:

A collection of stored operational data used by the application system of some particular enterprise

A shared collection of logically related data (and a description of this data) designed to meet the information needs of an organisation

A collection of stored data organised in such a way that all user requirements are satisfied by the database. In general there is only one copy of each item of data although there may be controlled repetition of some data.

All of the above
Which of the following is INCORRECT statement concerning the database design process?

Select correct option:

During requirements collection and analysis phase, one can gather the data requirements of database users.

By referring to a high level data model, it is possible to understand the data requirements of the users, entity types, relationships and constraints.

Transformation of the high level data model into the implementation data model is called logical design or data model mapping.

During the logical design phase of internal storage structures, access paths and file organization for the database files are specified.
User rights information is stored in

Select correct option:

- Physical database
- Catalog
- Logical database
- Buffer

Quiz Start Time: 11:27 AM

Time Left: 76 sec(s)
The Entity Relation Model models

Select correct option:

- Entities, Relationships and Processes
- Entities and Relationships
- Relationships
- Entities

Which of the following is NOT a component of a DFD?

Select correct option:

- Dataflow
- Datastore
- **External entities**
- Relationship between external entities
Question # 7 of 10 (Start time: 11:31:48 AM)  Total Marks: 1

Making a change to the conceptual schema of a database but not affecting the existing external schemas is an example of

Select correct option:

- Physical data independence
- Logical data independence
- Functional dependency
- Concurrency control

Question # 8 of 10 (Start time: 11:32:45 AM)  Total Marks: 1

In case of Context-level Diagram, the system is represented by

Select correct option:
One process at least
Two processes at least
One process only
Any number of processes

An instance is
Select correct option:

- a particular occurrence of an entity
- a special type of relation
- an attribute of an entity
- any particular entity

Question # 10 of 10 (Start time: 11:34:22 AM)  Total Marks: 1
A ________ is used to maintain a connection between the users of the database system.

Select correct option:

- mail server
- file server
- client-server
- none of the given

Question # 1 of 10 ( Start time: 01:13:48 PM ) Total Marks: 1

A _____ relationship exists when an association is maintained within a single entity.

Select correct option:

- Unary
- Binary
- Ternary
- Weak

Question # 2 of 10 ( Start time: 01:14:33 PM ) Total Marks: 1

A collection of concepts that can be used to describe the structure of a database

Select correct option:

- Database
Question # 3 of 10 (Start time: 01:16:00 PM) Total Marks: 1
Which of the following is NOT a component of a DFD?
Select correct option:

- Dataflow
- Datastore
- External entities
- Relationship between external entities

Question # 4 of 10 (Start time: 01:17:27 PM) Total Marks: 1
A candidate key that does not have a null value and is selected to uniquely identify all other attribute values in any given row is called a ____.
Select correct option:

- superkey
- candidate key
- primary key
secondary key

Question # 5 of 10 ( Start time: 01:18:32 PM ) Total Marks: 1

A candidate key that does not have a null value and is selected to uniquely identify all other attribute values in any given row is called a ____.

Select correct option:

superkey
candidate key
primary key
secondary key

Question # 6 of 10 ( Start time: 01:19:51 PM ) Total Marks: 1

A primary key is an attribute (or set of attributes) that has been chosen for an entity, whose values are used to uniquely identify a particular instance of an entity. True or false?

Select correct option:

True
False
Partially True
None of the given

Question # 7 of 10 (Start time: 01:20:37 PM) Total Marks: 1
In case of Context-level Diagram, the system is represented by
Select correct option:

- One process at least
- Two processes at least
- **One process only**
- Any number of processes

Question # 8 of 10 (Start time: 01:22:03 PM) Total Marks: 1
Data Redundancy Means
Select correct option:

- Security of data
- Duplication of data
- Management of data
- **Recovery of data**
Question # 9 of 10 ( Start time: 01:23:29 PM ) Total Marks: 1

Which levels are mostly used for Detailed DFD?

Select correct option:

- Level-0, Level-1
- Level-1, Level-2
- Level-2, Level-3
- Level-3, Level-4

Question # 10 of 10 ( Start time: 01:23:42 PM ) Total Marks: 1

In a three-level DBMS architecture, the ______ level interacts directly with the users.

Select correct option:

- external
- conceptual
- internal
- physical

Q1: Which of the following is NOT a component of a DFD?
- Dataflow
- Datastore
- External entities
- **Relationship between external entities**

**Q2:** A Foreign Key is

- A field in a table that matches a key field in another table
- A field in a table that contains data that is also contained elsewhere in another table
- A field in a table that has the same name as a key field in another table
- A field in a table that has the same name as a key field in another table

**Q3:** A description on a particular collection of data using the given data model

- Database
- Relation
- Schema
- None

**Q4:** Which of the following is INCORRECT statement concerning the database design process?

- During requirements collection and analysis phase, one can gather the data requirements of database users.
- By referring to a high level data model, it is possible to understand the data requirements of the users, entity types, relationships and constraints.
- Transformation of the high level data model into the implementation data model is called logical design or data model mapping.
- **During the logical design phase of internal storage structures, access paths and file organization for the database files are specified.**

**Q5:** Data about data is metadata

- True
- False

**Q6:** A relational database is

- one that consists of two or more tables
- a database that is able to process tables, queries, forms, reports and macros
- **one that consists of two or more tables that are joined in some way**
- the same as a flat file database

**Q7:** The ER model is meant to

- replace relational design
- **be close to a users perception of the data**
- enable low level descriptions of data
- enable detailed descriptions of data query processing

**Q8:** Data about data is database

- True
- False
Q9: A ________ is used to maintain a connection between the users of the database system.

- mail server
- file server
- client-server
- none of the given

Q10: A primary key is an attribute (or set of attributes) that has been chosen for an entity, whose values are used to uniquely identify a particular instance of an entity. True or false?

- True
- False
- Partially True
- None of the given

1. A software package designed to store and manage databases

- Database
- DBMS
- Data model
- Data

3. Which of the following is an atomic sequence of database actions?

- Transaction
- Concurrency
- Relations

4. A typical DBMS has an unlayered architecture

- True
- False

5. A data model which is used to hide storage details and present the users with a conceptual view of the database is

- Data concurrency
- Data Relationship
- 77Data Model
- Data Abstraction

6. Who is responsible for authorizing access to the database, for coordinating and monitoring its use?

- Database Designers
- Database Administrators
- End Users
- Application Programmers

7. A collection of concepts that can be used to describe the structure of a database

- Database
- DBMS
- Data model
8. SDL is
   - Standard Definition Language
   - Storage Definition Language
   - None of the above

9. The ability to modify the physical scheme without causing application programs to be rewritten is in
   a. Physical Data Independence
   b. Logical Data Independence
   c. None of these

1. This image represents a
   a. a many to many relation
   b. a many to one relation
   c. a one to one relation
   d. one to many relation

3. An entity type is
   a. defined when the database is actually constructed
   b. a specific type such as an integer, text, date, logical etc
   c. a coherent set of similar objects that we want to store data on (e.g. STUDENT, COURSE, CAR)
   d. defined by the database designer

4. This graphics
   a. indicates that there is a missing entity
   b. indicates that students attend courses
   c. indicates that many students can attend many courses
   d. indicates that students have to attend more than one course

5. Which of the following statements best describes the function of an entity relation model?
   a. An ER model is concerned primarily with a logical view of the data and secondly with the physical implementation
b. An ER model is concerned primarily with a physical implementation of the data and secondly with the logical view
c. An ER model provides a view of the logic of the data and not the physical implementation
d. An ER model is entirely concerned with modelling the physical implementation

6. The Entity Relation Model models
   a. Entities, Relationships and Processes
   b. Entities and Relationships
   c. Relationships
   d. Entities

7. An entity is
   a. any physical "thing" that exists in the real world
   b. a "thing" which has either a real physical existence (e.g. a car or a student) or a conceptual existence (e.g. a course)
   c. a real physical "thing" or a conceptual "thing" that is specific to a particular database management system
   d. a real physical "thing" that is specific to a particular database management system

8. This graphic indicates
   a. a car can be owned by many students
   b. a student cannot own a car
   c. a student can own many cars and a car can be owned by many students
   d. that a student can own 0, 1 or many cars

9. An instance is
   a. a particular occurrence of an entity
   b. a special type of relation
   c. an attribute of an entity
   d. any particular entity

11. Assume we want to map a 1:N relationship type, which involves entity types R and S, where R is on the N side of the relationship type and S is on the 1 side, to the relational model. The attributes of the relationship type should be mapped to attributes of
   a. the corresponding relation for the entity type R
   b. the corresponding relation for the entity type S
   c. the corresponding relations for both entity types R and S
   d. none of the above

12. When we map a multivalued attribute for entity E from the ER model to the relational model, we will create
   a. many relations, one for each of the distinct values of the attribute
   b. one relation that contains a foreign key and a column for the attribute
   c. a column in the relation that represents the entity E
   d. none of the above
13. A weak entity type

a. must have total participation in an identifying relationship
b. does not have a key attribute(s)
c. both (a) and (b)
d. none of the above

14. Mapping specialization/generalization entities to the relational model by creating a relation for each subclass that contains the attributes of that subclass and all of the attributes of the superclass (i.e., without having a relation for the superclass) works well if

a. the subclasses are disjoint and there is total participation
b. the subclasses overlap and there is total participation
c. the subclasses are disjoint and there is partial participation
d. the subclasses overlap and there is partial participation

15. Desirable properties of relational database design include

a. minimizing insertion/deletion anomalies
b. minimizing redundancy
c. minimizing update anomalies
d. all of the above

16. A Many-to-Many relationship from an ER diagram can be represented in the relational model by a

a. domain
b. primary key
c. relation with two foreign keys
d. a single attribute

17. The functional dependency \( A \rightarrow B \) for relation schema \( R(A,B,C,D) \) implies that

a. no two tuples in \( R \) can have the same value for attribute \( B \)
b. no two tuples in \( R \) can have the same value for attribute \( A \)
c. any two tuples in \( R \) that have the same value for \( B \) must have the same value for \( A \)
d. any two tuples in \( R \) that have the same value for \( A \) must have the same value for \( B \)

18. If \( AB \rightarrow CD \) is one of the functional dependencies for relation schema \( R(A,B,C,D) \) then which of the following will always hold?

a. \( AB \) is a candidate key for \( R \)
b. no two tuples in \( R \) can have the same values for \( A \) and \( B \)
c. \( AB \) is a primary key for \( R \)
d. all of the above

19. An Entity from an ER diagram can be represented in the relational model by a

a. domain
b. functional dependency
c. relation
d. a single attribute

20. Given the functional dependencies \( \{AB \rightarrow C, C \rightarrow D\} \) for the relation schema \( R(ABCD) \), the dependency \( A \rightarrow D \) can be inferred by

a. the reflexive rule
b. the augmentation rule
   c. the transitive rule
   d. none of the above

21. Given the functional dependencies, \( AB \rightarrow CDE \) and \( A \rightarrow E \), for relation scheme \( R = (A, B, C, D, E) \) we can infer the following:

   a. A is a key for \( R \)
   b. BE is a key for \( R \)
   c. \( AB \) is a key for \( R \)
   d. none of the above

3. A one to many relationship (of table A to Table B) is

   a. Where each record in Table B is required to have a match in table A
   b. Where each record in table B can have one or more matching records in table A
   c. Where each record in table A can have one or more matching records in table B
   d. Where each record in table A is required to have a match in table B

4. Assume that Table A is joined to Table B. A one to one join (an inner join or equijoin)

   a. displays all rows (records) for table A and only those in table B that have a matching value
   b. displays rows (records) only when the values of the Key in table A and the foreign key in table B are equal
   c. displays all rows (records) for table B and only those in table A that have a matching value
   d. is when table B contains only one matching record for each key in table A

5. A many to many relationship (join)

   a. is a way of joining two tables
   b. is use only when all of the tables is in third normal form
   c. is a way of joining three tables
   d. is not allowed in a practical implementation of a relational design

6. The model for a relational database was first proposed in the

   a. 1980
   b. 1970
   c. 1990
   d. 1960

7. In relational algebra the INTERSECTION of two sets (set A and Set B). This corresponds to

   a. \( A \ OR \ B \)
   b. \( A + B \)
   c. \( A \ AND \ B \)
   d. \( A - B \)

8. In relational algebra the UNION of two sets (set A and Set B). This corresponds to

   a. \( A \ OR \ B \)
   b. \( A + B \)
   c. \( A \ AND \ B \)
   d. \( A - B \)
9. The set of rules that govern the internal validity and consistency of data within a relational database are known as
   a. rules of referential integration  
   b. rules of data integration  
   c. rules of data integrity  
   d. **rules of referential integrity**  
10. A table (relation)
    a. orders records by the first field (attribute) in a record  
    **b. does not define a logical order of records (tuples)**  
    c. orders records by the key field in a record  
    d. imposes a logical order on the records  
11. In strict relational terminology, an attribute
    a. an entity  
    **b. a field**  
    c. a record  
    d. a table  
12. The process of combining two tables in a relational database is known as
    a. **a Join**  
    b. a Combine  
    c. a Relate  
    d. a Construct  
13. The DIFFERENCE between two sets (set A and set B) is defined as all members of set A but not set B. The notation for this
    a. B - A  
    b. B + A  
    c. A + B  
    d. **A – B**  
1. The rule that prohibits transitive dependencies is
   a. second normal form  
   b. first normal form  
   **c. third normal form**  
   d. none of the above  
2. Consider the table (Relation) CARS. The key is REGNO (car registration number), OID is a foreign key that identifies the car’s owner.

