

## CS-403 Final Term Exams Preparation Virtual University

| Sr | Questions  | Answers Choice   |
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| 1  | Consider two sets A and B. A contains 3 elements and B contains 4. How many elements do their Cartesian product contains?  | A. 12<br>B. 9<br>C. 16<br>D. 7   |
| 2  | DML commands are used for:   | A. inserting data into databases<br>B. creating databases<br>C. destroying databases<br>D. creating DB objects   |
| 3  | 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 incase of CROSS JOIN between these two tables?  | A. 24<br>B. 32<br>C. 12<br>D. 16   |
| 4  | Which of the following is CORRECT about database management system's languages?  | A. Data definition languages are used to specify the conceptual schema only.<br>B. Data manipulation languages are used to create the databases<br>C. Data manipulation languages are used for retrieval, insertion, deletion and modification of data<br>D. Data definition languages are only used to update data in the DBMS. |
| 5  | Which of the following is NOT a component of a DFD? Select correct option:   | A. Dataflow<br>B. Datastore<br>C. External entities<br>D. Relationship between external entities   |
| 6  | Which of the following are the general activities, which are performed during the development of application programs?   | A. Data input programs<br>B. Editing<br>C. Display<br>D. All of given  |
| 7  | Which of the following is a feature of PRIMARY KEY constraint?   | A. unique identifier for a row within a database table.<br>B. allow any actions that would destroy links between tables<br>C. limit the values that can be placed in a column.<br>D. enforces that the column will only accept null values.  |
| 8  | Who is responsible for authorizing access to the database, for coordinating and monitoring its use? Select correct option:   | A. Database Designer<br>B. Database Administrator<br>C. End User<br>D. Application Programmer  |
| 9  | 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? | A. The relation Interview is in 3NF<br>B. The relation Interview is in BCNF<br>C. The FD3 violates 3NF.<br>D. The FD2 violates 2NF.  |
| 10 | In SQL queries, while creating tables or relations in database, key columns may be specified by  | A. Data type<br>B. Null<br>C. Not Null<br>D. Owner   |
| 11 | Which of the following is incorrect with respect to indexed sequential files?  | A. New records are added to an overflow file<br>B. Record in main file that precedes it is updated to contain a pointer to the new record<br>C. The overflow is merged with the main file during a batch update<br>D. Multiple indexes for the same key field cannot be setup  |
| 12 | Which of the following concepts is applicable with respect to 2NF?   | A. Full functional dependency<br>B. Any kind of dependency<br>C. Transitive dependency<br>D. Non-transitive dependency   |

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| 13 | Which of the following is NOT a feature of Indexed sequential files?   | <p>A. Records are stored in sequence and index is maintained.</p> <p>B. Dense and nondense types of indexes are maintained.</p> <p>C. Track overflows and file overflow areas can not be ensured</p> <p>D. Cylinder index increases the efficiency</p>   |
| 14 | What is the impact of setting multiple indexes for the same key, in index sequential file  | <p>A. Multiple indexes for the same key can not be set</p> <p>B. It increases efficiency</p> <p>C. It decreases efficiency</p> <p>D. It will increase complexity as the access time will be increased</p>  |
| 15 | ALTER TABLE exams RENAME COLUMN Q_description TO Question_Descp, Std_ID to Student_ID. Syntax of ALTER TABLE is NOT correct  | <p>A. True</p> <p>B. False</p> <p>C. Not Sure</p>  |
| 16 | Which of the following is incorrect with respect to indexed sequential files?  | <p>A. New records are added to an overflow file</p> <p>B. Record in main file that precedes it is updated to contain a pointer to the new record</p> <p>C. The overflow is merged with the main file during a batch update</p> <p>D. Multiple indexes for the same key field cannot be setup</p> |
| 17 | Which of the following is correct regarding Dataflow diagram?  | <p>A. Single DFD is required to represent a system</p> <p>B. The dataflow must be bidirectional</p> <p>C. Created at increasing levels of detail</p> <p>D. Used to represent the relationships among the external entities</p>   |
| 18 | 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? | <p>A. SELECT * FROM CUST WHERE last_name='ALI';</p> <p>B. SELECT * FROM CUST WHERE last_name=ALI;</p> <p>C. SELECT * FROM CUSTOMER WHERE name=ALI;</p> <p>D. SELECT * FROM CUSTOMER WHERE last_name=ALI;</p>   |
| 19 | In a conceptual model for a university, what type of relationship exists between Grade and Student entities?   | <p>A. 1:1</p> <p>B. 1:M</p> <p>C. M:M</p> <p>D. Ternary</p>  |
| 20 | _____ is a control that enables users to select one option from an associated list; users can also type an option  | <p>A. Combo box</p> <p>B. Button</p> <p>C. Text box</p> <p>D. Static area</p>  |
| 21 | If K is a foreign key in relation R1, then   | <p>A. every tuple of R1 has a distinct value for K</p> <p>B. k can not have a null value for tuples in R1</p> <p>C. K is a key for some other relation.</p> <p>D. K is a primary key for R1.</p>   |
| 22 | The ____ constraint specifies whether each entity supertype occurrence must also be a member of at least one subtype.  | <p>A. specialization</p> <p>B. uniqueness</p> <p>C. inheritance</p> <p>D. completeness</p>   |
| 23 | Suppose there are 4 fields in a table named WORKER (Id, first_name, last_name, joining_year). Which of the following gives all the information of the workers who have joined after 1965?            | <p>A. SELECT * FROM WORKER WHERE joining_Year&gt;1965;</p> <p>B. SELECT * FROM WORKER WHERE joining_Year&gt;'1965';</p> <p>C. SELECT * FROM WORKER AND joining_Year&gt;'1965';</p> <p>D. SELECT * WHERE joining_Year&gt;1965;</p>  |
| 24 | A collection of concepts that can be used to describe the structure of a database  | <p>A. Database</p> <p>B. DBMS</p> <p>C. Data model</p> <p>D. Data</p>  |
| 25 | User rights information is stored in   | <p>A. Physical database</p> <p>B. Catalog</p> <p>C. Logical database</p> <p>D. Buffer</p>  |

