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**MALLA REDDY ENGINEERING COLLEGE (AUTONOMOUS)**

**II B.Tech II Semester (MR20-2020-21Batch) Mid Term Examinations-I, May-2022**

Subject Code & Name: - A0515 & **DBMS** Max. Marks: **25M**

Branch: Common to **CSE**  Time: **90 Mins** Date:

**Answer ALL the Questions**

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| --- | --- | --- | --- | --- |
| **S**  **NO.** | **Questions** | **Marks** | **BT Level** | **CO** |
|  | **Module-1** |  |  |  |
| **1** | Briefly explain the three tier architecture for the data independence | 5 | 2 | 1 |
| **2** | Explain advantages and disadvantages of DBMS over File System | 5 | 2 | 1 |
| **3** | Explain the concept of Specialization, generalization and aggregation in E\_R diagrams. Give one example for each one of them | 5 | 3 | 1 |
| **4** | List out various database applications and explain them. | 5 | 2 | 1 |
| **5** | Explain centralized and client server architecture for the database | 5 | 2 | 1 |
| **6** | What is degree of relation and mapping cardinality and explain various relations with ER representation | 5 | 3 | 1 |
| **7** | Explain the difference between the weak entity and strong entity with ER diagram representation | 5 | 2 | 1 |
| **8** | Define and discuss the functions of Database Administrator (DBA) | 5 | 2 | 1 |

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| **S**  **NO.** | **Questions** | **Marks** | **BT Level** | **CO** |
|  | **Module-2** |  |  |  |
| **1** | Classify different join operations (Relational Algebra& SQL) and explain with example. | 5 | 3 | 2 |
| **2** | What is view of data? Explain the three levels of data independence. | 5 | 2 | 2 |
| **3** | Explain following operators in Relational Algebra   1. Selection b. Projection c. Rename | 5 | 2 | 2 |
| **4** | Define Relational Model & Explain the concept of domain, attribute, tuple, relation with an example? | 5 | 2 | 2 |
| **5** | Explain Commit, Rollback and Save point commands in SQL with suitable examples | 5 | 2 | 2 |
| **6** | What are the SQL constructs to modify the structure of tables and destroy tables | 5 | 2 | 2 |
| **7** | Discussed what happens when Views are destroyed | 5 | 2 | 2 |
| **8** | What is Relation? Differentiate between a relation Schema and Relation Instance | 5 | 2 | 2 |

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| **S**  **NO.** | **Questions** | **Marks** | **BT Level** | **CO** |
|  | **Module-3** |  |  |  |
| **1** | Discuss in detail about PL/SQL Procedures with examples | 5 | 2 | 3 |
| **2** | Discuss about Nested queries with an example. | 5 | 2 | 3 |
| **3** | Discuss about different types of aggregate operators in SQL with examples? | 5 | 2 | 3 |
| **4** | Explain the term stored procedure and give examples why stored procedure are useful | 5 | 2 | 3 |