<table>
<thead>
<tr>
<th>REGNO (Key Field)</th>
<th>MODEL</th>
<th>COLOUR</th>
<th>OID</th>
</tr>
</thead>
</table>

   This table is
1. third normal form  
   **b. second normal form**  
   c. first normal form  
   d. cannot be determined  

3. Most RDB designers will accept that in order to deal with the complexities of "real life" transactions, a design needs to reach  
   a. second normal form  
   b. third normal form  
   c. the standard of a flat file  
   d. first normal form  

4. Consider the table (Relation) STUDREC  

<table>
<thead>
<tr>
<th>SREF (Key Field)</th>
<th>INIT</th>
<th>SNAME</th>
<th>DOB</th>
<th>GENDER</th>
<th>RES</th>
<th>KIDS</th>
<th>HTOWN</th>
<th>DISTANCE</th>
</tr>
</thead>
</table>

The key is SREF (student reference number). This table is  
   a. first normal form  
   b. third normal form  
   c. **second normal form**  

5. The rule that specifies that there should be no repeating fields and that fields should be atomic is  
   a. **first normal form**  
   b. third normal form  
   c. second normal form  

6. The rule that requires that each non-key field (attribute) should be fully functionally dependent on the primary key  
   a. first normal form  
   b. third normal form  
   c. **second normal form**  

7. Second Normal Form is designed to  
   a. ensure that every non key field in a record is fully functionaly dependant upon the key for that record  
   b. ensure that a table that is in first normal form is decomposed into two or more tables  
   c. ensure that a table that is in first normal form is decomposed into two tables  
   d. ensure that every non key field in a record has a corresponding foreign key in at least one other table  

8. First Normal Form is designed to  
   a. ensure that there are no duplicate key fields in a table  
   b. ensure that data is held accurately  
   c. ensure that all of the data in a RDBMS is represented in one data table
that there are no repeating fields in a table (i.e. the fields are atomic)
9. Third Normal Form is designed to
   a. ensure that there are no dependencies between keys and foreign keys
   b. ensure that the database contains three tables
   c. ensure that there are no transitional dependencies, i.e. to ensure that there are no dependencies between non-key fields
   d. ensure that a table that is in second normal form is decomposed into two or more tables
10. Normalisation is
   a. a process whereby the design of a table (relation) is decomposed into more tables that more precisely fit the relational model
   b. the process of ensuring that a relational database has at least two tables in it
   c. a process whereby a limit is put on the number of fields a record can contain
   d. the process of ensuring that each table has a key

In an ERD, the focus is on the ___ and the relationships between them.
Select correct option:

attributes
entities
keys
indexes

: The entity relationship diagram is used to graphically represent the ___ database model.
Select correct option:

condensed
physical
logical
conceptual

Anwar: in “One to One Relationship” One instance of first entity type is mapped with two instances of second entity type
Select correct option:

true
false

: “Select” and “project” are the examples of
Select correct option:

Unary operations
Binary operations
Ternary operations
All of above

If A -> B and A -> C, then A -> BC The Inference Rule applies is;
Select correct option:
Union
Decomposition
Augmentation
Reflexivity

Unary operations involves
Select correct option:

**Only one relation**
Only two relations
More than two relations
Not more than five relations

Which of the following might be represented with a multivalued attribute?
Select correct option:

- person's name
- class location
- **bank account balance**
- book title

in "many to many relationship" one instance of first entity can be mapped with many instances of second entity
Select correct option:

true
false

Quiz Start Time: 04:03 PM
Time Left 89 sec(s)
Question # 1 of 8 ( Start time: 04:03:58 PM ) Total Marks: 1
Which of the following might be represented with a single-valued attribute?
Select correct option:

- person's phone number
- car's color
- employee's educational background
- computer's processor speed

Quiz Start Time: 04:03 PM
Time Left 89 sec(s)
Question # 2 of 8 (Start time: 04:04:11 PM) Total Marks: 1
Binary relationships are those, which are established between
Select correct option:
One entity type
**Two entity type**
Three entity type
Unlimited entities

Quiz Start Time: 04:03 PM
Time Left 89 sec(s)

Question # 3 of 8 (Start time: 04:04:42 PM) Total Marks: 1
_____ is same as Equi-Join with a slight difference.
Select correct option:
**Natural Join**
Semi Join
Outer Join
Theta Join

Quiz Start Time: 04:03 PM
Time Left 88 sec(s)

Question # 4 of 8 (Start time: 04:05:05 PM) Total Marks: 1
"Select" and "project" are the examples of
Select correct option:
**Unary operations**
Binary operations
Ternary operations
All of above

Time Left 88 sec(s)

Question # 5 of 8 (Start time: 04:05:24 PM) Total Marks: 1
Relational Calculus is a ____________ relational data manipulation language.
Select correct option:
Procedural, Informal
Non-Procedural, Informal
Procedural, Formal
**Non-Procedural, Formal**

Quiz Start Time: 04:03 PM
Time Left 89
In “One to Many” cardinality one instance of a relation is mapped with
Select correct option:
- many instances of second entity type
- One instance of second entity type
- Primary key of 2 relations
- none of above

Atomicity is a feature of ____.
Select correct option:
- 1NF
- 2NF
- 3NF
- BCNF

A ___ entity has a primary key that is partially or totally derived from the parent entity in the relationship.
Select correct option:
- strong
- Weak
- Business
- Relationship

SQL stands for ____________.
- I - Structured Query Language
- II – Standard Query Language
- III- Status Query Language

Only I
Making a change to the conceptual schema of a database but not affecting the existing external schema is an example of
Physical data independence.
Concurrency control.

**Logical data independence.**
Functional dependency

Logical data independence provides the independence in a way that changes in conceptual model do not affect the external views. Or simply it can be stated at the Immunity of external level from changes at conceptual level.

SQL data types do not have support for storing multi-media objects directly.

True
False

**Truncate is an alternative of Delete command.**
True
False

What happens if the WHERE clause is omitted from a DELETE statement?

**All records from the table are deleted**

No record from the table will be deleted

First record of the table will be deleted

The statement will not be executed and will give a syntax error
Query Analyzer is used to practice SQL in MS-Access and MS-SQL Server.

True

False

Which of the following is used to retrieve and insert information from database?

DML

DDL

DCL

Both DML and DDL

SQL commands that allow for the manipulation of data in the database, such as SELECT, INSERT, DELETE, and UPDATE.

Which of the following can not be included into CREATE TABLE statement?

Data types

Constraints

Attributes

Cardinalities

Which of the following is NOT a DDL command?

Create DB

Create table

Delete

Drop

Which of the following SQL statements used to control access to the data and to the database?

GRANT

REVOKE

Both GRANT and REVOKE

SELECT

A relational database is

one that consists of two or more tables
a database that is able to process tables, queries, forms, reports and macros

**one that consists of two or more tables that are joined in some way**

the same as a flat file database

**Which model operates at the lowest level of abstraction?**

Select correct option:

- conceptual
- internal
- external
- **physical**

A ______ is used to maintain a connection between the users of the database system.

- mail server
- **file server**
- client-server
- none of the given

A file server is used to maintain a connection between the users of the database system. Each client of the network runs its own copy of the DBMS and the database resides on the file server.

A collection of concepts that can be used to describe the structure of a database

- Database
- DBMS
- **Data model**
- Data

Data model is a set or collection of construct used for creating a database and producing designs for the databases
Data about data is metadata
True

False

Database is a data structure that stores metadata, i.e. data about data. More generally we can say an organized collection of information.

A primary key is an attribute (or set of attributes) that has been chosen for an entity, whose values are used to uniquely identify a particular instance of an entity.
True

False

Partially True

None of the given

Which of the following is INCORRECT statement concerning the database design process?

During requirements collection and analysis phase, one can gather the data requirements of database users.

By referring to a high level data model, it is possible to understand the data requirements of the users, entity types, relationships and constraints.

Transformation of the high level data model into the implementation data model is called logical design or data model mapping.

During the logical design phase of internal storage structures, access paths and file organization for the database files are specified.

These things are done at physical design stage not at logical design stage. At logical design stage we are concerned about schema structures.

Which feature of database provides conversion from inconsistent state of DB to a consistent state ensuring minimum data loss?

User accessible catalog

Data processing

Recovery service

Authorization service
Who is responsible for authorizing access to the database, for coordinating and monitoring its use?

Database Designer

**Database Administrator**

End User

Application Programmer

A primary key is an attribute (or set of attributes) that has been chosen for an entity, whose values are used to uniquely identify a particular instance of an entity. True or False?

True

False

Partially True

None of the given

Which of the following describes the job of a database administrator?

- Development, implementation operation of the physical database
- Creation of the system catalog
- Monitoring and controlling database security and authorization: Setting up controls to ensure the quality and integrity of data
- All of the above

Which of the following is NOT a component of a DFD?

- Dataflow
- Datastore
- External entities
- **Relationship between external entities**

The Entity Relation Model models

- Entities, Relationships and Processes
- **Entities and Relationships**
Relationships

Entities

Data about data is database
True

False

Partially True

None of the Above

Database is a data structure that stores metadata, i.e. data about data. More generally we can say an organized collection of information

A relational database system is based on the concept(s) of:
A network of data records

Nested tables

Tables, rows and columns

A tree-like structure of data

Most commercial DBMS are based on the record-based data models, like Hierarchical, Network or Relational.

Data Manipulation Language (DML) is the set of commands used to maintain and query a database including updating, inserting, modifying and retrieving data.

True

False

Which of the following is used with INSERT command to insert values in a DB table?

Select correct option:

ONTO

INTO

UPTO

WITH

Which of the following is a correct way of selecting all the columns from a table called PERSONS?

Select correct option:

SELECT FROM * Persons
SELECT * FROM Persons

SELECT * WHERE Persons

SELECT WHERE * Persons

Question # 3 of 10 (Start time:09:53:51 PM) Total M - 1

The ______ operator allows to use wild cards in the where clause of an SQL statement.

Select correct option:

IN

FROM

LIKE

None of the above.

Question # 4 of 10 (Start time:09:54:15 PM) Total M - 1

Which of the following statements creates a database named IMDB.

Select correct option:

CREATE DATABASE IMDB;

CREATE DB IMDB;

ADD DATABASE named IMDB;

CREATE IMDB DATABASE;

Question # 5 of 10 (Start time:09:54:31 PM) Total M - 1

Which of the following is not true regarding clustering?

Select correct option:

It increases the efficiency since related records are placed close to each other

**Clustering makes records, difficult to access**

suitable to relatively static situations.
It is a process, which means to place records from different tables to place in adjacent physical locations.