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| 26 | Identify the operation which is NOT one of the parts of the five basic set operations in relational algebra?   | <p>A. Join</p> <p>B. Union</p> <p>C. Cartesian Product</p> <p>D. Set Difference</p>  |
| 27 | Which of the following is INCORRECT statement concerning the database design process?  | <p>A. During requirements collection and analysis phase, one can gather the data requirements of database users.</p> <p>B. By referring to a high level data model, it is possible to understand the data requirements of the users, entity types, relationships and constraints.</p> <p>C. Transformation of the high level data model into the implementation data model is called logical design or data model mapping</p> <p>D. During the logical design phase of internal storage structures, access paths and file organization for the database files are specified.</p> |
| 28 | Who is responsible for authorizing access to the database, for coordinating and monitoring its use ?   | <p>A. Database Designers</p> <p>B. Database Administrators</p> <p>C. End Users</p> <p>D. Application Programmers</p>   |
| 29 | Which of the following constraints enforces referential integrity?   | <p>A. FOREIGN KEY</p> <p>B. CHECK</p> <p>C. PRIMARY KEY</p> <p>D. UNIQUE</p>   |
| 30 | Which of the following statements creates a database named COMPANY.  | <p>A. CREATE DATABASE company</p> <p>B. CREATE DB company</p> <p>C. ADD DATABASE copmany</p> <p>D. CREATE company DATABASE</p>   |
| 31 | Structural constraints of a relationship type refer to   | <p>A. identifying the owner entity type relevant to a given entity type</p> <p>B. whether the existence of an entity depends on it being related to another entity via the relationship type.</p> <p>C. the role that a participating entity from the entity type plays in each relationship instance</p> <p>D. the constraints applicable in granting access to tables, columns and views in a database schema.</p>   |
| 32 | 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? | <p>A. SELECT * FROM CUST WHERE last_name='ALI';</p> <p>B. SELECT * FROM CUST WHERE last_name=ALI;</p> <p>C. SELECT * FROM CUSTOMER WHERE name=ALI;</p> <p>D. SELECT * FROM CUSTOMER WHERE last_name=ALI;</p>   |
| 33 | Which feature of database provides conversion from inconsistent state of DB to a consistent state ensuring minimum data loss?  | <p>A. User accessible catalog</p> <p>B. Data processing</p> <p>C. Authorization service</p> <p>D. Recovery service</p>   |
| 34 | In a conceptual model for a university, what type of relationship exists between Grade and Student entitie   | <p>A. 1:1</p> <p>B. 1:M</p> <p>C. M:M</p> <p>D. Ternary</p>  |
| 35 | _____is a control that enables users to select one option from an associated list; users can also type an option.  | <p>A. Combo box</p> <p>B. Button</p> <p>C. Text box</p> <p>D. Static area</p>  |
| 36 | Which of the following should not be a property of a database transaction?   | <p>A. Atomicity</p> <p>B. Isolation</p> <p>C. Durability</p> <p>D. Divergence</p>  |
| 37 | Which of the following is the correct way of removing the Index called branchNoIndex?  | <p>A. DROP INDEX branchNoIndex;</p> <p>B. APPEND INDEX branchNoIndex;</p> <p>C. REMOVE INDEX branchNoIndex;</p> <p>D. DEL INDEX branchNoIndex;</p>   |
| 38 | _____ records data by burning microscopic holes in the surface of the disk with a laser.   | <p>A. Hard disk</p> <p>B. RAM</p> <p>C. Optical disk</p> <p>D. Floppy disk</p>   |

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| 39 | Which of the following types of partitioning reduces the chances of unbalanced partitions?   | A. vertical<br>B. List<br>C. Hash<br>D. Range   |
| 40 | Which of the following is not true about De-normalization?   | A. It is the process of attempting to optimize the performance of a database<br>B. De-normalization is a technique to move from lower to higher normal forms of database modeling<br>C. It enhances the performance of DB<br>D. In de-normalization it is required to add redundant data.   |
| 41 | Select the correct statement among the following   | A. When different entity types participate only once in a single relationship type it is called a recursive relationship<br>B. Role names are not technically necessary in relationship types when all the participating entity types are distinct<br>C. Cardinality ratios for binary relationship are displayed on Entity Relationship Diagrams by using a diamond shape notation<br>D. Partial participation which is also called existence dependency is displayed as a double line connecting the participating entity type to the relationship .  |
| 42 | GRANT SELECT, UPDATE(Designation) ON Employee TO Amali,Hiruni WITH GRANT OPTION; What does this SQL statement do?                  | A. Grant permission to Amali,only to retrieve data from Employee table and grant permission to Hiruni, only to update the designation from Employee table.<br>B. Grant permission to Hiruni in order to grant, select and update permission to Amali.<br>C. Grant permission to Amali & Hiruni to update designation of employees in the Employee table<br>D. Grant permission to Amali and Hiruni to update all data except designation in Employee table  |
| 43 | Select the correct statement among the following.  | A. Role names are not technically necessary in relationship types when all the participating entity types are distinct<br>B. When different entity types participate only once in a single relationship type it is called a recursive relationship.<br>C. Cardinality ratios for binary relationship are displayed on Entity Relationship Diagrams by using a diamond shape notation.<br>D. Partial participation which is also called existence dependency is displayed as a double line connecting the participating entity type to the relationship. |
| 44 | Which of the following serves as a milestone or reference point in the log file?   | A. Constraints<br>B. Relations<br>C. Check points<br>D. Transactions identities   |
| 45 | ALTER TABLE exams<br>RENAME COLUMN Q_description TO Question_Descp, Std_ID to Student_ID.<br>Syntax of ALTER TABLE is NOT correct. | A. True<br>B. False<br>C. Not Sure  |
| 46 | Identify the INCORRECT statement among the given.  | A. An entity may be an object with a physical existence like a car, a house or an Employee<br>B. One cannot consider something which has conceptual existence like a course in a degree program as an entity<br>C. Age can be considered as a single value attribute of a person.<br>D. An entity type describes the schema or intension for a set of entities which share the same structure   |