**Prepared By Name:**

**Signature: HOD Signature**

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| **S.**  **NO.** | **Questions** | **Ans** |
|  | **Module-1** |  |
| 1 | DBMS is a collection of that enables user to create and  maintain a database.   1. Keys 2. Translators 3. Program 4. Language activity | C |
| 2 | In a relational schema ,each tuple is divided into fields called   1. Relations 2. Domains 3. Queries 4. All the above | B |
| 3 | In an ER model ,\_ is described in the database by storing its  data   1. Entity 2. Attribute 3. Relation ship 4. Notation | A |
| 4 | Which of the following are the properties of entities?   1. Groups 2. Table 3. Attributes 4. schema | C |
| 5 | defines the structure of a relation which consists of a fixed set  of attribute-domain pairs   1. Instance 2. Schema 3. Program 4. Super key | B |
| 6 | is a full form of SQL   1. Standard query language 2. Sequential query language 3. Structured query language 4. Server query language | C |
| 7 | A relational database developer refers to a record as   1. A criteria 2. A relation 3. A tuple 4. An attribute | C |
| 8 | The collection of information stored in a database at a particular  moment is called as   1. Schema 2. Instance of data base 3. Data domain 4. Independent | C |
| 9 | A is used to define overall design of database   1. Schema 2. Application program 3. Data definition language 4. Code | A |
| 10 | DBMS helps to achieve   1. Data independence 2. Centralized control of data 3. Neither A or B 4. Both A and B | D |
| 11 | A database Management Systems Collection of interrelated data   1. Collection of programs to access data 2. Collection of data describes 3. one particular enterprise 4. All the above | D |
| 12 | Which of the following is not a level of data abstraction?   1. Physical level 2. Critical level 3. Logical level 4. View level | B |
| 13 | Disadvantages of file system to store data is   1. Data redundancy and inconsistency 2. Difficulty in accessing data 3. Data Isolation 4. All the above | D |
| 14 | In an entity-relationship diagram rectangles represents   1. Entity sets 2. Attributes 3. Data base 4. Tables | A |
| 15 | Data manipulation language enables users to   1. Retrieval of information stored in data base 2. Insertion of new information into the database 3. Deletion of information form data base 4. All the above | D |
| 16 | Which of the following is not a schema?   1. Data base schema 2. Physical schema 3. Critical schema 4. Logical schema | C |
| 17 | Which of the following is data base language   1. Data definition language 2. Data manipulation language 3. Query language 4. All the above | D |
| 18 | Which of the following is a data model   1. Entity-relationship model 2. Relational data model 3. Object-based data model 4. All the above | D |
| 19 | The attribute that can be divided into other attributes is called   1. Simple attribute 2. Composite attribute 3. Multi-valued attribute 4. Derived attribute | B |
| 20 | In an Entity-relationship diagram “Ellipses” represents   1. Attributes 2. Weak entity set 3. Relationship sets 4. Multi-valued attributes | A |
| 21 | In an Entity-relationship diagram “diamonds” represents   1. Attributes 2. Multi-valued attributes 3. Weak entity set 4. Relationship sets | D |
| 22 | One of the following is a valid record-based data model   1. Object-oriented model 2. Relational model 3. Entity-relationship model 4. None of the above | B |
| 23 | The levelof data abstraction which describes how the data is actually stored is   1. Conceptual level 2. Physical level 3. Logical level 4. External Level | B |
| 24 | A data model is :   1. Used to describe structure of a database 2. Set of basic operations on database 3. Both A and B 4. None of these | A |
| 25 | DBA stands for   1. Data Basic Access 2. Data Base Access 3. Data Bank Administration 4. Data Base Administrator | D |
| 26 | Which database level is closest to the users?   1. External 2. Internal 3. Physical 4. Conceptual | A |
| 27 | A schema describes   1. Record relationship 2. Data elements 3. Record and files 4. All the above | D |
| 28 | An abstraction concept for building composite object from their  component object is called:   1. Specialization 2. Normalization 3. Generalization 4. Aggregation | D |
| 29 | Manager’s salary details are hidden from the employee. This is Conceptual level data   1. hiding 2. Physical level data hiding 3. External level data hiding 4. None of these | C |
| 30 | Which one is lowest level data model?   1. Physical data model 2. Logical data model 3. External data model 4. None of these | A |
| 31 | Data items grouped together for storage purposes are called a   1. Record 2. Title 3. List 4. String | A |
| 32 | The conceptual model is   1. dependent on hardware. 2. dependent on software. 3. dependent on both hardware and software . 4. independent of both hardware and software. | D |
| 33 | An association between students and courses is:   1. 1:1 relationship 2. 1:M relationship 3. M:M relationship 4. None of these | C |