Question # 6 of 10 (Start time: 09:54:55 PM) Total M - 1
Which of the following is used to filter rows according to some condition(s)?
Select correct option:
SELECT
FROM
WHERE
UPDATE

Question # 7 of 10 (Start time: 09:55:14 PM) Total M - 1
Which of the following is not an aggregate function
Select correct option:
AVG
SUM
UPPER
MAX

CREATE TABLE and CREATE index belongs to which type of SQL commands
Select correct option:
DML
DDL
DCL
DQL

Question # 9 of 10 (Start time: 09:55:59 PM) Total M - 1
In SQL, which command is used to modify the rows of tables.

Select correct option:

**UPDATE**

**INSERT**

**BROWSE**

**APPEND**

Within a table, each primary key value__. Select correct option:
- is a minimal super key
- is always the first field in each table
- must be numeric
- **must be unique**

Foreign Key is Select correct option:
- A field in a table that matches a key field in another table
- A field in a table that contains data that is also contained elsewhere in another table
- A field in a table that has the same name as a key field in another table

A______is used to maintain a connection between the users of the database system. Select correct option:
- mail server
- file server
- **client-server**
- none of the given

Data about data is database Select correct option:
- True
- **False**
Partially True
None of the Above

Which one of the following is NOT a characteristic of Meta data?
Select correct option:
Data about data
Describes a data dictionary
Self-describing
Includes user data

The most widely used conceptual model is the ___ model.
Select correct option:
implementation
ER
Object Oriented
internal

Which model operates at the lowest level of abstraction?
Select correct option:
conceptual
internal
external
physical

Which of the following describes a database system?
Select correct option:
A collection of stored operational data used by the application system of some particular enterprise
A shared collection of logically related data (and a description of this data) designed to meet the information needs of an organization
A collection of stored data organized in such a way that all user requirements are satisfied by the database. In general there is only one copy of each item of data although there may be controlled repetition of some data.
All of the above

Data inconsistency leads to a number of problems such as
Select correct option:
loss of information and incorrect results
less secure data
redundant data
Slow database development

Which of the following constraints enforces entity integrity?
Select correct option:
**PRIMARY KEY**
FOREIGN KEY
CHECK
NOT NULL

A relational database system is based on the concept(s) of:
Select correct option:
**A network of data records**
Nested tables
Tables, rows and columns
A tree-like structure of data

Which of the following is NOT a component of a DFD?
Select correct option:
Dataflow
Datastore
External entities
**Relationship between external entities**

A candidate key that does not have a null value and is selected to uniquely identify all other attribute values in any given row is called a __.
Select correct option:
superkey
candidate key
**primary key**
secondary key

Which of the following is correct regarding Dataflow diagram?
Select correct option:
Single DFD is required to represent a system
Created at increasing levels of detail
The dataflow must be bidirectional
**Used to represent the relationships among the external entities**

Data about data is metadata
Select correct option:

**True**
False

Data Redundancy Means
Select correct option:

Security of data
**Duplication of data**
Management of data
Recovery of data

Controlling redundancy in a database management system DOES NOT help to
Select correct option:
avoid duplication
avoid unnecessary wastage of storage space
**avoid unauthorized access to data**
avoid inconsistency among data

In an ERD, the focus is on the __ and the relationships between them.
Select correct option:
**attributes**
entities
keys
indexes

**User rights information is stored in**
Select correct option:
Physical database
**Catalog**
Logical database
Buffer
Which of the following might be represented with a multivalued attribute? Select correct option:

person's name

**class location** (Not Confirm)

bank account balance

book title

A relational database is
Select correct option:

one that consists of two or more tables

a database that is able to process tables, queries, forms, reports and macros

**one that consists of two or more tables that are joined in some way**

the same as a flat file database

Which of the following is INCORRECT statement concerning the database design process? Select correct option:

During requirements collection and analysis phase, one can gather the data requirements of database users.

By referring to a high level data model, it is possible to understand the data requirements of the users, entity types, relationships and constraints.

Transformation of the high level data model into the implementation data model is called logical design or data model mapping.

**During the logical design phase of internal storage structures, access paths and file organization for the database files are specified.**

Which feature of database provides conversion from inconsistent state of DB to a consistent state ensuring minimum data loss? Select correct option:

User accessible catalog

Data processing

**Recovery service**

Authorization service

Which levels are mostly used for Detailed DFD? Select correct option:

**Level-0, Level-1**

Level-1, Level-2

Level-2, Level-3

Level-3, Level-4
A primary key is an attribute (or set of attributes) that has been chosen for an entity, whose values are used to uniquely identify a particular instance of an entity. True or false?
Select correct option:
True
False
Partially True
None of the given

Who is responsible for authorizing access to the database, for coordinating and monitoring its use?
Select correct option:
Database Designer
Database Administrator
End User
Application Programmer

In case of Context-level Diagram, the system is represented by
Select correct option:
One process at least
Two processes at least
One process only
Any number of processes

The Entity Relation Model models
Select correct option:
Entities, Relationships and Processes
Entities and Relationships
Relationships
Entities
An instance is
Select correct option:
A particular occurrence of an entity
A special type of relation
An attribute of an entity
Any particular entity

Software packages designed to store and manage databases
Database
DBMS
Data model
Data
A table can be logically connected to another table by defining a ____.

- hyperlink
- **common attribute**
- primary key
- superkey

A collection of concepts that can be used to describe the structure of a database

- Database
- DBMS
- **Data model**
- Data

The main software package that supports a database management approach is called

Select correct option:

- Data Dictionary
- Report Generator
- **Database Management System**
- Distributed database

The ER model is meant to

Select correct option:

- replace relational design
- be close to a user’s perception of the data
- enable low level descriptions of data
- **enable detailed descriptions of data query processing**

A description on a particular collection of data using the given data model

Select correct option:

- Database
- Relation
- **Schema**
- None

Which of the following functions are NOT performed by a database administrator?

Select correct option:
Planning, designing and implementing database systems
Establishing standards and procedures for database systems
Communicating with database users
Allocation of storage locations and data structures

Level of data at which entities or objects exist in reality is called

Real world data
Schema for real world data
Meta data
Data about data

An entity type is
defined when the database is actually constructed
a specific type such as an integer, text, date, logical etc

a coherent set of similar objects that we want to store data on (e.g. STUDENT, COURSE, CAR)
defined by the database designer

In a three-level DBMS architecture, the ______ level interacts directly with the users.
Select correct option:

external
contemplual
internal
physical

Revoke is a __________ Statement

Data Definition

Control Access

Data Manipulation
Data Description

Which of the following is not true regarding clustering?
It increases the efficiency since related records are placed close to each other.

Clustering makes records, difficult to access
Suitable to relatively static situations
It is a process, which means to place record from different tables to places in adjacent physical locations.
DML does not used to:
Select correct option:
add new rows to tables
retrieve rows from table
modify the rows of tables
alter a table definition

The ________ operator allows to use wild cards in the where clause of an SQL statement.
Select correct option:
IN
FROM
LIKE
None of the above.

Identify the basic part(s) of a SELECT statement?
SELECT
FROM
Both SELECT and FROM
DISTINCT

What happens if the WHERE clause is omitted from a DELETE statement?
Select correct option:
    All records from the table are deleted
No record from the table will be deleted
First record of the table will be deleted
The statement will not be executed and will give a syntax error

Truncate is an alternative of Delete command.
Select correct option:
True
False
Which of the following function falls in the category of Aggregate functions. 
Select correct option:

SUM
MIN
MAX
All of the above

Quiz No. 03 ---Lecture 25 to Lecture 32
Which of the following is one of the purposes of using DDL commands?
inserting records into databases
updating records into databases
manipulating databases
creating and destroying databases

Which of the following is incorrect about alter table statement?
Cannot be used to modify type or size of an existing column
Can be used to delete a column
Can not be used to create a new table
Can be used to add column in the existing table

Which of the following is used to retrieve and insert information from database?

DML
DDL
DCL
Both DML and DDL

Which of the following is used with INSERT command to insert values in a DB table?

ONTO
INTO
UPTO
WITH

In SQL, which command is used to modify the rows of tables.

Update
Insert
Browse
Append
Columns used to uniquely identify individual rows of a given table, may be specified to be not NOT NULL.

**True** (not sure)
False

Objective of an order by clause is to display or arrange output of a select statement in a particular order.

**True**
False

Which of the following is not a part of an INSERT statement?

- INTO
- **VALUE**
- INSERT
- Modify

Which of the following is not an aggregate function
Select correct option:

- AVG
- SUM
- **UPPER**
- MAX

UPDATE command belongs to which type of Classification
Select correct option:

- **DML**
- DDL
- DCL
- DQL

GRANT belongs to which type of SQL commands classification
Select correct option:

- DML
- DDL
- **DCL**
- DQL
Which of the following SQL statements used to control access to the data and to the database?
Select correct option:

- GRANT
- REVOKE
- Both GRANT and REVOKE
- SELECT

Which of the following is the correct syntax for adding a new column into an existing table.
Select correct option:

- ALTER TABLE table_name { ALTER [COLUMN] column type [(size)] [DEFAULT default] }
- ALTER TABLE table_name { ADD [COLUMN] column type [(size)] [DEFAULT default] }
- Both I and II.
- None of the above.

The ________ function helps reduce the need to use multiple OR conditions.

- Like
- IN
- AND
- Between

In SQL, which command is used to delete rows from table.

- Delete
- Remove
- Truncate
- Both I and II

Which of the following clauses allows sorting the records in result set?

- Where
- Order by
- From
- Having

In SQL queries, while creating tables or relations in database, key columns may be specified by

- Bull
- Not Null
- Data Type
- None of the above
Operators are the ones that require two operands on both sides of the operator.

Double
Two Sided
**Binary**
None of the given options

What happened if the Where clause is omitted from a Delete Statement?
All record from the table are deleted
No record from the tables will be deleted
First record of the tables will be deleted
The statement will not be executed and will give a syntax error

Grant belong to which types of SQL command classification
DML
DDL
**DCL**
DQL

Update command belong to which type of classification
**DML**
DDL
DCL
DQL

Which of the following is a String function in SQL
Count
**LEN**
SQRT
SIN

GRANT is a ____________ command.
DDL
DML
**DCL**
None of the above
Consider a table named “emp” having fields Empname, EmpID, Age, salary. Which of the following is true if the following SQL statement tries to execute?

SELECT * FROM emp
WHERE Empname='ALI'
ORDERBY Age;

The statement has a syntax error

**The statement displays the entire fields from emp in which the Empname is ALI in any order**

The statement displays the entire fields from emp in which the Empname is ALI in descending order of their age

The statement displays the entire fields from emp in which the Empname is ALI in ascending order of their age

Truncate command response time is ____ as compared to Delete command.
Select correct option:

- Poor
- Same
- **Better**
- worst

Which of the following syntax of the functions in SQL is used to add column values?
Select correct option:

- COUNT(*)
- COUNT(expression)
- MAX(expression)
- **SUM(expression) Not Sure**

Which of the following is used to filter rows according to some condition(s)?
Select correct option:

- SELECT
- FROM
- **WHERE**
- UPDATE

Which of the following is a correct way of selecting all the columns from a table called PERSONS?
Select correct option:

- SELECT FROM * Persons
- **SELECT * FROM Persons**
SELECT * WHERE Persons
SELECT WHERE * Persons

Which of the following statements creates a database named IMDB.
Select correct option:
CREATE DATABASE IMDB;
CREATE DB IMDB;
ADD DATABASE named IMDB;
CREATE IMDB DATABASE;

CREATE TABLE and CREATE index belongs to which type of SQL commands
Select correct option:
DML
DDL not sure
DCL
DQL

The _____________ condition allows to retrieve values within a specific range.
    AND
    LIKE
    BETWEEN
    FROM

SQL is used for:
Select correct option:
Creating, managing and deleting tables and manage the relationships among the stored date.
Generating queries, organizing, managing and retrieving data stored in a database.
Maintaining data integrity and coordinate data sharing.
All of the above

Which language is used to permit or prohibit access to a table?
Select correct option:
DCL
DDL
DML
All of the above.