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| 47 | Which of the following statements are Data Definition Language command?  | A. INSERT<br>B. UPDATE<br>C. GRANT<br>D. TRUNCATE   |
| 48 | 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 | A. Has an error - the string should be in double quotes<br>B. Has an error - ORDER BY clause.<br>C. Does not have an error.<br>D. Has an error - the string in single quotes 'NORTH' and 'SOUTH'.   |
| 49 | While recovering data, which of the following files does a recovery manager examines at first?   | A. A system file<br>B. Log file<br>C. Data dictionary<br>D. Metadata  |
| 50 | In which of the following situations, Clustering is suitable:  | A. Frequently updating<br>B. Relatively static<br>C. Relatively deletion<br>D. Relatively dynamic   |
| 51 | Controlling redundancy in a database management system DOES NOT help to  | A. avoid duplication<br>B. avoid unnecessary wastage of storage space<br>C. avoid unauthorised access to data<br>D. avoid inconsistency among data  |
| 52 | Which of the following SQL keywords is not used with DDL statements?   | A. Table<br>B. Update<br>C. Create<br>D. Alter  |
| 53 | Which of the given techniques is/are used to improve query performance in database?  | A. Good File organization<br>B. Indexing<br>C. Both Indexing and Good File organization<br>D. Select only one record per query  |
| 54 | An entity type is  | A. defined when the database is actually constructed<br>B. a specific type such as an integer, text, date, logical etc<br>C. a coherent set of similar objects that we want to store data on (e.g. STUDENT, COURSE, CAR)<br>D. defined by the database designer   |
| 55 | An entity can be logically connected to another by defining a ____.  | A. hyperlink<br>B. common attribute<br>C. primary key<br>D. superkey  |
| 56 | Which of following is not the feature of Indexes?  | A. consume storage space<br>B. must be refreshed when the data in their master tables changes<br>C. improve the performance of SQL execution when they are used for query rewrites<br>D. can be accessed directly using a SELECT statement  |
| 57 | Which of the following statements are Data Definition Language command?  | A. INSERT<br>B. UPDATE<br>C. GRANT<br>D. TRUNCATE   |
| 58 | Which of the following is NOT a feature of HASH ACCESS?  | A. indexes to search or maintain<br>B. Very fast direct access<br>C. Inefficient sequential access<br>D. Use when direct access is needed, but sequential access is not.  |
| 59 | Identify the correct statement.  | A. Referential integrity constraints check whether the primary key values are unique<br>B. Referential integrity constraints check whether an attribute value lies in the given range<br>C. Referential integrity constraints are specified between entities having recursive relationships<br>D. When Referential integrity rules are enforced, a tuple in one relation that refers to another relation must refer to an existing tuple. |
|    |  | A. Every attribute value Non atomic   |

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| 60 | Which one is true regarding relation?   | <p>B. Attribute in table may not have unique name</p> <p>C. table order of the column is relevant</p> <p>D. the order of the rows is irrelevant</p>  |
| 61 | What is the alternate name of Data Dictionary?  | <p>A. Index</p> <p>B. Metadata</p> <p>C. Data</p> <p>D. System Catalog</p>   |
| 62 | A ____ entity has a primary key that is partially or totally derived from the parent entity in the relationship.  | <p>A. strong</p> <p>B. weak</p> <p>C. business</p> <p>D. relationship</p>  |
| 63 | A weak entity type  | <p>A. must have total participation in an identifying relationship</p> <p>B. does not have a key attribute(s)</p> <p>C. both (a) and (b)</p> <p>D. none of the above</p>   |
| 64 | Which key word is available in SQL to enforce referential integrity?  | <p>A. Check</p> <p>B. Primary Key</p> <p>C. Set Default</p> <p>D. Unique</p>   |
| 65 | Which of the following statements is correct with respect to the two relations given above?   | <p>A. The two relations are not union-compatible since their attribute names differ.</p> <p>B. The set operations such as CARTESIAN PRODUCT and DIVISION can be applied on these two relations.</p> <p>C. To find out those students who work as instructors, it is necessary to perform the operation <math>\text{Student} \cap \text{Instructor}</math>.</p> <p>D. CS403-MIDTERM SOLVED MCQS with references by MOAAZ(2).pdf</p> |
| 66 | Which of the following SQL commands deletes a record of an employee with the employee_id 12345, from a table named PERSON.  | <p>A. DELETE FROM person WHERE employee_id = '12345'</p> <p>B. DELETE WHERE person FROM employee_id = 12345</p> <p>C. DROP FROM person WHERE employee_id = 12345</p> <p>D. DELETE WHERE person WHERE employee_id = 12345</p>   |
| 67 | Description on particular collection of data using data model   | <p>A. Schema</p> <p>B. Relation</p> <p>C. Data base</p> <p>D. None of the above</p>  |
| 68 | Which of the following is true for the relational model?  | <p>A. Degree of a relation is the number of rows in a relation</p> <p>B. Null value is a blank or zero value given to an attribute value when its value is inapplicable or its value is unknown</p> <p>C. Complex key is a key consisting of more than one attribute.</p> <p>D. Constraint is a rule that restricts the values in a database.</p>  |
| 69 | Identify the correct statement  | <p>A. Entity integrity constraints specify that primary key values can be composite</p> <p>B. Entity integrity constraints are specified on individual relations.</p> <p>C. Entity integrity constraints are specified between weak entities.</p> <p>D. When entity integrity rules are enforced, a tuple in one relation that refers to another relation must refer to an existing tuple.</p>                                     |
| 70 | The main memory of a computer system is also known as   | <p>A. ROM</p> <p>B. RAM</p> <p>C. PROM</p> <p>D. Hard disk</p>   |
| 71 | 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? | <p>A. Object being updated</p> <p>B. Identity of the transaction</p> <p>C. Object value</p> <p>D. Identity of the next transaction to be executed</p>  |