| 34 | A view of a database that appears to an application program is known  as:   1. Schema 2. Subschema 3. Virtual table 4. None of these | B |
| 35 | The set of all possible values of data items is called:   1. Domain 2. Attribute 3. Tuples 4. None of these | A |
| 36 | ----------------is a property that describes various characteristics of an entity   1. ER diagram 2. Column 3. Relationship 4. Attribute | D |
| 37 | ----------------level describes what data is stored in the database and the  relationships among the data   1. Physical level 2. Logical level 3. Conceptual level 4. None of the above | B |
| 38 | ----------------denote derived attributes   1. Double ellipse 2. Dashed ellipse 3. Square ellipse 4. Ellipse with attribute name underlined | B |
| 39 | A---------------------------------------is an association between entities   1. Relation 2. One to one 3. Generalization 4. Specialization | A |
| 40 | In which of the following is a single-entity instance of one type related  to many entity instance of another type   1. One to one relationship 2. One to many relationship 3. Many to many relationship 4. Composite relationship | B |
| 41 | An advantage of the data base management approach is   1. Data is dependent on programs 2. Data redundancy increases 3. Data is integrated and can be accessed by multiple programs 4. None of the above | C |
| 42 | A relational database developer refers to a record as   1. A criteria 2. A relation 3. A tuple 4. An attribute | C |
| 43 | Data independence means   1. Data is defined separately and not included in programs 2. Programs are not dependent on the physical attributes of data 3. Programs are not dependent on the logical attributes of data 4. Both B and C | D |
| 44 | ER –model uses this symbol to represent weak entity set   1. Dotted rectangle 2. Diamond 3. Doubly outlined rectangle 4. None of these | C |
| 45 | DBMS helps in achieving   1. Data independence 2. Centralized control of data 3. Neither A nor B 4. Both A or B | D |
| 46 | What is a relationship called when it is maintained between two  entities   1. Unary 2. Binary 3. Ternary 4. Quaternary | B |
| 47 | A set of possible data values is called   1. Attribute 2. Degree 3. Tuple 4. Domain | D |
| 48 | Which are the two ways in which entities can participate in a  relationship?   1. Passive and active 2. Total and partial 3. Simple and complex 4. All the above | B |
| 49 | In ER-diagram generalization is represented by   1. Ellipse 2. Dashed ellipse 3. Rectangle 4. Triangle | D |
| 50 | In the relational model, the number of attributes and number of types in a relation are termed as---------- and---------- respectively   1. Cardinality , domain 2. Degree , cardinality 3. Domain , degree 4. Cardinality , degree | B |
|  | **Module-2** |  |
| **51** | In ----------------the unmatched rows of second table are listed along with  the common rows of both the tables.   1. Left outer join 2. Right outer join 3. Full outer join 4. Half outer join | B |
| 52 | The keywords RESTRICT/CASCADE must always be used with   1. Create 2. Drop 3. Alter 4. Delete | D |
| 53 | Cost of query processing is directly proportional to   1. Number of disk access 2. Number of cpu access 3. Memory space 4. Total number of records | A |
| 54 | Query inside a query is known as   1. Correlated query 2. Nested query 3. Interrelated query 4. Query optimizer | B |
| 55 | ----------------operators merge the result set of two different queries into a  single result set   1. Set 2. Aggregate 3. Comparison 4. Collation | A |
| 56 | --------------Operator returns a result set that doesn’t contain any duplicate  rows   1. EXCEPT 2. INTERSECT 3. UNION ALL 4. UNION | D |
| 57 | -----------------Operator returns a value if an element is in given set,  otherwise returns a value false   1. EXISTS 2. ALL 3. IN 4. ANY | C |
| 58 | -----------------------operator followed by a column name returns the average value  of all the values in the specified column   1. COUNT 2. SUM 3. MAX 4. AVG | D |
| 59 | ----------------------operator removes duplicate rows from the final result set   1. EXCEPT 2. EXCEPT ALL 3. INTERSECT 4. INTERSECT[DISTINC] | D |
| 60 | uses equity operator to join the two relations   1. Equi-join 2. Outer join 3. Natural join 4. Full join | A |
| 61 | It is possible to define a schema completely using   1. VDL and DDL 2. DDL and DML 3. SDL and DDL 4. VDL and DML | B |
| 62 | Cartesian product in relational algebra is   1. a Unary operator 2. a Binary operator 3. a Ternary operator 4. not defined | B |
| 63 | DML is provided for   1. Description of logical structure of database. 2. Addition of new structures in the database system. 3. Manipulation & processing of database. system 4. Definition of physical structure of database | C |
| 64 | ‘AS’ clause is used in SQL for   1. Selection operation. 2. Rename operation 3. Join operation. 4. Projection operation. | B |
| 65 | Architecture of the database can be viewed as   1. two levels 2. four levels 3. three levels 4. One level | C |