Data Manipulation Language (DML) is the set of commands used to maintain and query a database including updating, inserting, modifying and retrieving data.
Select correct option:
True
False

Which of the following is NOT a DDL command?
Select correct option:
Create DB
Create table
Delete
Drop

SQL stands for ______________.
I - Structured Query Language
II – Standard Query Language
III- Status Query Language
Select correct option:
Only I
Only II
Both I and II
Only III

Making a change to the conceptual schema of a database but not affecting the existing external schemas is an example of
Physical data independence.
Concurrency control.
Logical data independence.
Functional dependency

SQL data types do not have support for storing multi-media objects directly.
Select correct option:
True
False
Query Analyzer is used to practice SQL in MS-Access and MS-SQL Server.
Select correct option:

True
False

Identify the language which is used to specify database schema.
DCL
DML
DDL
None of the above

Value of a function in SQL is always determined by the input parameters
True
False

Which of the following clauses allows to sort the records in result set?
Where
Order by
From
Having

Which of the following cannot be included into CREATE TABLE statement?
Select correct option:
Data types
Constraints
Attributes
Cardinalities

Which of the following describes the job of a database administrator?
Select correct option:
Development, implementation operation of the physical database
Creation of the system catalog

**Monitoring and controlling database security and authorization:** Setting up controls to ensure the quality and integrity of data
All of the above

What does the abbreviation DBMS stand for?
Database Manipulation Software.
Data Borrowing and Movement Software
Digital Base Mapping System.
**Database Management System.**

The ____________ keyword is used in SELECT statement to return different values.
Select correct option:
LIKE
IN
DISTINCT
WHERE

DML stands for ____________.
Select correct option:
Dynamic Modeling Language
**Data Manipulation Language**
Data Management Language
Domain Modeling Language

Functions in SQL return a single value
Select correct option:
**True**
False

A relational database system is based on the concept(s) of:
Select correct option:

A network of data records
Nested tables
Tables, rows and columns
A tree-like structure of data

A relational database is
Select correct option:
**one that consists of two or more tables**
a database that is able to process tables, queries, forms, reports and macros
one that consists of two or more tables that are joined in some way
the same as a flat file database
Which one of the following is NOT a characteristic of meta data?
Select correct option:
Data about data
Describes a data dictionary
Self-describing
**Includes user data**

An entity type is
defined when the database is actually constructed
specific type such as an integer, text, date, logical etc
**coherent set of similar objects that we want to store data on (e.g. STUDENT, COURSE, CAR)**
defined by the database designer

Which of the following is INCORRECT statement concerning the database design process?
Select correct option:
During requirements collection and analysis phase, one can gather the data requirements of database users.
**By referring to a high level data model, it is possible to understand the data requirements of the users, entity types, relationships and constraints.**
Transformation of the high level data model into the implementation data model is called logical design or data model mapping.
During the logical design phase of internal storage structures, access paths and file organization for the database files are specified.

Making a change to the conceptual schema of a database but not affecting the existing external schemas is an example of
Select correct option:
Physical data independence
Logical data independence
Functional dependency
Concurrency control

Which feature of database provides conversion from inconsistent state of DB to a consistent state ensuring minimum data loss?
Select correct option:
User accessible catalog
Data processing
Recovery service
Authorization service

A Foreign Key is
Select correct option:
A field in a table that matches a key field in another table
A field in a table that contains data that is also contained elsewhere in another table
A field in a table that has the same name as a key field in another table
A field in a table that has the same name as a key field in another table

Which model operates at the lowest level of abstraction?
Select correct option:
conceptual
internal
external

physica
implementation

ER
Object Oriented
internal

Data about data is metadata
Select correct option:
True
False

Data Redundancy Means
Select correct option:
Security of data

**Duplication of data**

Management of data

Recovery of data

Data inconsistency leads to a number of problems such as
Select correct option:

**loss of information and incorrect results**

less secure data

redundant data

Slow database development

most widely used conceptual model is the __ model.
Select correct option:

implementation

**ER**

Object Oriented

internal

Controlling redundancy in a database management system DOES NOT help to
Select correct option:

avoid duplication

avoid unnecessary wastage of storage space

avoid **unauthorised access to data**

avoid inconsistency among data

In an ERD, the focus is on the __ and the relationships between them.
Select correct option:

**attributes**

entities

keys

indexes

An entity type is
defined when the database is actually constructed

ea specific type such as an integer, text, date, logical etc
**User rights information is stored in**
Select correct option:

- Physical database
- **Catalog**
- Logical database
- Buffer

Which of the following might be represented with a multivalued attribute?
Select correct option:

- person's name
- **class location** (Not Confirm)
- bank account balance
- book title

Which of the following is correct regarding Dataflow diagram?
Select correct option:

- Single DFD is required to represent a system
  Created at increasing levels of detail
  The dataflow must be bidirectional
  Used to represent the relationships among the external entities

Data about data is database
Select correct option:

- **True**
- False
- Partially True
- None of the Above

Which one of the following is NOT a characteristic of meta data?
Select correct option:

- Data about data
- **Describes a data dictionary**
- Self-describing
- Includes user data

The most widely used conceptual model is the ___ model.
Select correct option:

- implementation
ER
Object Oriented
internal

Which model operates at the lowest level of abstraction?
Select correct option:
conceptual
internal
external
physical

Which of the following describes a database system?
Select correct option:
A collection of stored operational data used by the application system of some particular enterprise
A shared collection of logically vustedents.ning related data (and a description of this data) designed to meet the information needs of an organisation
**A collection of stored data organised in such a way that all user requirements are satisfied by the database. In general there is only one copy of each item of data** although there may be controlled repetition of some data.
All of the above

Data inconsistency leads to a number of problems such as
Select correct option:
loss of information and incorrect results
less secure data
redundant data
Slow database development

Which of the following constraints enforces entity integrity?
Select correct option:
**PRIMARY KEY**
FOREIGN KEY
CHECK
NOT NULL
A relational database system is based on the concept(s) of:
Select correct option:
A network of data records
Nested tables
**Tables, rows and columns**
A tree-like structure of data

Which of the following is NOT a component of a DFD?
Select correct option:
Dataflow
Datastore
**External entities**
Relationship between external entities

**Question # 6 of 10 ( Start time: 08:51:30 PM ) Total Marks: 1**
A candidate key that does not have a null value and is selected to uniquely identify all other attribute values in any given row is called a ___.
Select correct option:
superkey
candidate key
**primary key**
secondary key

Which of the following is correct regarding Dataflow diagram?
Select correct option:
Single DFD is required to represent a system
Created at increasing levels of detail
The dataflow must be bidirectional
**Used to represent the relationships among the external entities**

Which of the following constraints enforces entity integrity?
Select correct option:
**PRIMARY KEY**
FOREIGN KEY
CHECK

A________is used to maintain a connection between the users of the database system.
Select correct option:
mail server
Which of the following functions are NOT performed by a database administrator? Select correct option:

**Planning, designing and implementing database systems**
Establishing standards and procedures for database systems
Communicating with database users
Allocation of storage locations and data structures

Level of data at which entities or objects exist in reality is called

**Real world data**
Schema for real world data
Meta data
Data about data
An entity type is defined when the database is actually constructed
a specific type such as an integer, text, date, logical etc
**a coherent set of similar objects that we want to store data on (e.g. STUDENT, COURSE, CAR)**
defined by the database designer

In a three-level DBMS architecture, the ______ level interacts directly with the users. Select correct option:

**external**
conceptual
internal
physical

Revoke is a __________ Statement

Data Definition

**Control Access**
Data Manipulation
Data Description
Which of the following is not true regarding clustering?
It increases the efficiency since related records are placed close to each other.

**Clustering makes records, difficult to access**

Suitable to relatively static situations
It is a process, which means to place record from different tables to places in adjacent physical locations.

DML does not used to:
Select correct option:
add new rows to tables
retrieve rows from table
modify the rows of tables

**alter a table definition**

The ________ operator allows to use wild cards in the where clause of an SQL statement.
Select correct option:
IN
FROM
LIKE
None of the above.

Identify the basic part(s) of a SELECT statement?
SELECT
FROM

**Both SELECT and FROM**

DISTINCT

What happens if the WHERE clause is omitted from a DELETE statement?
Select correct option:

**All records from the table are deleted**

No record from the table will be deleted
First record of the table will be deleted
The statement will not be executed and will give a syntax error
Truncate is an alternative of Delete command.
Select correct option:

True
False

Which of the following function falls in the category of Aggregate functions.
Select correct option:
SUM
MIN
MAX
All of the above

1. in “many to many relationship” one instance of first entity can be mapped with many instances of second entity
T
F

2. Select the most appropriate statement. Which of the following data model is used to design logical database design?
Relational
Hierarchal
Object oriented
Any model can be used

3. In “One to Many” cardinality one instance of a relation is mapped with many instances of second entity type
One instance of second entity type
Primary key of 2 relations
none of above

4. Select” and “project” are the examples of
Unary operations
Binary operations
Ternary operations
All of above

5. Binary relationships are those, which are established between one entity type
One entity type
Two entity type
Three entity type
Unlimited entities
6. **Unary operations involves**
   - Only one relation
   - Only two relations
   - More than two relations
   - Not more than five relations

7. **Which of the following is true regarding foreign keys?**
   - There can only be one foreign key in a relation
   - **There can be as many foreign keys as needed**
   - Foreign key is not a super key
   - Each table in database must have a foreign key

---

**Which of the following is a feature of CHECK constraint?**
Select correct option:
- **limit the values that can be placed in a column.**
- used to enforce referential integrity.
- enforces the uniqueness of the values in a set of columns.
- is a unique identifier for a row within a database table.

The check constraint checks the values for any particular attribute. In this way different types of constraints can be enforced in any table by CREATE command.

---

**In “One to Many” cardinality one instance of a relation is mapped with**
Select correct option:
- **many instances of second entity type**
- One instance of second entity type  
- Primary key of 2 relations
- none of above

---

in “one to one relationship” one instance of first entity can be mapped with two instances of second entity
- true
- false
in “many to many relationship” one instance of first entity can be mapped with many instances of second entity
Select correct option:
true
false

Which of the following constraints enforces entity integrity?
Select correct option:
PRIMARY KEY (Correct)
FOREIGN KEY
CHECK
NOT NULL

Binary relationships are those, which are established between
Select correct option:
One entity type
Two entity type (Correct)
Three entity type
Unlimited entities

Unary Operation involve
one relation only
Only two operations
More than two relations
No more than five relations

Which of the following might be represented with a multivalued attribute?
Select correct option:
person's name
class location
bank account balance
book title

Which of the following might be represented with a single-valued attribute

Person’s phone number
Car’s color
Employee’s educational background
computer's processor speed

8- In an ERD, the focus is on the ____ and the relationships between them.
attributes
entities
keys
indexes

Equi-join is similar to ________ with a slight difference.
Natural Join
Semi join
Outer join
Theta join

_____ is same as Equi-Join with a slight difference.
Select correct option:
Natural Join
Semi Join
Outer Join
Theta Join

Description on a particular collection of data using the given data model
Select correct option:
Database
Relation
Schema
None

A candidate key that does not have a null value and is selected to uniquely identify all
other attribute values in any given row is called a ___.
Select correct option:
superkey
candidate key
primary key
secondary key
The database management system (DBMS) is used to
Select correct option:
Store the data
Access the data
Manage its users
All of above

Which model operates at the lowest level of abstraction?
Select correct option:
conceptual
internal
external
physical

A Foreign Key is
Select correct option:
A field in a table that matches a key field in another table
A field in a table that contains data that is also contained elsewhere in another table
A field in a table that has the same name as a key field in another table
A field in a table that has the same name as a key field in another table

Each table must have a __ key.
Select correct option:
primary
secondary
logical
foreign

A software package designed to store and manage databases
Select correct option:
Database
DBMS
Data model
Data

A_______________ entity has a primary key that is partially or totally derived from the parent entity in the relationship.
Strong
Weak
Business
Relationship

In ERD, the focus is on the _________ and the relationships between them.
  Attributes
  Entities
  Keys
  Indexes