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| 72 | Which of the following are the general activities, which are performed during the development of application programs?   | A. Data input programs<br>B. Editing<br>C. Display<br>D. All of given  |
| 73 | Which of the following enforces a relation into 1st normal form?   | A. The domain of attribute must include only atomic values.<br>B. Every non-key attribute is fully functionally dependent on primary key<br>C. non-key attribute is non-transitively dependent on primary key.<br>D. Every non-key attribute is partially dependent on super key   |
| 74 | Which of the following is NOT a component of a DFD?  | A. Dataflow<br>B. Datastore<br>C. External entities<br>D. Relationship between external entities   |
| 75 | Which of the following is NOT one of the ways of resolving deadlocks?  | A. Undoing all the updates made by the particular transaction which is the cause of deadlock.<br>B. A message is passed to the victim and depending on the system the transaction may or may not be started again automatically<br>C. Picking a list of all previously completed transactions and undoing all the updates.<br>D. Rollback 'victim' transaction and restart it  |
| 76 | Identify the correct statement with respect to normalization   | A. Normalization is a formal technique that can be used only at the starting phase of the database design<br>B. Normalization can be used as a top-down standalone database design technique<br>C. The process of normalization through decomposition must achieve the lossless join property at any cost whereas the dependency reservation property is sometimes sacrificed.<br>D. The process of normalization through decomposition must achieve the lossless join property at any cost whereas the dependency reservation property is sometimes sacrificed. |
| 77 | The ____ constraint specifies whether each entity supertype occurrence must also be a member of at least one subtype   | A. specialization<br>B. uniqueness<br>C. inheritance<br>D. completeness  |
| 78 | A collection of related data is  | A. Logical model<br>B. Database<br>C. Data<br>D. Relational model  |
| 79 | Which of the following will be deleted relating to a table if you use TRUNCATE command?  | A. all rows in a table<br>B. indexes<br>C. table structure and its columns<br>D. constraints   |
| 80 | A superkey that does not contain a subset of attributes that is itself a superkey is called a ____.  | A. candidate key<br>B. primary key<br>C. superkey<br>D. secondary key  |
| 81 | 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). | A. 1:1<br>B. 1:M<br>C. M:M<br>D. Ternary   |
| 82 | Which of the following concepts is applicable with respect to 2NF?   | A. Full functional dependency<br>B. Any kind of dependency<br>C. Transitive dependency<br>D. Non-transitive dependency   |
| 83 | Which of the following is not true about relational tables?  | A. Column values are of the same kind<br>B. Each row is unique<br>C. Each column must have a unique name.<br>D. The sequence of rows is significant.   |

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| 84 | A collection of related data is  | A. Logical model<br>B. Database<br>C. Data<br>D. Relational model  |
| 85 | A database system allows the following EXCEPT  | A. management and control of data towards an efficient working of an organisation<br>B. 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.<br>C. any user to access all its data<br>D. integration of data across multiple applications into a single application.  |
| 86 | Laser records data by burning microscopic holes in the surface of the disk with a                                      | A. Hard disk<br>B. RAM<br>C. Optical disk<br>D. Floppy disk  |
| 87 | Which of the following is not a form of optical disk?  | A. CD ROM<br>B. WORM<br>C. Erasable Optical<br>D. EEPROM   |
| 88 | Which of the following statements are Data Manipulation Language command?  | A. INSERT<br>B. GRANT<br>C. TRUNCATE<br>D. CREATE  |
| 89 | Only one type of constraint can be enforced in any table by CREATE command   | A. True<br>B. False<br>C. Not Sure   |
| 90 | Select the correct statement about the ANSI/SPARC architecture   | A. The conceptual level is a level of indication between the internal level and the external level.<br>B. The internal level in a database system will definitely be relational.<br>C. Any given database has many conceptual schemas and one physical schema, but it has only one external schemas.<br>D. The external level is not concerned with individual user perceptions, while the conceptual level is concerned with a community user perception. |
| 91 | Which of the following enforces a relation into 1st normal form?   | A. The domain of attribute must include only atomic values<br>B. Every non-key attribute is fully functionally dependent on primary key<br>C. non-key attribute is non-transitively dependent on primary key.<br>D. Every non-key attribute is partially dependent on super key  |
| 92 | Materialized views and Indexes are NOT similar by the following way(s).  | A. they consume storage space<br>B. They must be refreshed when the data in their master tables changes<br>C. They can be accessed directly using a SELECT statement<br>D. All of the Given  |
| 93 | Which of the following is correct?   | A. The relation Interview is in 3NF<br>B. The relation Interview is in BCNF.<br>C. The FD3 violates 3NF.<br>D. The FD2 violates 2NF  |
| 94 | Making a change to the conceptual schema of a database but not affecting the existing external schemas is an example o | A. Physical data independence<br>B. Concurrency control.<br>C. Logical data independence.<br>D. Functional dependency  |
| 95 | Which of the following is the correct way to find out the size of cartesian product incase of CROSS JOIN?              | A. the number of columns in the first table multiplied by the number of columns in the second table.<br>B. the number of columns in the first table multiplied by the number of rows in the second table<br>C. the number of rows in the first table multiplied by the number of columns in the first table<br>D. the number of rows in the first  |