| 66 | In a relational model, relations are termed as   1. Tuples 2. Attributes 3. Tables 4. rows | C |
| 67 | The database schema is written in   1. DCL 2. DDL 3. HLL 4. DML | B |
| 68 | A primary key is combined with a foreign key creates   1. Parent-Child relationship between the tables that connect them 2. Many to many relationship between the tables that connect them 3. Network model between the tables that connect them 4. None of the above | A |
| 69 | Count function in SQL returns the number of   1. Values 2. Distinct values 3. Groups 4. Columns | A |
| 70 | The statement in SQL which allows to change the definition of a table  is   1. Alter 2. Update 3. Create 4. select | A |
| 71 | is a change to the database that activates the trigger   1. Event 2. Condition 3. Action 4. Assertion | A |
| 72 | is a query or test that is run when the trigger is activated   1. Event 2. Condition 3. Action 4. Assertion | B |
| 73 | Which of the following is not a part of a trigger description   1. Event 2. Condition 3. Action 4. Assertion | D |
| 74 | A trigger description contains parts   1. 2 2. 3 3. 4 4. 5 | B |
| 75 | A database that has a set of associated triggers is called an   1. Active database 2. Passive database 3. Data warehouse 4. Associated database | A |
| 76 | clause is used for row-level triggers.   1. FOR EACH ROW 2. FOR ROW 3. EACH ROW 4. ROW | A |
| 77 | --------is a procedure that is executed when the trigger is activated and  it's condition is TRUE.   1. Event 2. Condition 3. Action 4. Assertion | C |
| 78 | SQL is used for Data processing in batch mode   1. Query for relational databases 2. Dtp 3. work 4. Command line arguments | A |
| 79 | ------------,keywords are used to refer to the values before and  after modification   1. Before, After 2. Old, New 3. Older, Newer 4. Before, After | B |
| 80 | Which command is used in DDL   1. DROP 2. REVOKE 3. ROLLBACK 4. COMMENT | A |
| 81 | Which command is not used in DCL.   1. COMMIT 2. GRANT 3. ROLLBACK 4. SET TRANSACTION | B |
| 82 | keyword is used to associate a default value with a domain   1. DEFAULT 2. ANY 3. UNKNOWN 4. ALL | A |
| 83 | CHECK clause is used for constraints over   1. Two tables only 2. single table only 3. Three tables only 4. Four tables only | C |
| 84 | I n SQL----------------------command we can use to sort the table.   1. Group by clause 2. having clause 3. order by clause 4. where clause | C |
| 85 | Constraints not associated with any one table are called as   1. Associations 2. Assertions 3. Assistants 4. Associated conditions | B |
| 86 | SQL is relationally   1. Complete language 2. Incomplete language 3. Cant handle certain relations 4. Sound language | A |
| 87 | SQL provides-------------------special comparison operator to test whether a  column value is null.   1. ARE NULL 2. NULL 3. IS NULL 4. NOTNULL | C |
| 88 | When a column value is unknown or inapplicable, then it is treated as  in SQL   1. Null 2. Zero 3. One 4. Any value | A |
| 89 | The number of unique values in the column A can be obtained by   1. COUNT ( [A] ) 2. COUNT ( A ) 3. COUNT ( [UNIQUE] A) 4. COUNT( [DISTINCT]A) | D |
| 90 | MAX ( A ) aggregate operator gives   1. Maximum value in column A 2. Maximum value in row A 3. Maximum value in row A and column A 4. Maximum of table A | A |
| 91 | We can disallow null values by specifying----------- as part of the field  definition.   1. NO NULL 2. NOT NULL 3. ! NULL 4. != NULL | B |
| 92 | With SQL, how do you select all the records from a table named ''Persons'' where The value of the column ''FirstName'' is ''Peter''?   1. SELECT [all] FROM Persons WHERE FirstName='Peter'. 2. SELECT [all] FROM Persons WHERE FirstName LIKE 'Peter'. 3. SELECT \* FROM Persons WHERE FirstName='Peter'. 4. SELECT \* FROM Persons WHERE FirstName LIKE 'Peter'. | D |
| 93 | The--------------------statement is used to add or drop columns in an  existing table.   1. DROP TABLE 2. DELETE TABLE 3. INSERT TABLE 4. ALTER TABLE | D |
| 94 | Which SQL statements used to update the data from databases?   1. Save 2. Update 3. Modify 4. Save as | B |
| 95 | I n SQL--------------------command we can use to sort the table.   1. Group by clause 2. Having clause 3. Order by clause 4. Where clause | C |
| 96 | A----------------------is a query that has another query embedded within  it.   1. Nested query 2. Relational query 3. Multi dimensional query 4. Algebraic query | A |
| 97 | Employee (fname, minit, lname, ssn, bdate, address, sex, salary, superssn, dno) SQL query to retrieve the names of all employees who do not have supervisors?   1. SELECT fname,lname FROM Employee WHERE superssn=0. 2. SELECT fname,lname FROM Employee WHERE superssn=NULL. 3. SELECT fname,lname FROM Employee WHERE ssn IS NULL. 4. SELECT fname,lname FROM Employee WHERE superssn IS NULL. | D. |
| 98 | Correlated sub query is a   1. Query evaluated once for the entire parent statement. 2. Evaluated once for every row processed by the parent statement. 3. Query evaluated once only. 4. The query will never be evaluated. | B |