“Select” and “project” are the examples of
  Unary operations
  Binary operations
  Ternary operations
  All of the above

Atomicity is a feature of ____________.
  1NF
  2NF
  3NF
  BCNF

If Aà B and AàC then A à BC the inference Rules applies is:
  Union
  Decomposition
  Augmentation
  Reflexivity

Relational Calculus is a ____________ relational data manipulation language.
  Procedural, Informal
  Non-Procedural, Informal
  Procedural, Formal
  Non-Procedural, Formal
A third Normal Form (3 NF) relation should
Select correct option:
**be in 2 NF**
not have complete key
not be 1 NF
should not have non-key attributes depend on key attribute

The process of normalization
Select correct option:
is automatic using a computer program
requires one to understand dependency between attributes
is manual and requires semantic information
is finding the key of a relation

Given the following relation it is not 3 NF because Student (roll no, name, course no, course max. marks, year of study, address), where roll no is PK
Select correct option:
**it is not in 2 NF**
it does not have composite key
non-key attributes course no and course max. marks are functionally dependent
it has more than 3 non-key attributes

A relation is said to be in 2 NF if (i) it is in 1 NF (ii) non-key attributes dependent on key attribute (iii) non-key attributes are independent of one another (iv) if it has a composite key, no non-key attribute should be dependent on part of the composite key
Attributes are (i) properties of relationship (ii) attributed to entities (iii) properties of members of an entity set
Select correct option:
i
i and ii
i and iii
iii

Controlling redundancy in a database management system DOES NOT help to
Select correct option:

avoid duplication
avoid unnecessary wastage of storage space
avoid unauthorised access to data
avoid inconsistency among data

Question # 2 of 10 ( Start time: 11:18:38 AM ) Total Marks: 1
User rights information is stored in
Select correct option:

Physical database
Catalog
**Logical database**
Buffer

Quiz Start Time: 11:17 AM Time Left 38 sec(s)

Question # 3 of 10 ( Start time: 11:20:08 AM ) Total Marks: 1
Which levels are mostly used for Detailed DFD?
Select correct option:

**Level-0, Level-1**
Level-1, Level-2
Level-2, Level-3
Level-3, Level-4

Quiz Start Time: 11:17 AM Time Left 76 sec(s)

Question # 4 of 10 ( Start time: 11:21:13 AM ) Total Marks: 1
Within a table, each primary key value ____.
Select correct option:

is a minimal superkey
is always the first field in each table
must be numeric
**must be unique**
A primary key is an attribute (or set of attributes) that has been chosen for an entity, whose values are used to uniquely identify a particular instance of an entity. True or false?

Select correct option:

True
False
Partially True
None of the given

Who is responsible for authorizing access to the database, for coordinating and monitoring its use?

Select correct option:

Database Designer
Database Administrator
End User
Application Programmer
In case of Context-level Diagram, the system is represented by
Select correct option:

One process atleast
Two processes atleast
One process only
Any number of processes

In a three-level DBMS architecture, the ______ level interacts directly with the users.
Select correct option:

external
conceptual
internal
physical

Which feature of database provides conversion from inconsistent state of DB to a consistent state ensuring minimum data loss?
Select correct option:

User accessible catalog
Data processing
Recovery service
Authorization service

Quiz Start Time: 11:27 AM Time Left 60 sec(s)

Question # 1 of 10 (Start time: 11:27:14 AM) Total Marks: 1
Which of the following describes a database system?
Select correct option:

A collection of stored operational data used by the application system of some particular enterprise
A shared collection of logically related data (and a description of this data) designed to meet the information needs of an organisation
A collection of stored data organised in such a way that all user requirements are satisfied by the database. In general there is only one copy of each item of data although there may be controlled repetition of some data.
All of the above

Quiz Start Time: 11:27 AM Time Left 18 sec(s)

Question # 2 of 10 (Start time: 11:27:53 AM) Total Marks: 1
Which of the following is INCORRECT statement concerning the database design process?
Select correct option:

During requirements collection and analysis phase, one can gather the data requirements of database users.
By referring to a high level data model, it is possible to understand the data requirements of the users, entity types, relationships and constraints.
Transformation of the high level data model into the implementation data model is called
logical design or data model mapping. During the logical design phase of internal storage structures, access paths and file organization for the database files are specified.

Quiz Start Time: 11:27 AM Time Left 70 sec(s)

Question # 3 of 10 ( Start time: 11:29:11 AM ) Total Marks: 1
User rights information is stored in
Select correct option:

- Physical database
- Catalog
- Logical database
- Buffer

Quiz Start Time: 11:27 AM Time Left 76 sec(s)

Question # 4 of 10 ( Start time: 11:30:04 AM ) Total Marks: 1
The Entity Relation Model models
Select correct option:

- Entities, Relationships and Processes
- Entities and Relationships
- Relationships
- Entities

Quiz Start Time: 11:27 AM Time Left 31
Which of the following is NOT a component of a DFD?
Select correct option:

- Dataflow
- Datastore
- **External entities**
- Relationship between external entities

Making a change to the conceptual schema of a database but not affecting the existing external schemas is an example of
Select correct option:

- Physical data independence
- **Logical data independence**
- Functional dependency
- Concurrency control

Incase of Context-level Diagram, the system is represented by
Select correct option:

- One process atleast
- Two processes atleast
One process only

Any number of processes

Question # 9 of 10 (Start time: 11:33:11 AM) Total Marks: 1
An instance is
Select correct option:

- a particular occurrence of an entity
- a special type of relation
- an attribute of an entity
- any particular entity

Question # 10 of 10 (Start time: 11:34:22 AM) Total Marks: 1
A__________is used to maintain a connection between the users of the database system.
Select correct option:

- mail server
- file server
- client-server
- none of the given

CS403 - Database Management System
GRANT belongs to which type of SQL commands classification

Select correct option:

- DML
- DDL
- DCL
- DQL

In SQL, which command is used to modify the rows of tables.

Select correct option:

- UPDATE

Correct
REVOKE is a ______________ statement.

Select correct option:

- Data Definition
- Control Access (Correct)
- Data manipulation
- Data description
Which of the following syntax of the functions in SQL is used to add column values?

Select correct option:

- COUNT(*)
- COUNT(expression)
- MAX(expression)
- SUM(expression)

Sum 222

Which of the following is not a part of an INSERT statement?

Select correct option:

- INTO
- VALUES
In SQL, which command is used to delete rows from table.

Select correct option:

- DELETE
- REMOVE
- TRUNCATE
- Both I and II

Both 207

Which of the following is a String function in SQL
Data Manipulation Language (DML) is the set of commands used to maintain and query a database including updating, inserting, modifying and retrieving data.
Objective of an order by clause is to display or arrange output of a select statement in a particular order.

Select correct option:

- True --- correct
- False

Which of the following is used to filter rows according to some condition(s)?

Select correct option:

- SELECT
- FROM
- WHERE --- correct
- UPDATE
Which of the following is incorrect about alter table statement?

Select correct option:

- Cannot be used to modify type or size of an existing column
- Can be used to delete a column
- Can not be used to create a new table
- Can be used to add column in the existing table

UPDATE command belongs to which type of Classification

Select correct option:

- DML
- DDL

Correct answer: Cannot be used to modify type or size of an existing column.
The ____________ keyword is used in SELECT statement to return different values.

Select correct option:

- LIKE
- IN
- DISTINCT
- WHERE

Which of the following prevents duplicate values to be displayed as a result of an SQL statement?

Select correct option:
The ________ function helps reduce the need to use multiple OR conditions.

Select correct option:

- DISTINCT
- DELETE
- UPDATE
- ALTER
- Like
- IN
- AND
- BETWEEN
Which language is used to permit or prohibit access to a table?

Select correct option:

1. DCL
2. DDL
3. DML
4. All of the above.

The correct answer is DCL.

Which of the following SQL statements used to control access to the data and to the database?

Select correct option:

1. GRANT
2. REVOKE

The correct answer is GRANT and REVOKE.
Both GRANT and REVOKE

Select correct option:

SELECT

FROM

Both SELECT and FROM

DISTINCT

Identify the basic part(s) of a SELECT statement?

Select correct option:

Which of the following clauses allows to sort the records in result set?

Select correct option:
DML does not used to:

Select correct option:

- add new rows to tables
- retrieve rows from table
- modify the rows of tables
Which of the following is used with INSERT command to insert values in a DB table?

Select correct option:

- INTO
- ONTO
- UPTO
- WITH

Functions in SQL return a single value

Select correct option:

- True
Which of the following is one of the purposes of using DDL commands?

- inserting records into databases
- updating records into databases
- manipulating databases
- creating and destroying databases **(Right Answer)**

Which of the following is incorrect about alter table statement?

- Cannot be used to modify type or size of an existing column **(Right Answer)**
- Can be used to delete a column
- Can not be used to create a new table
Can be used to add column in the existing table

Which of the following is used to retrieve and insert information from database?

**DML (Right Answer)**

DDL

DCL

Both DML and DDL

Which of the following is used with INSERT command to insert values in a DB table?

**INTO (Right Answer)**

UPTO

WITH

In SQL, which command is used to modify the rows of tables.

**Update (Right Answer)**

Insert

Browse

Append

Identify the basic part(s) of a SELECT statement?
SELECT
FROM

**Both SELECT and FROM** (Right Answer)

DISTINCT

Columns used to uniquely identify individual rows of a given table, may be specified to be not **NOT** NULL.

True

**False** (Right Answer)

Objective of an order by clause is to display or arrange output of a select statement in a particular order.

**True** (Right Answer)

False

Which of the following is not a part of an INSERT statement?

INTO

**VALUE** (Right Answer)

INSERT

Modify

The ________ operator allows to use wild cards in the where clause of an SQL statement.

Select correct option:
IN
FROM
LIKE (Right Answer)
None of the above.

Question # 3 of 10 ( Start time: 06:15:54 PM ) Total Marks: 1
Which of the following is not an aggregate function
Select correct option:

AVG
SUM
UPPER (Right Answer)
MAX

Question # 4 of 10 ( Start time: 06:16:23 PM ) Total Marks: 1
UPDATE command belongs to which type of Classification
Select correct option:

DML (Right Answer)
DDL
Question # 6 of 10 (Start time: 06:18:52 PM) Total Marks: 1

GRANT belongs to which type of SQL commands classification

Select correct option:

DML
DDL
**DCL (Right Answer)**
DQL

Question # 7 of 10 (Start time: 06:20:21 PM) Total Marks: 1

DML does not used to:

Select correct option:

add new rows to tables
retrieve rows from table
modify the rows of tables
**alter a table definition (Right Answer)**
Question # 9 of 10 ( Start time: 06:22:02 PM ) Total Marks: 1

Which of the following SQL statements used to control access to the data and to the database?
Select correct option:

- GRANT
- REVOKE
- Both GRANT and REVOKE (Right Answer)

SELECT

Which of the following is the correct syntax for adding a new column into an existing table.
Select correct option:

- ALTER TABLE table_name { ALTER [COLUMN] column type [(size)] [DEFAULT default] }
- ALTER TABLE table_name { ADD [COLUMN] column type [(size)] [DEFAULT default] }
- Both I and II. (Right Answer)

None of the above.

DML does not used to
Add new Rows to tables

Retrieve Rows from table

Modify the rows of tables

**Alter table definition** (Right Answer)

The _________ function helps reduce the need to use multiple OR conditions.

Like

**IN** (Right Answer)

AND

Between

Columns used to uniquely identify individual rows of a given table, may be specified to be not NOT NULL.

**TRUE** (Right Answer)

FALSE

In SQL, which command is used to delete rows from table.

**Delete** (Right Answer)

Remove

Truncate

Both I and II
Which of the following clauses allows to sort the records in result set?

Where

**Order by** (Right Answer)

From

Having

Which of the following SQL statements used to control access to the data and to the database?

Grant

Revoke

**Both Grant and Revoke** (Right Answer)

Select

Which of the following is used with INSERT command to insert values in a DB table?