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|     |  | table multiplied by the number of rows in the second table  |
| 96  | Which of the following functions are NOT performed by a database administrator?  | <p>A. Planning, designing and implementing database systems</p> <p>B. Establishing standards and procedures for database systems</p> <p>C. Communicating with database users</p> <p>D. Allocation of storage locations and data structures</p>  |
| 97  | Select the correct statement among the following on proper naming of schema constructs:  | <p>A. Entity type name applies to all the entities belonging to that entity type and therefore a plural name is selected for entity type.</p> <p>B. In the narrative description of the database requirements, verbs tend to indicate the names of relationship types.</p> <p>C. The nouns arising from a database requirement description can be considered as names of attributes.</p> <p>D. Additional nouns which are appearing in the narrative description of the database requirements represent the weak entity type names.</p> |
| 98  | A super key that does not contain a subset of attributes that is itself a super key is called a _____.                                       | <p>A. candidate key</p> <p>B. primary key</p> <p>C. superkey</p> <p>D. secondary key</p>  |
| 99  | The ER- data model is an example of:   | <p>A. Physical database</p> <p>B. Logical database</p> <p>C. Relational database</p> <p>D. Conceptual database</p>  |
| 100 | Making a change to the conceptual schema of a database but not affecting the existing external schemas is an example of                      | <p>A. Physical data independence.</p> <p>B. Concurrency control</p> <p>C. Logical data independence.</p> <p>D. Functional dependency</p>  |
| 101 | Which of the following is true about relational schema?  | <p>A. The sequence of columns is significant</p> <p>B. The sequence of rows is significant.</p> <p>C. Contains only derived attributes.</p> <p>D. Values are atomic</p>   |
| 102 | Which of the following is not true with respect to denormalization ?   | <p>A. A denormalized data model is not the same as a data model that has not been normalized</p> <p>B. Denormalization takes place before the normalization process</p> <p>C. It is an attempt to optimize the performance of database</p> <p>D. Denormalization process can not be initiated before the Database design</p>  |
| 103 | Which of the following is not one of the properties of Transaction?  | <p>A. atomicity</p> <p>B. consistency</p> <p>C. redundancy</p> <p>D. durability</p>   |
| 104 | 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 | <p>A. superkey</p> <p>B. candidate key</p> <p>C. primary key</p> <p>D. secondary key</p>  |
| 105 | Which of the following is NOT a feature of Context DFD?  | <p>A. one process (which represents the entire system)</p> <p>B. all sources/sinks (external entities)</p> <p>C. data flows linking the process to the sources and sinks (external entities)</p> <p>D. sub-processes (which explain and decomposed the major process into small processes)</p>  |
| 106 | Which of the following is Advantage of Re-Hashing technique to handle the collisions?  | <p>A. Collisions don't use primary table space</p> <p>B. Unlimited number of elements</p> <p>C. Fast access through use of main table space</p> <p>D. Overhead of multiple linked lists</p>   |

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| 107 | You can't modify more than one table at a time through a view.  | A. True<br>B. False<br>C. Not Sure  |
| 108 | Which of the following is not true regarding Indexes?   | A. Index can be defined even when there is no data in the table<br>B. It support Range selections<br>C. It can be created using 'Create Index' statement<br>D. It can not be created on composite attributes  |
| 109 | Which of the following is true about DELETE command?  | A. is DDL Command<br>B. Resets identity of the table<br>C. cannot activate a trigger<br>D. Can be Rolled back   |
| 110 | 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? | A. 24<br>B. 54<br>C. 6<br>D. 1  |
| 111 | A collection of concepts that can be used to describe the structure of a database   | A. Database<br>B. DBMS<br>C. Data model<br>D. Data  |
| 112 | Which of the following is not a feature of TRANSACTION?   | A. Users should be able to regard the execution of each transaction as atomic<br>B. Each transaction, run by itself<br>C. must preserve the consistency of the database<br>D. dependant on other concurrent transactions  |
| 113 | Consider two sets A and B. A contains 2 elements and B contains 3. How many elements do their cartesian product contains?   | A. 6<br>B. 9<br>C. 5<br>D. 4  |
| 114 | Which of the following is a correct way to implement one-to-many relationship while designing tables?   | A. by splitting the data into two tables with primary key and foreign key relationships<br>B. using a junction table with the keys from both the tables forming the composite primary key of the junction table.<br>C. by splitting each table into three<br>D. as a single table and rarely as two tables with primary and foreign key relationships |
| 115 | Which of the following concepts is applicable with respect to 3NF?  | A. Full functional dependency<br>B. Any kind of dependency<br>C. Transitive dependency<br>D. Partial functional dependency  |
| 116 | A software package designed to store and manage databases   | A. Database<br>B. DBMS<br>C. Data model<br>D. Data  |
| 117 | Which of the following is not a benefit of normalization?   | A. Minimize insertion anomalies<br>B. Minimize deletion anomalies<br>C. Minimize updation anomalies<br>D. Maximize redundancy   |
| 118 | A _____ is used to maintain a connection between the users of the database system.  | A. Mail server<br>B. File Server<br>C. Client-serve<br>D. None of the given.  |
| 119 | _____ is a control that users click to perform an action, set or toggle a state, or set an option.  | A. Button<br>B. Text box<br>C. Input form<br>D. Report  |
| 120 | Which of the following is NOT a feature of a good interface?  | A. Consistency<br>B. Process based<br>C. Data structure based<br>D. User friendly   |
| 121 | Making a change to the conceptual schema of a database but not affecting the existing external schemas is an example of   | A. Physical data independence<br>B. Concurrency control.<br>C. Logical data independence.<br>D. Functional dependency   |