| 99 | --------------------keyword is used to eliminate duplicates in the result of a  query.   1. SELECT 2. FROM 3. WHERE 4. DISTINCT | D |
| 100 | Which operator stands for zero or more arbitrary characters in SQL  query   1. LIKE 2. % 3. \_ 4. ^ | B |
|  | **Module-3** |  |
| 101 | Functional dependency is represented by which of the following  symbol   1. → 2. ^ 3. + 4. => | A |
| 102 | ----------------------are a set of rules, that when applied repeatedly, generates a  closure of functional dependencies   1. Armstrong's Axioms 2. Relational Expressions 3. quantifiers 4. Relationships | A |
| 103 | -----------------------is a systematic approach of decomposing tables to  eliminate data redundancy and undesirable characteristics like Insertion, Update and Deletion Anamolies   1. Normalization 2. Transaction 3. Atomicity 4. Durability | A |
| 104 | ----------------is a constraint between two sets of attributes from the  database   1. Redundancy 2. Functional dependency 3. Decomposition 4. Recoverability | B |
| 105 | The left hand side of the functional dependency is called   1. determinant 2. dependent 3. closure 4. None of the above | A |
| 106 | The right hand side of the functional dependency is called   1. determinant 2. dependent 3. closure 4. None of the above | B |
| 107 | A functional dependency X→Y is a relationship between two sets of attributes X and Y of a given table T   1. one-to-one 2. many-to-many 3. many-to-one 4. None of the above | A |
| 108 | If a functional dependency (FD) X → Y holds, where Y is a subset of X, then it is called   1. Trivial Functional Dependency 2. Non-Trivial Functional Dependency 3. Completely non-trivial Functional Dependency 4. None of the above | A |
| 109 | If a functional dependency (FD) X → Y holds, where Y is not a subset of X, then it is called a   1. Trivial Functional Dependency 2. Non-Trivial Functional Dependency 3. Completely non-trivial Functional Dependency 4. None of the above | B |
| 110 | If a functional dependency (FD) X → Y holds, where x intersect Y =Φ, it is said to be a   1. Trivial Functional Dependency 2. Non-Trivial Functional Dependency 3. Completely non-trivial Functional Dependency 4. None of the above | C |
| 111 | -----------rule specifies if alpha is a set of attributes and beta is  subset alpha, then alpha holds beta   1. Reflexive rule 2. Augmentation rule 3. Transitivity rule 4. Associative rule | A |
| 112 | ----------------rule specifies if a → b holds and b → c holds, then a → c  also holds   1. Reflexive rule 2. Augmentation rule 3. Transitivity rule 4. Associative rule | C |
| 113 | -----------rule specifies if a → b holds and y is attribute set, then ay  → by also holds   1. Reflexive rule 2. Augmentation rule 3. Transitivity rule 4. Associative rule | B |
| 114 | A Relation with redundancy can be refined by------- using with  smaller relations that contain the same information but without redundancy   1. Decomposing it 2. Updating it 3. Inserting it 4. Deleting it | A |
| 115 | Which of the following one is not an example of integrity constraints   1. Functional dependency 2. Multivalued dependency 3. Join dependency 4. Multilevel dependency | B |
| 116 | It may not be possible to store certain information unless some other,  unrelated information is stored as well is called   1. Redundant storage 2. Insertion anomalies 3. Deletion anomalies 4. Update anomalies | B |
| 117 | If X→ Y holds, where y is a set of attributes, and there is some subset  V of X such that V→ Y holds then X is a   1. Primary key 2. Candidate key 3. Super key 4. Not a key | C |
| 118 | X→ Y means   1. X functionally determines Y 2. Y functionally determines X 3. X not functionally determines Y 4. X functionally determines X | A |
| 119 | It may not be possible to delete certain information without losing  some other,unrelated information as well is called   1. Redundant storage 2. Insertion anomalies 3. Update anomalies 4. Deletion anomalies | D |
| 120 | The------------------------of a set F of functional dependencies is the set of  all functional dependencies logically implied by F   1. Closure 2. Associative 3. Normalization 4. None of the Above | A |
| 121 | Which of the following one is an example of a integrity constraints   1. Multilevel dependency 2. Insertion dependency 3. Multivalued dependency 4. Deletion dependency | C |
| 122 | Which one is a kind of integrity constraint that generalizes the concept  of the key   1. Multilevel dependency 2. Multivalued dependency 3. Lossless join 4. Functional dependency | D |
| 123 | If X→ YZ then X→ Y, and X→ Z are called   1. Decomposition 2. Union 3. Augmentation 4. Transitivity | A |
| 124 | Which of the following rule specifies, If X→ Y and X→ Z then X→YZ   1. Union 2. Decomposition 3. Composition 4. None of the Above | A |
| 125 | I n SQL--------------------command we can use to sort the table.   1. Group by clause 2. Having clause 3. Order by clause 4. Where clause | C |

**Prepared By Name:**

**Signature: HOD Signature**