**INTIO** (Right Answer)

UPTO

WITH

In SQL queries, while creating tables or relations in database, key columns may be specified by

**Not Null** (Right Answer)
Data Type
None of the above

Which of the following is not an aggregate function

AVG

SUM

**UPPER** (Right Answer)

MAX

_______ Operators are the ones that require two operands on both sides of the operator.

Double

Tow Sided

Binary

None of the given options

What happened if the Where clause is omitted from a Delete Statement?

All record from the table are deleted

No record from the tables will be deleted

First record of the tables will be deleted

The statement will not be executed and will give a syntax error
Grant belong to which types of SQL command classification

DML
DDL
**DCL (Right Answer)**
DQL

Update command belong to which type of classification

**DML (Right Answer)**
DDL
DCL
DQL

Which of the following is incorrect about alter table statement?

- Cannot be used to modify type or size of an existing column
- Can be used to delete a column
- Can not be used to create a new table
- Can be used to add column in the existing table

Which of the following is not true regarding clustering?

- It increases the efficiency since related records are placed close to each other.
Clustering makes records, difficult to access  

Suitable to relatively static situations

It is a process, which means to place record from different tables to places in adjacent physical locations.

Truncate command responses time is __________ as compared to delete command.

Poor

Same

Better  

Worst

Which of the following is a String function in SQL

Count

LEN  

SQRT

SIN

Revoke is a __________ Statement

Data Definition

Control Access  

Data Manipulation
Data Description

GRANT is a _____________ command.

DDL

DML

DCL (Right Answer)

None of the above

Which of the following is one of the purposes of using DDL commands?

Inserting records into databases

Updating records into databases

Manipulation databases

Creating and destroying databases (Right Answer)

Which of the following is not a part of an INSERT statement?

Select correct option:

INTO

VALUES (Right Answer)

INSERT

MODIFY

Consider a table named “emp” having fields Empname, EmpID, Age, salary. Which of the following is true if the following SQL statement tries to execute? SELECT * FROM emp WHERE Empname=’ALI’ ORDER BY Age;

The statement has a syntax error
The statement displays the entire fields from emp in which the Empname is ALI in any order (Right Answer)
The statement displays the entire fields from emp in which the Empname is ALI in descending order of their age
The statement displays the entire fields from emp in which the Empname is ALI in ascending order of their age

In SQL, which command is used to modify the rows of tables.
Select correct option:
UPDATE (Right Answer)
INSERT
BROWSE
APPEND

In SQL, which command is used to delete rows from table.
Select correct option:
DELETE (Right Answer)
REMOVE
TRUNCATE
Both I and II

In SQL queries, while creating tables or relations in database, key columns may be specified by
Select correct option:
Null
Not Null (Right Answer)
Data Type
None of the above

What happens if the WHERE clause is omitted from a DELETE statement?
All records from the table are deleted (Right Answer)
No record from the table will be deleted
First record of the table will be deleted
The statement will not be executed and will give a syntax error.

Truncate command response time is _____ as compared to Delete command.
Select correct option:
- Poor
- Same
- Better (Right Answer)
- worst

Which of the following syntax of the functions in SQL is used to add column values?
Select correct option:
- COUNT(*)
- COUNT(expression)
- MAX(expression)
- SUM(expression) Not Sure(Right Answer)

Which of the following is used to retrieve and insert information from database?
Select correct option:
- DML (Right Answer)
- DDL
- DCL
- Both DML and DDL

Which of the following is used to filter rows according to some condition(s)?
Select correct option:
- SELECT
- FROM
- WHERE (Right Answer)
- UPDATE
Which of the following is used with INSERT command to insert values in a DB table?

Select correct option:

ONTO

INTO (Right Answer)

UPTO

WITH

Which of the following is a correct way of selecting all the columns from a table called PERSONS?

Select correct option:

SELECT FROM * Persons

SELECT * FROM Persons (Right Answer)

SELECT * WHERE Persons

SELECT WHERE * Persons

The ________ operator allows to use wild cards in the where clause of an SQL statement.

Select correct option:

IN

FROM
LIKE (Right Answer)

None of the above.

Which of the following statements creates a database named IMDB.

Select correct option:

CREATE DATABASE IMDB; (Right Answer)

CREATE DB IMDB;

ADD DATABASE named IMDB;

CREATE IMDB DATABASE;

Which of the following is not true regarding clustering?

Select correct option:

It increases the efficiency since related records are placed close to each other

Clustering makes records, difficult to access (Right Answer)

Suitable to relatively static situations.

It is a process, which means to place records from different tables to place in adjacent physical locations.

Which of the following is used to filter rows according to some condition(s)?

Select correct option:

SELECT
Which of the following is not an aggregate function

Select correct option:

AVG
SUM
**UPPER** (Right Answer)
MAX

CREATE TABLE and CREATE index belongs to which type of SQL commands

Select correct option:

DML
DCL
**DDL** (Right Answer)
DQL
In SQL, which command is used to modify the rows of tables.

Select correct option:

**UPDATE** (Right Answer)

INSERT

BROWSE

APPEND

---

SQL is used for:
Select correct option:

Creating, managing and deleting tables and manage the relationships among the stored data.
Generating queries, organizing, managing and retrieving data stored in a database.
Maintaining data integrity and coordinate data sharing.

**All of the above** (Right Answer)

---

Which of the following is used to filter rows according to some condition(s)?
Select correct option:

SELECT
FROM
**WHERE** (Right Answer)
UPDATE

---

Which language is used to permit or prohibit access to a table?
Select correct option:

**DCL** (Right Answer)

DDL
DML
All of the above.

Which of the following is a String function in SQL

COUNT
LEN (Right Answer)
SQRT
SIN

Truncate is an alternative of Delete command.
Select correct option:

True (Right Answer)
False

Which of the following SQL statements used to control access to the data and to the database?
Select correct option:

GRANT
REVOKE
Both GRANT and REVOKE (Right Answer)
SELECT

Data Manipulation Language (DML) is the set of commands used to maintain and query a database including updating, inserting, modifying and retrieving data.
Select correct option:

True (Right Answer)
False
Which of the following is NOT a DDL command?
Select correct option:
Create DB
Create table
Delete (Right Answer)
Drop

Which of the following is one of the purposes of using DDL commands?
Select correct option:
inserting records into databases
upating records into databases (Right Answer)
manipulating databases
creating and destroying databases

Which of the following function falls in the category of Aggregate functions.
Select correct option:
SUM
MIN
MAX
All of the above (Right Answer)

SQL stands for ______________.
I - Structured Query Language
II – Standard Query Language
III- Status Query Language
Select correct option:
Only I

Only II

**Both I and II** (Right Answer)

Only III

Making a change to the conceptual schema of a database but not affecting the existing external schemas is an example of

Physical data independence.

Concurrency control.

**Logical data independence.** (Right Answer)

Functional dependency

SQL data types do not have support for storing multi-media objects directly.

Select correct option:

**True** (Right Answer)

False

Truncate is an alternative of Delete command.

Select correct option:
What happens if the WHERE clause is omitted from a DELETE statement?

Select correct option:

- **All records from the table are deleted** (Right Answer)
- No record from the table will be deleted
- First record of the table will be deleted
- The statement will not be executed and will give a syntax error

Query Analyzer is used to practice SQL in MS-Access and MS-SQL Server.

Select correct option:

- **True** (Right Answer)
- False

Which of the following is used to retrieve and insert information from database?

Select correct option:

- **DML** (Right Answer)
- DDL
- DCL
- Both DML and DDL
Which of the following can not be included into CREATE TABLE statement?
Select correct option:

Data types
Constraints
Attributes
**Cardinalities** (Right Answer)

Which of the following is NOT a DDL command?
Select correct option:
Create DB
Create table
**Delete** (Right Answer)
Drop

Which of the following SQL statements used to control access to the data and to the database?
Select correct option:
GRANT
REVOKE
**Both GRANT and REVOKE** (Right Answer)
SELECT
A relational database is
Select correct option:

one that consists of two or more tables

a database that is able to process tables, queries, forms, reports and macros

**one that consists of two or more tables that are joined in some way** (Right Answer)

the same as a flat file database

Which model operates at the lowest level of abstraction?
Select correct option:

conceptual

internal

external

**physical** (Right Answer)

A________is used to maintain a connection between the users of the database system.
Select correct option:

mail server

**file server** (Right Answer)
A collection of concepts that can be used to describe the structure of a database

Select correct option:

Database

DBMS

**Data model** (Right Answer)

Data

Data about data is metadata

Select correct option:

**True** (Right Answer)

False

A primary key is an attribute (or set of attributes) that has been chosen for an entity, whose values are used to uniquely identify a particular instance of an entity.

Select correct option:

**True** (Right Answer)

False

Partially True

None of the given
Which of the following is INCORRECT statement concerning the database design process?

Select correct option:

During requirements collection and analysis phase, one can gather the data requirements of database users.

By referring to a high level data model, it is possible to understand the data requirements of the users, entity types, relationships and constraints.

Transformation of the high level data model into the implementation data model is called logical design or data model mapping.

**During the logical design phase of internal storage structures, access paths and file organization for the database files are specified.** (Right Answer)

Which feature of database provides conversion from inconsistent state of DB to a consistent state ensuring minimum data loss?

Select correct option:

User accessible catalog

Data processing

**Recovery service** (Right Answer)

Authorization service

Who is responsible for authorizing access to the database, for coordinating and monitoring its use?

Select correct option:

Database Designer

**Database Administrator** (Right Answer)
End User

Application Programmer

Which of the following describes the job of a database administrator?

Select correct option:

Development, implementation operation of the physical database

Creation of the system catalog

Monitoring and controlling database security and authorization: Setting up controls to ensure the quality and integrity of data (Right Answer)

All of the above

Which of the following is NOT a component of a DFD?

Select correct option:

Dataflow

Datastore

External entities

Relationship between external entities (Right Answer)

The Entity Relation Model models

Select correct option:
Entities, Relationships and Processes

Entities and Relationships

**Relationships** (Right Answer)

Entities

A relational database system is based on the concept(s) of:

Select correct option:

**A network of data records** (Right Answer)

Nested tables

Tables, rows and columns

A tree-like structure of data

Data Manipulation Language (DML) is the set of commands used to maintain and query a database including updating, inserting, modifying and retrieving data.

Select correct option:

**True** (Right Answer)

False

DML does not used to:

Add new rows to tables

Retrieve row from tables
Modify the rows of tables

Alter a table definition (Right Answer)

What does the abbreviation DBMS stand for?

Database Manipulation Software.

Data Borrowing and Movement Software

Digital Base Mapping System.

Database Management System. (Right Answer)

Identify the language which is used to specify database schema.

DCL

DML

DDL

Non of the above (Right Answer)

Columns used to uniquely identify individual rows of a given table, may be specified to be not NOT NULL.

True
Value of a function in SQL is always determined by the input parameters

True (Right Answer)

False

Question No: 1 (Marks: 1) - Please choose one
Making a change to the conceptual schema of a database but not affecting the existing external schemas is an example of

► Physical data independence.
► Concurrency control.
► **Logical data independence.**
► Functional dependency

Question No: 3 (Marks: 1) - Please choose one
Which key word is available in SQL to enforce referential integrity?

► Check
► **Primary Key**
► Set Default
► Unique

Question No: 4 (Marks: 1) - Please choose one
Which of the following statements are Data Definition Language command?

► INSERT

► UPDATE

► GRANT

► **TRUNCATE**
Question No: 5 (Marks: 1) - Please choose one
How many clustered index(es) do each database table have?
► 2
► 3
► 5
► 1

Question No: 6 (Marks: 1) - Please choose one
Which of the following is true about DELETE command?
► is DDL Command.
► Resets identity of the table.
► cannot activate a trigger.
► Can be Rolled back.