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| 122 | _____ is a control that users click to perform an action, set or toggle a state, or set an option.  | A. Button<br>B. Text box<br>C. Input form<br>D. Report   |
| 123 | Which of the following is true about application programs?  | A. develop before the database design<br>B. Tools selection is made after the development database<br>C. meant to perform different operations by the user<br>D. must to design before the designing and developing database   |
| 124 | Which of the following concepts is applicable with respect to 3NF   | A. Full functional dependency<br>B. Any kind of dependency<br>C. Transitive dependency<br>D. Partial functional dependency   |
| 125 | The Entity Relation Model models  | A. Entities, Relationships and Processes<br>B. Entities and Relationships<br>C. Relationships<br>D. Entities   |
| 126 | Which of the following is an example of volatile memory?  | A. RAM<br>B. ROM<br>C. Flash memory<br>D. CPU  |
| 127 | Partitions may become unbalanced in:  | A. Range partitioning<br>B. Hash partitioning<br>C. List partitioning<br>D. Vertical partitioning  |
| 128 | Which of the following statements is true about the views?  | A. view is always a complete set of all the tables in a database<br>B. View can not be used for retrieving data<br>C. The results of using a view are not permanently stored in the database.<br>D. Rows can not be updated or deleted in the view   |
| 129 | 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 incase of CROSS JOIN between these two tables? | A. 24 ( The number of rows in the first table multiplied by the number of rows in the second table )<br>B. 32<br>C. 12<br>D. 16  |
| 130 | Which of the following is NOT a feature of Indexed sequential files?  | A. Records are stored in sequence and index is maintained<br>B. Dense and nondense types of indexes are maintained<br>C. Track overflows and file overflow areas can not be ensured.<br>D. Cylinder index increases the efficiency   |
| 131 | As part of database naming conventions, attribute names should use suffixes such as ID, NUMBER or CODE for the _____.   | A. primary key<br>B. foreign key<br>C. index<br>D. determinant   |
| 132 | Identify the correct statement with respect to normalization.   | A. Normalization is a formal technique that can be used only at the starting phase of the database design.<br>B. Normalization can be used as a top-down standalone database design technique.<br>C. The process of normalization through decomposition must achieve the lossless join property at any cost whereas the dependency reservation property is sometimes sacrificed.<br>D. The process of normalization through decomposition must achieve the dependency reservation property at any cost whereas the lossless join property is sometimes sacrificed. |
| 133 | Identify the advantage of DELETE command over TRUNCATE.   | A. Can be Rolled back<br>B. is DDL Command.<br>C. cannot activate a trigger.<br>D. faster and uses fewer system  |

A. A set of database operations that are processed partly

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| 134 | Which of the following is not true regarding DB transactions?   | <p><del>the previous entry</del></p> <p>B. A database transaction is a logical unit of database operations</p> <p>C. A database transaction must be atomic</p> <p>D. A database transaction must contain the ACID property</p>  |
| 135 | Which of the following is a correct way of selecting all the columns from a table called PERSONS?                                       | <p>A. SELECT FROM * Persons</p> <p><b>B. SELECT * FROM Persons</b></p> <p>C. SELECT * WHERE Persons</p> <p>D. SELECT WHERE * Persons</p>  |
| 136 | Which of the following is true about NOT NULL constraint?   | <p>A. enforce domain integrity</p> <p>B. limit the values that can be placed in a column</p> <p><b>C. prevents any actions that would destroy links between tables with the corresponding data values</b></p> <p>D. enforces the uniqueness of the values in a set of columns</p>   |
| 137 | Controlling redundancy in a database management system DOES NOT help to   | <p>A. avoid duplication</p> <p><b>B. avoid unnecessary wastage of storage space</b></p> <p>C. avoid unauthorised access to data</p> <p>D. avoid inconsistency among data</p>  |
| 138 | A ____ relationship exists when an association is maintained within a single entity.  | <p><b>A. unary</b></p> <p>B. ternary</p> <p>C. binary</p> <p>D. weak</p>  |
| 139 | Which of the following is not true about input forms?   | <p>A. Provide an easy, effective, efficient way to enter data into a table</p> <p>B. Especially useful when the person entering the data is not familiar with the inner workings</p> <p>C. Provide different controls to add data into the tables</p> <p><b>D. One input forms can populate one table at a time</b></p>                       |
| 140 | A relation (from the relational database model) consists of a set of tuples, which implies that   | <p><b>A. all tuples in a relation must be distinct.</b></p> <p>B. relational model supports multi-valued attributes whose values can be represented in sets</p> <p>C. for any two tuples, the values associated with all of their attributes may be the same</p> <p>D. all tuples in a particular relation may have different attributes.</p> |
| 141 | Which of the following concept is applicable with respect to 2NF?   | <p>A. Non-transitive dependency</p> <p><b>B. Full functional dependency</b></p> <p>C. Partial dependency</p> <p>D. Transitive dependency</p>  |
| 142 | Identify the operation which is NOT one of the parts of the five basic set operations in relational algebra?                            | <p><b>A. Join</b></p> <p>B. Union</p> <p>C. Cartesian Product</p> <p>D. Set Difference</p>  |
| 143 | In which of the following, Materialized Views are suitable  | <p>A. Data warehousing</p> <p>B. Decision support</p> <p>C. Mobile computing</p> <p><b>D. All of the Given</b></p>  |
| 144 | ALTER TABLE exams ALTER COLUMN Q_description varchar(50) Syntax of ALTER TABLE is NOT correct.  | <p>A. True</p> <p><b>B. False</b></p> <p>C. Not Sure</p>  |
| 145 | Which of the following most certainly implies the need for an entire table to implement?  | <p>A. A binary relationship</p> <p><b>B. A ternary relationship</b></p> <p>C. A recursive relationship</p> <p>D. An identifying relationship</p>  |
| 146 | Which of the following is the correct description of cache hit?   | <p><b>A. When data is found in the cache</b></p> <p>B. When data is removed in the cache</p> <p>C. The number of times the cache is accessed directly by the processor</p> <p>D. When data is lost from the cache</p>   |
| 147 | _____ is a control that presents a set of choices from which a user can select one or more items; items can be text, graphics, or both. | <p>A. Text input</p> <p>B. Report</p> <p>C. Button</p> <p><b>D. List box</b></p>  |

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| 148 | Which of the following is disadvantage of chaining technique to handle the collisions?  | <p>A. Unlimited Number of elements</p> <p>B. Fast re-hashing</p> <p>C. Overhead of multiple linked lists</p> <p>D. Maximum number of elements must be known</p>   |
| 149 | Which of the following is true about TRUNCATE?  | <p>A. Can be Rolled back.</p> <p>B. Activates Triggers</p> <p>C. is DML Command.</p> <p>D. Resets identity of the table</p>   |
| 150 | Incase of Context-level Diagram, the system is represented by Select correct option:  | <p>A. One process atleast</p> <p>B. Two processes atleast</p> <p>C. One process only</p> <p>D. Any number of processes</p>  |
| 151 | What is the maximum limit of keys in context with Indexed sequential files?   | <p>A. 7</p> <p>B. 255</p> <p>C. 1</p> <p>D. 235</p>   |
| 152 | Which of the following is INCORRECT with respect to file systems?   | <p>A. At the physical level, pointer or hashed address scheme may be employed to provide a certain degree of data independence at the user level.</p> <p>B. A logical record is concerned with efficient storage of information in the secondary storage devices.</p> <p>C. Some physical organisations use pointers to record blocks to locate records on disk.</p> <p>D. 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.</p> |
| 153 | Which of the following is used to add or drop columns in an existing table?   | <p>A. ALTER</p> <p>B. HAVING</p> <p>C. SELECT</p> <p>D. THEN</p>  |
| 154 | Which of the following is INCORRECT about VIEWS?  | <p>A. It is not possible to left out the data which is not required for a specific view.</p> <p>B. A database view displays one or more database records on the same page.</p> <p>C. Views can be used as security mechanisms</p> <p>D. Views are generally used to focus the perception each user has of the database.</p>   |
| 155 | Select the correct statement among the following on proper naming of schema constructs:                                       | <p>A. Entity type name applies to all the entities belonging to that entity type and therefore a plural name is selected for entity type.</p> <p>B. In the narrative description of the database requirements, verbs tend to indicate the names of relationship types.</p> <p>C. The nouns arising from a database requirement description can be considered as names of attributes</p> <p>D. Additional nouns which are appearing in the narrative description of the database requirements represent the weak entity type names.</p>                |
| 156 | Which of the following gives all the fields from employee table named as EMP?   | <p>A. SELECT * from EMP;</p> <p>B. SELECT emp* from EMP;</p> <p>C. SELECT emp_id where EMP;</p> <p>D. SELECT * where EMP;</p>   |
| 157 | Which feature of database provides conversion from inconsistent state of DB to a consistent state ensuring minimum data loss? | <p>A. User accessible catalog</p> <p>B. Data processing</p> <p>C. Authorization service</p> <p>D. Recovery service</p>  |
| 158 | How many clustered index(es) do each database table have?   | <p>A. 2</p> <p>B. 3</p> <p>C. 4</p> <p>D. 1</p>   |