Question No: 7 (Marks: 1) - Please choose one
Which of the following will be deleted relating to a table if you use TRUNCATE command?
► all rows in a table
► indexes
► table structure and its columns
► constraints

Question No: 8 (Marks: 1) - Please choose one
Which of the following is not true about De-normalization?
► It is the process of attempting to optimize the performance of a database
► De-normalization is a technique to move from lower to higher normal forms of database modeling
► In de-normalization it is required to add redundant data.
► It enhances the performance of DB

Question No: 9 (Marks: 1) - Please choose one
Which of the following is not a feature of TRANSACTION?
► Users should be able to regard the execution of each transaction as atomic.
Each transaction, run by itself.

must preserve the consistency of the database

dependant on other concurrent transactions

Question No: 10 (Marks: 1) - Please choose one
Which of the following gives all the fields from employee table named as EMP?
► select * from EMP;
► select emp* from EMP';
► select emp_id where EMP;
► select * where EMP;

Question No: 11 (Marks: 1) - Please choose one
Suppose there are 4 fields in a table named CUST (customer_id, first_name, last_name, phone).
Which of the following gives all the information of the customers in the table whose last name is ALI?
► SELECT * FROM CUST WHERE last_name='ALI';
► SELECT * FROM CUST WHERE last_name=ALI;
► SELECT * FROM CUSTOMER WHERE name=ALI;
► SELECT * FROM CUSTOMER WHERE last_name=ALI;

Question No: 12 (Marks: 1) - Please choose one
Identify the correct statement with respect to normalization.
► Normalization is a formal technique that can be used only at the starting phase of the database design.
► Normalization can be used as a top-down standalone database design technique.
► The process of normalization through decomposition must achieve the lossless join property at any cost whereas the dependency reservation property is sometimes sacrificed.
► The process of normalization through decomposition must achieve the dependency reservation property at any cost whereas the lossless join property is sometimes sacrificed.

Question No: 13 (Marks: 1) - Please choose one
Which of the following is not true with respect to denormalization?
► A denormalized data model is not the same as a data model that has not been normalized
► Denormalization takes place before the normalization process
► It is an attempt to optimize the performance of database
► Denormalization process can not be initiated before the Database design

Question No: 14 (Marks: 1) - Please choose one
Which of the following is incorrect with respect to indexed sequential files?
► New records are added to an overflow file
► Record in main file that precedes it is updated to contain a pointer to the new record
► The overflow is merged with the main file during a batch update
► Multiple indexes for the same key field cannot be setup

Question No: 15 (Marks: 1) - Please choose one
Which of the following types of partitioning reduces the chances of unbalanced partitions?
► Vertical
► List
► Hash
► Range

Question No: 16 (Marks: 1) - Please choose one
DML commands are used for:
► Inserting data into databases
► Creating databases
► Destroying databases
► Creating DB objects

Question No: 17 (Marks: 1) - Please choose one
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: 18 (Marks: 1) - Please choose one
Which of the following is correct regarding Dataflow diagram?

► Single DFD is required to represent a system
► The dataflow must be bidirectional
► Created at increasing levels of detail
► Used to represent the relationships among the external entities

Question No: 19 (Marks: 1) - Please choose one
Select the correct statement among the following on proper naming of schema constructs:

► Entity type name applies to all the entities belonging to that entity type and therefore a plural name is selected for entity type.
► In the narrative description of the database requirements, verbs tend to indicate the names of relationship types.
► The nouns arising from a database requirement description can be considered as names of attributes.
► Additional nouns which are appearing in the narrative description of the database requirements represent the weak entity type names.

Question No: 20 (Marks: 1) - Please choose one
Structural constraints of a relationship type refer to

► identifying the owner entity type relevant to a given entity type
► whether the existence of an entity depends on it being related to another entity via the relationship type.
► the role that a participating entity from the entity type plays in each relationship instance.
► the constraints applicable in granting access to tables, columns and views in a database schema.
Question No: 21 ( Marks: 1 ) - Please choose one
Identify the correct statement.
► Entity integrity constraints specify that primary key values can be composite.
► Entity integrity constraints are specified on individual relations.
► Entity integrity constraints are specified between weak entities.
► When entity integrity rules are enforced, a tuple in one relation that refers to another relation must refer to an existing tuple.

Question No: 22 ( Marks: 1 ) - Please choose one
What is the impact of setting multiple indexes for the same key, in index sequential files?
► Multiple indexes for the same key can not be set
► It increases efficiency
► It decreases efficiency
► It will increase complexity as the access time will be increased

Question No: 23 ( Marks: 1 ) - Please choose one
Which of the following is not true regarding Indexes?
► Index can be defined even when there is no data in the table
► It support Range selections
► It can be created using ‘Create Index’ statement
► It can not be created on composite attributes

Question No: 24 ( Marks: 1 ) - Please choose one
While recovering data, which of the following files does a recovery manager examines at first?
Question No: 25 ( Marks: 1 ) - Please choose one
The main memory of a computer system is also known as

► ROM
► RAM
► PROM
► Hard disk

Question No: 26 ( Marks: 1 ) - Please choose one
_______ is a control that enables users to select one option from an associated list; users can also type an option.

► Combo box
► Button
► Text box
► Static area

Question No: 27 ( Marks: 1 ) - Please choose one
_______ records data by burning microscopic holes in the surface of the disk with a laser.

► Hard disk
► RAM
Question No: 28 (Marks: 1) - Please choose one
Which of following is NOT generally the aim of data partitioning and placement of data?
➤ Reduce Workload
➤ Balance Workload
➤ Merging different relations
➤ Speed up rate of useful works.

1: In case of Context-level Diagram, the system is represented by

1. One process at least
   2. Two processes at least
   3. One process only
   4. Any number of processes

Ans: 3

2 Making a change to the conceptual schema of a database but not affecting the existing external schemas is an example of

Physical data independence
   Logical data independence
   Functional dependency
   Concurrency control

Ans: 2

3 Within a table, each primary key value __.
   is a minimal superkey
   is always the first field in each table
   must be numeric
must be unique
ans: 4

4 © An entity type is
defined when the database is actually constructed
   a specific type such as an integer, text, date, logical etc
   a coherent set of similar objects that we want to store data on (e.g. STUDENT, COURSE, CAR)
   defined by the database designer

   ans: 3

5 Which of the following is INCORRECT statement concerning the database design process?

   During requirements collection and analysis phase, one can gather the data requirements of
database users.
   By referring to a high level data model, it is possible to understand the data requirements of the
users, entity types, relationships and constraints.
   Transformation of the high level data model into the implementation data model is called logical
design or data model mapping.
   During the logical design phase of internal storage structures, access paths and file organization
for the database files are specified.

   ans: 2

6 Which of the following is correct regarding Dataflow diagram?

   Single DFD is required to represent a system
       Created at increasing levels of detail
       The dataflow must be bidirectional
       Used to represent the relationships among the external entities

   ans: 4

7 Each table must have a ___ key.

   primary
secondary
logical
foreign

ans: 1

8 An instance is

a particular occurrence of an entity
a special type of relation
an attribute of an entity
any particular entity

ans: 3

9 A table can be logically connected to another table by defining a ___.

hyperlink
common attribute
primary key
superkey

ans: 2

10 Which of the following is NOT a component of a DFD?

Dataflow
Datastore
External entities
Relationship between external entities

ans: 4

CS-403- Database Management System

Quizzes

Within a table, each primary key value ___.
Select correct option:

- is a minimal super key
- is always the first field in each table
- must be numeric
- **must be unique**

Foreign Key is  
Select correct option:

- **A field in a table that matches a key field in another table**
- A field in a table that contains data that is also contained elsewhere in another table
- A field in a table that has the same name as a key field in another table

Which of the following might be represented with a single-valued attribute?  
Select correct option:

- **person's phone number** (Please Check)
- car's color
- employee's educational background
- **computer's processor speed** (Please Check)

A________ is used to maintain a connection between the users of the database system.  
Select correct option:

- mail server
- file server
- **client-server**
- none of the given

Data about data is database  
Select correct option:

- **True**
Which one of the following is NOT a characteristic of Meta data? Select correct option:

- Data about data
- Describes a data dictionary
- Self-describing
- Includes user data

The most widely used conceptual model is the __ model. Select correct option:

- implementation
- ER
- Object Oriented
- internal

Which model operates at the lowest level of abstraction? Select correct option:

- conceptual
- internal
- external
- physical

Which of the following describes a database system? Select correct option:

- A collection of stored operational data used by the application system of some particular enterprise
- A shared collection of logically related data (and a description of this data) designed to meet the information needs of an organization
- A collection of stored data organized in such a way that all user requirements are satisfied
by the database. In general there is only one copy of each item of data although there may be controlled repetition of some data. All of the above

Data inconsistency leads to a number of problems such as
Select correct option:

- loss of information and incorrect results
- less secure data
- redundant data
- Slow database development

Which of the following constraints enforces entity integrity?
Select correct option:

- PRIMARY KEY
- FOREIGN KEY
- CHECK
- NOT NULL

A relational database system is based on the concept(s) of:
Select correct option:

- A network of data records
- Nested tables
- Tables, rows and columns
- A tree-like structure of data

Which of the following is NOT a component of a DFD?
Select correct option:

- Dataflow
- Datastore
- External entities
- Relationship between external entities
A candidate key that does not have a null value and is selected to uniquely identify all other attribute values in any given row is called a ___.

Select correct option:

- superkey
- candidate key
- primary key
- secondary key

Which of the following is correct regarding Dataflow diagram?

Select correct option:

- Single DFD is required to represent a system
- Created at increasing levels of detail
- The dataflow must be bidirectional
- **Used to represent the relationships among the external entities**

Data about data is metadata

Select correct option:

- **True**
- False

Data Redundancy Means

Select correct option:

- Security of data
- **Duplication of data**
- Management of data
- Recovery of data

Controlling redundancy in a database management system DOES NOT help to
Select correct option:

- avoid duplication
- avoid unnecessary wastage of storage space
- avoid unauthorized access to data
- avoid inconsistency among data

In an ERD, the focus is on the ___ and the relationships between them.
Select correct option:

- attributes
- entities
- keys
- indexes

User rights information is stored in
Select correct option:

- Physical database
- Catalog
- Logical database
- Buffer

Which of the following might be represented with a multivalued attribute?
Select correct option:

- person's name
- class location (Not Confirm)
- bank account balance
- book title

A relational database is
Select correct option:

- one that consists of two or more tables
- a database that is able to process tables, queries, forms, reports and macros
one that consists of two or more tables that are joined in some way
the same as a flat file database

Which of the following is INCORRECT statement concerning the database design process?
Select correct option:

During requirements collection and analysis phase, one can gather the data requirements of
database users.
*By referring to a high level data model, it is possible to understand the data requirements
of the users, entity types, relationships and constraints.*
Transformation of the high level data model into the implementation data model is called
logical design or data model mapping.
During the logical design phase of internal storage structures, access paths and file
organization for the database files are specified.

Which feature of database provides conversion from inconsistent state of DB to a consistent state
ensuring minimum data loss?
Select correct option:

User accessible catalog
Data processing
**Recovery service**
Authorization service

Which levels are mostly used for Detailed DFD?
Select correct option:

**Level-0, Level-1**
Level-1, Level-2
Level-2, Level-3
Level-3, Level-4

A primary key is an attribute (or set of attributes) that has been chosen for an entity, whose values
are used to uniquely identify a particular instance of an entity. True or false?
Select correct option:
Who is responsible for authorizing access to the database, for coordinating and monitoring its use?
Select correct option:

- Database Designer
- **Database Administrator**
- End User
- Application Programmer

In case of Context-level Diagram, the system is represented by
Select correct option:

- One process at least
- Two processes at least
- **One process only**
- Any number of processes

The Entity Relation Model models
Select correct option:

- Entities, Relationships and Processes
- **Entities and Relationships**
- Relationships
- Entities

An instance is
Select correct option:

- A particular occurrence of an entity
- A special type of relation
- An attribute of an entity
- Any particular entity
Software packages designed to store and manage databases

Database
**DBMS**
Data model
Data

A table can be logically connected to another table by defining a ____.