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| 159 | If W, X, Y and Z are attributes of a relation, which of the following inference rules for functional dependencies is correct?                        | <p>A. If <math>(X, Z) \rightarrow Y</math>, then <math>X \rightarrow Y</math> and <math>Z \rightarrow Y</math>.</p> <p>B. If <math>X \rightarrow Y</math> and <math>X \rightarrow Z</math> then <math>X \rightarrow (Y, Z)</math></p> <p>C. If <math>XY</math> then <math>Y \rightarrow X</math></p> <p>D. If <math>X \rightarrow Y</math> then <math>(X, Z) \rightarrow (Y, W)</math>.</p> |
| 160 | Browser based forms are developed in the following tools EXCEPT  | <p>A. HTML</p> <p>B. Scripting language</p> <p>C. Front Page</p> <p>D. Web-based Forms</p>  |
| 161 | Which of following is NOT generally the aim of data partitioning and placement of data?  | <p>A. Reduce Workload</p> <p>B. Balance Workload</p> <p>C. Merging different relations</p> <p>D. Speed up rate of useful works.</p>   |
| 162 | In a conceptual database model, which of the following most likely represents a valid identifier for a class grades?                                 | <p>A. StudentID</p> <p>B. StudentID, CourseID</p> <p>C. StudentID, CourseID, InstructorID</p> <p>D. StudentID, CourseSectionID</p>  |
| 163 | The information regarding 'views' and 'Integrity constraints' are found in   | <p>A. Both Data Dictionary and System Catalog</p> <p>B. System Catalog</p> <p>C. Data Dictionary</p> <p>D. Indexes</p>  |
| 164 | Which of the following is not a type of user interface?  | <p>A. Graphical User Interface (GUI)</p> <p>B. Forms</p> <p>C. DB tables</p> <p>D. Text based</p>   |
| 165 | A superkey that does not contain a subset of attributes that is itself a superkey is called a _____  | <p>A. candidate key</p> <p>B. primary key</p> <p>C. superkey</p> <p>D. secondary key</p>  |
| 166 | A relation (from the relational database model) consists of a set of tuples, which implies th  | <p>A. Relational model supports multi-valued attributes whose values can be represented in sets.</p> <p>B. for any two tuples, the values associated with all of their attributes may be the same</p> <p>C. for any two tuples, the values associated with one or more of their attributes must differ.</p> <p>D. all tuples in a particular relation may have different attributes.</p>    |
| 167 | _____ records data by burning microscopic holes in the surface of the disk with a laser.   | <p>A. Hard disk</p> <p>B. RAM</p> <p>C. Optical disk</p> <p>D. Floppy disk</p>  |
| 168 | Which feature of database provides conversion from inconsistent state of DB to a consistent state ensuring minimum data loss? Select correct option: | <p>A. User accessible catalog</p> <p>B. Data processing</p> <p>C. Recovery service</p> <p>D. Authorization service</p>  |
| 169 | A description on a particular collection of data using the given data model  | <p>A. Database</p> <p>B. Schema</p> <p>C. None of the above</p> <p>D. Relation</p>  |
| 170 | Identify which of the above statements is/are correct.   | <p>A. Only A</p> <p>B. Only B</p> <p>C. Only B and C</p> <p>D. Only A and B</p>   |
| 171 | Which of the following constraints enforces entity integrity?  | <p>A. PRIMARY KEY</p> <p>B. FOREIGN KEY</p> <p>C. CHECK</p> <p>D. NOT NULL</p>  |
| 172 | Identify the correct statement about ANSI/SPARC architecture.  | <p>A. The external level is not concerned with individual user perceptions</p> <p>B. The internal level, in a database system, will always be relational</p> <p>C. Any given database has exactly one conceptual schema and one physical schema, but it may have several external schemas.</p> <p>D. A data definition language is used to define the internal schema</p>                   |
| 173 | _____ is a control that enables users to select one option from an associated list; users can also type an option.                                   | <p>A. Combo box</p> <p>B. Button</p> <p>C. Text box</p> <p>D. Static area</p>   |

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|     |  | D. Static area  |
| 174 | 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  | <p>A. The relationship type Y is of cardinality ratio 1 : N</p> <p>B. The diagram depicts existence dependencies</p> <p>C. The participation of X in the Y relationship type is total</p> <p>D. The participation of Z in the Y relationship type is partial.</p>   |
| 175 | Which of the following is one of the purposes of using DML commands?   | <p>A. Creating databases</p> <p>B. Destroying databases</p> <p>C. Inserting data in tables</p> <p>D. Non of the above</p>   |
| 176 | Database management systems, operating systems, applications and utilities are all examples of ____.   | <p>A. hardware</p> <p>B. software</p> <p>C. computer infrastructure</p> <p>D. input and output</p>  |
| 177 | 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? | <p>A. The relation Interview is in 3NF</p> <p>B. The relation Interview is in BCNF.</p> <p>C. The FD3 violates 3NF.</p> <p>D. The FD2 violates 2NF</p>  |
| 178 | What is the impact of setting multiple indexes for the same key, in index sequential files?  | <p>A. Multiple indexes for the same key can not be set</p> <p>B. It increases efficiency</p> <p>C. It decreases efficiency</p> <p>D. It will increase complexity as the access time will be increased</p>   |
| 179 | Identify the constraint that limits the values that can be placed in a column.   | <p>A. NOT NULL</p> <p>B. CHECK</p> <p>C. FOREIGN KEY</p> <p>D. UNIQUE</p>   |
| 180 | Identify the factor which enforces a relation in 3NF?  | <p>A. Every non-key attribute is fully functionally dependent on primary key</p> <p>B. Every non-key attribute is partially dependent on super key</p> <p>C. The domain of attribute must include only atomic values.</p> <p>D. Every non-key attribute is non-transitively dependent on primary key.</p>   |
| 181 | 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                                       | <p>A. Only A</p> <p>B. Only B</p> <p>C. B and C</p> <p>D. A and B</p>   |
| 182 | Which of the following is not true about input forms?  | <p>A. Provide an easy, effective, efficient way to enter data into a table</p> <p>B. Especially useful when the person entering the data is not familiar with the inner workings</p> <p>C. Provide different controls to add data into the tables</p> <p>D. One input forms can populate one table at a time</p>  |
| 183 | Which of the following is one of the purposes of using DDL commands?   | <p>A. inserting records into databases</p> <p>B. updating records into databases</p> <p>C. manipulating databases</p> <p>D. creating and destroying databases</p>   |
| 184 | GRANT SELECT, UPDATE(Designation) ON Employee TO Amali,Hiruni WITH GRANT OPTION; What does this SQL statement do?  | <p>A. Grant permission to Amali,only to retrieve data from Employee table and grant permission to Hiruni, only to update the designation from Employee table.</p> <p>B. Grant permission to Amali &amp; Hiruni to retrieve data from Employee table</p> <p>C. Grant permission to Hiruni in order to grant, select and update permission to Amali.</p> <p>D. Grant permission to Amali and Hiruni to update all data except designation in Employee table</p> |