- hyperlink
- **common attribute**
- primary key
- superkey

A collection of concepts that can be used to describe the structure of a database

Database
**DBMS**
**Data model**
Data

The main software package that supports a database management approach is called

Select correct option:

- Data Dictionary
- Report Generator
- **Database Management System**
- Distributed database

The ER model is meant to
select correct option:

- replace relational design
- be close to a user’s perception of the data
enable low level descriptions of data
enable detailed descriptions of data query processing

A description on a particular collection of data using the given data model
Select correct option:

- Database
- Relation
- Schema
- None

Which of the following functions are NOT performed by a database administrator?
Select correct option:

- Planning, designing and implementing database systems
- Establishing standards and procedures for database systems
- Communicating with database users
- Allocation of storage locations and data structures

Level of data at which entities or objects exist in reality is called

- Real world data
- Schema for real world data
- Meta data
- Data about data

An entity type is
defined when the database is actually constructed
a specific type such as an integer, text, date, logical etc
a coherent set of similar objects that we want to store data on (e.g. STUDENT, COURSE, CAR)
defined by the database designer

In a three-level DBMS architecture, the ______ level interacts directly with the users.
Select correct option:

- external
- conceptual
- internal
- physical
Revoke is a __________ Statement  
Data Definition  
**Control Access**  
Data Manipulation  
Data Description

Which of the following is not true regarding clustering ?
   It increases the efficiency since related records are placed close to each other.  
   **Clustering makes records, difficult to access**  
   Suitable to relatively static situations  
   It is a process, which means to place record from different tables to places in adjacent physical locations.

DML does not used to :
Select correct option:  
   add new rows to tables  
   retrieve rows from table  
   modify the rows of tables  
   **alter a table definition**

The ________ operator allows to use wild cards in the where clause of an SQL statement.  
Select correct option:  
   IN  
   FROM  
   **LIKE**  
   None of the above.

Identify the basic part(s) of a SELECT statement?  
SELECT  
FROM  
Both SELECT and FROM  
DISTINCT

What happens if the WHERE clause is omitted from a DELETE statement?  
Select correct option:  
   **All records from the table are deleted**  
   No record from the table will be deleted  
   First record of the table will be deleted  
   The statement will not be executed and will give a syntax error

Truncate is an alternative of Delete command.
Select correct option:
  True
  False

Which of the following function falls in the category of Aggregate functions.
Select correct option:
  SUM
  MIN
  MAX
  All of the above

Quiz No. 03 ---Lecture 25 to Lecture 32

Which of the following is one of the purposes of using DDL commands?
  inserting records into databases
  updating records into databases
  manipulating databases
  creating and destroying databases

Which of the following is incorrect about alter table statement?
  Cannot be used to modify type or size of an existing column
  Can be used to delete a column
  Can not be used to create a new table
  Can be used to add column in the existing table

Which of the following is used to retrieve and insert information from database?
  DML
  DDL
  DCL
  Both DML and DDL

Which of the following is used with INSERT command to insert values in a DB table?
  ONTO
  INTO
  UPTO
  WITH

In SQL, which command is used to modify the rows of tables.
  Update
  Insert
  Browse
  Append
Columns used to uniquely identify individual rows of a given table, may be specified to be not NOT NULL.
   True (not sure)
   False

Objective of an order by clause is to display or arrange output of a select statement in a particular order.
   True
   False

Which of the following is not a part of an INSERT statement?
   INTO
   VALUE
   INSERT
   Modify

Which of the following is not an aggregate function
Select correct option:
   AVG
   SUM
   UPPER
   MAX

UPDATE command belongs to which type of Classification
Select correct option:
   DML
   DDL
   DCL
   DQL

GRANT belongs to which type of SQL commands classification
Select correct option:
   DML
   DDL
   DCL
   DQL

Which of the following SQL statements used to control access to the data and to the database?
Select correct option:
   GRANT
   REVOKE
   Both GRANT and REVOKE
   SELECT
Which of the following is the correct syntax for adding a new column into an existing table. Select correct option:

```
ALTER TABLE table_name { ALTER [COLUMN] column type [(size)] [DEFAULT default] }
ALTER TABLE table_name { ADD [COLUMN] column type [(size)] [DEFAULT default] }
Both I and II.
None of the above.
```

The ______ function helps reduce the need to use multiple OR conditions.

Like
IN
AND
Between

In SQL, which command is used to delete rows from table.

```
Delete
Remove
Truncate
Both I and II
```

Which of the following clauses allows sorting the records in result set?

```
Where
Order by
From
Having
```

In SQL queries, while creating tables or relations in database, key columns may be specified by

```
Bull
Not Null
Data Type
None of the above
```

_______ Operators are the ones that require two operands on both sides of the operator.

Double
Two Sided
Binary
None of the given options

What happened if the Where clause is omitted from a Delete Statement?
All record from the table are deleted
No record from the tables will be deleted
First record of the tables will be deleted
The statement will not be executed and will give a syntax error

Grant belong to which types of SQL command classification
- DML
- DDL
- DCL
- DQL

Update command belong to which type of classification
- DML
- DDL
- DCL
- DQL

Truncate command responses time is ____________ as compared to delete command.
- Poor
- Same
- Better
- Worst

Which of the following is a String function in SQL
- Count
- LEN
- SQRT
- SIN

GRANT is a _____________ command.
- DDL
- DML
- DCL
- None of the above

Consider a table named “emp” having fields Empname, EmpID, Age, salary. Which of the following is true if the following SQL statement tries to execute?

```
SELECT * FROM emp
WHERE Empname='ALI'
ORDERBY Age;
```

The statement has a syntax error

The statement displays the entire fields from emp in which the Empname is ALI in any order
The statement displays the entire fields from emp in which the Empname is ALI in descending order of their age.
The statement displays the entire fields from emp in which the Empname is ALI in ascending order of their age.

Truncate command response time is ____ as compared to Delete command.
Select correct option:

- Poor
- Same
- **Better**
- worst

Which of the following syntax of the functions in SQL is used to add column values?
Select correct option:

- COUNT(*)
- COUNT(expression)
- MAX(expression)
- **SUM(expression)** Not Sure

Which of the following is used to filter rows according to some condition(s)?
Select correct option:

```
SELECT
FROM
WHERE
UPDATE
```

Which of the following is a correct way of selecting all the columns from a table called PERSONS?
Select correct option:

```
SELECT FROM * Persons
SELECT * FROM Persons
SELECT * WHERE Persons
SELECT WHERE * Persons
```

Which of the following statements creates a database named IMDB.
Select correct option:

```
CREATE DATABASE IMDB;
CREATE DB IMDB;
```
ADD DATABASE named IMDB;
CREATE IMDB DATABASE;

CREATE TABLE and CREATE index belongs to which type of SQL commands
Select correct option:
- DML
- **DDL**
- DCL
- DQL

SQL is used for:
Select correct option:
- Creating, managing and deleting tables and manage the relationships among the stored date.
- Generating queries, organizing, managing and retrieving data stored in a database.
- Maintaining data integrity and coordinate data sharing.
- **All of the above**

Which language is used to permit or prohibit access to a table?
Select correct option:
- DCL
- DDL
- DML
- All of the above.

Data Manipulation Language (DML) is the set of commands used to maintain and query a database including updating, inserting, modifying and retrieving data.
Select correct option:
- **True**
- False

Which of the following is NOT a DDL command?
Select correct option:
- Create DB
- Create table
- **Delete**
- Drop

SQL stands for ________________.
I - Structured Query Language
II – Standard Query Language
III- Status Query Language
Select correct option:
Only I
Only II
**Both I and II**
Only III

Making a change to the conceptual schema of a database but not affecting the existing external schemas is an example of
   - Physical data independence.
   - Concurrency control.
   - **Logical data independence.**
   - Functional dependency

SQL data types do not have support for storing multi-media objects directly.
Select correct option:
   - **True**
   - False

Query Analyzer is used to practice SQL in MS-Access and MS-SQL Server.
Select correct option:
   - **True**
   - False

Which of the following cannot be included into CREATE TABLE statement?
Select correct option:
   - Data types
   - Constraints
   - Attributes
   - Cardinalities

Identify the language which is used to specify database schema.
   - DCL
   - DML
   - DDL
   - **None of the above**

Value of a function in SQL is always determined by the input parameters
   - **True**
   - False

Which of the following clauses allows to sort the records in result set?
   - Where
   - **Order by**
   - From
Having

Which of the following cannot be included into CREATE TABLE statement?
Select correct option:
  Data types
  Constraints
  Attributes
  **Cardinalities**

Which of the following describes the job of a database administrator?
Select correct option:
  Development, implementation operation of the physical database
  Creation of the system catalog
  **Monitoring and controlling database security and authorization: Setting up controls to ensure the quality and integrity of data**
  All of the above

What does the abbreviation DBMS stand for?
  Database Manipulation Software.
  Data Borrowing and Movement Software
  Digital Base Mapping System.
  **Database Management System.**

The ____________ keyword is used in SELECT statement to return different values.
Select correct option:
  LIKE
  IN
  **DISTINCT**
  WHERE

DML stands for ____________.
Select correct option:
  Dynamic Modeling Language
  **Data Manipulation Language**
  Data Management Language
  Domain Modeling Language

Functions in SQL return a single value
Select correct option:
  **True**
  False
Which of the following is a feature of CHECK constraint?
Select correct option:

- **limit the values that can be placed in a column.**
- used to enforce referential integrity.
- enforces the uniqueness of the values in a set of columns.
- is a unique identifier for a row within a database table.

The check constraint checks the values for any particular attribute. In this way different types of constraints can be enforced in any table by CREATE command.

In “One to Many” cardinality one instance of a relation is mapped with
Select correct option:

- many instances of second entity type
- One instance of second entity type
- Primary key of 2 relations
- none of above

In “one to one relationship” one instance of first entity can be mapped with two instances of second entity

- true
- **false**

In “many to many relationship” one instance of first entity can be mapped with many instances of second entity
Select correct option:

- true
Which of the following constraints enforces entity integrity? 
Select correct option:

- PRIMARY KEY (Correct)
- FOREIGN KEY
- CHECK
- NOT NULL

Binary relationships are those, which are established between 
Select correct option:

- One entity type
- Two entity type (Correct)
- Three entity type
- Unlimited entities

- Unary Operation involve
  Ans = one Operation only

4- multivalued attribute are 
Ans Bank account Balance

6- Which of the following might be represented with a single-valued attribute 
Ans computer's processor speed

7- Relational Calculus is a ____________ relational data manipulation language
Ans. *procedural and formal* (not confirm)

8. In an ERD, the focus is on the ____ and the relationships between them.
Ans. *Entites* (NOT Sure)

Equi-join is similar to ________ with slight difference.
Ans. *Natural Join* (NOT Sure)

Description on a particular collection of data using the given data model
Select correct option:

- Database
- Relation
- **Schema**
- None

A candidate key that does not have a null value and is selected to uniquely identify all other attribute values in any given row is called a ___.
Select correct option:

- superkey
- candidate key
- primary key
- secondary key

The database management system (DBMS) is used to
Select correct option:

- Store the data
- Access the data
- Manage its users
- **All of above**
Which model operates at the lowest level of abstraction?

Select correct option:

- conceptual
- internal
- external
- **physical**

A Foreign Key is

Select correct option:

**A field in a table that matches a key field in another table**
- A field in a table that contains data that is also contained elsewhere in another table
- A field in a table that has the same name as a key field in another table
- A field in a table that has the same name as a key field in another table

Each table must have a ___ key.

Select correct option:

- **primary**
- secondary
- logical
- foreign

A software package designed to store and manage databases

Select correct option:

- Database
- **DBMS**
- Data model
- Data
A ____________ entity has a primary key that is partially or totally derived from the parent entity in the relationship.

- Strong
- **Weak**
- Business
- Relationship

In ERD, the focus is on the __________ and the relationships between them.

- Attributes
- **Entities**
- Keys
- Indexes

“Select” and “project” are the examples of

- **Unary operations**
- Binary operations
- Ternary operations
- All of the above

Atomicity is a feature of ____________.

- 1NF
- 2NF
- 3NF
- BCNF
If A \( \land \) B and AC then A BC the inference Rules applies is:

- **Union**
- Decomposition
- Augmentation
- Reflexivity

Relational Calculus is a __________ relational data manipulation language.

- Procedural, Informal
- Non-Procedural, Informal
- **Procedural, Formal**
- Non-Procedural, Formal