MCQ

DATABASE MANAGEMENT SYSTEM

Q.1. The characteristics that allows program data independence and program function independent is known as

(1) Data abstraction (2) Data independence
(3) Data dependency (4) Data Modeling

Ans. (1) Data abstraction

Q.2. The data base designer is responsible for

(1) Identifying the data
(2) Administration database
(3) Designing data flow diagram
(4) Actual implementation

Ans. (3) Designing data flow diagram

Q.3.The lowest layer of the DBMS software deals with

(1) Management of space on disk
(2) Execution of query
(3) Backup process
(4) Information retrieval

Ans. (1) Management of space on disk

Q.4.In DBMS architecture higher layers allocate, de-allocate, read and write through lowest layer called

(1) Conceptual schema (2) Storage Software
(3) Disk space manager (4) External View

Ans. (3) Disk space manager

Q.5. The attribute which has more than one values are known as

(1) Multiple Attributes (2) Composite Attributes
(3) Atomic Attributes (4) Multi-valued Attributes

Ans. (4) Multi-valued Attributes

Q.6. The symbol double rectangular box is used to represents

(1) 1-to-1 only
(2) 1-to-N & N-to-1
(3) M-to-N & N-to-M
(4) All cardinality ratios are possible.

Ans. (4) All cardinality ratios are possible.

Q.27. Suppose Assigned is a many-to-one relationship with two participating entity types Employee and Department. A maximum of seven employees can be assigned to a department. If in the ER diagram, the line that connects Employee to the relationship Assigned is to be labeled with (x,y) using min-max notation, choose the correct option:

(1) $x = 7, y = 1$ (2) $x = 1, y = 7$
(3) $x = 7, y = 7$ (4) $x = 1, y = 1$

Ans. (4) $x = 1, y = 1$

Q.28. Consider the statements given below:
Statement- S1 : The owner of a weak entity is always a strong entity.
Statement- S2 : Entity sets must be disjoint.
Choose correct option:
(1) S1:True ; S2: True (2) S1: False; S2: False
(3) S1: False; S2: True (4) S1: True; S2: False

Ans. (2) S1: False; S2: False

Q.29. Consider the following sets:
Statement- S1 : For R1, R2 to be union-compatible the domains of the corresponding attributes should be the same
Statement- S2 : For R1, R2 to be union-compatible they should have equal number of attributes.
Choose the correct matching between S1 and S2
(1) S1:True ; S2: True (2) S1: False; S2: False
(3) S1: False; S2: True (4) S1: True; S2: False

Ans. (1) S1:True ; S2: True

Q.30. Consider the following statements:
Statement- S1 : A Relation can have at most one foreign key
Statement- S2 : A foreign key in a relation is a key for that relation

Choose the correct option:
(1) S1:True ; S2: True (2) S1: False; S2: True
(3) S1: False; S2: False (4) S1: True; S2: False

Ans. (3) S1: False; S2: False

Q.31. Consider the following statements:
Statement- S1: A relation always has a key
Statement- S2: A relation may have more than one key.
Choose the correct option:
(1) S1:True ; S2: True (2) S1: False; S2: False
(3) S1: False; S2: True (4) S1: True; S2: False

Ans. (1) S1:True ; S2: True

Q.32. Consider the following statements:
Statement- S1: An attribute of a relation may have a domain consisting of elements that are lists.
Statement- S1: No two attributes of a relation can have the same domain.
Choose the correct option:
(1) S1: False; S2: False (2) S1:True ; S2: True
(3) S1: False; S2: True (4) S1: True; S2: False

Ans. (1) S1: False; S2: False

Q.34. Consider a relation R(A1, A2 , A3 , A4 , A5) where attribute A1 is the only key . The maximum possible number of super keys for the relation R will be:
(1) 2 (2) 4
(3) 8 (4) 16

Ans. (4) 16

Q.35. Suppose A1 A5 is the key for the relation $R(A1, A2, A3, A4, A5)$. Consider the statements given below:
Statement- S1: $A5$ may also be a key for the relation R.
Statement- S2 : $A1\ A4\ A5$ is a super key for the relation R.
Statement- S3 : $A1\ A4\ A5$ may also be a key for the relation R.
Choose the correct option:

Q.16.If an entity relationship, y is domain entity and x a subroutine entity. Then which of the follow is/are incorrect.

(1) Operationally, if y is deleted, so is x
(2) X is existence dependent on y
(3) Operationally, x is deleted, so is y
(4) Operationally, x is deleted y remains the same.

Ans. (3) Operationally, x is deleted, so is y

Q.17.An attribute of one table matching the primary of another table is called as

(1) Secondary key (2) Candidate key
(3) Foreign key (4) Composite key

Ans. (3) Foreign key

Q.18.A primary key, if combined with a foreign creates

(1) Many to many relationship
(2) Network model
(3) Parent child relationship
(4) None of these

Ans. (3) Parent child relationship

Q.19.The employee salary should not be greater 20000. This is

(1) Integrity constraints
(2) Referential constraints
(3) Unique constraints
(4) Check constraints

Ans. (4) Check constraints

Q.20.Chose the correct sentence in context of RDB

(1) A relation is order list of tuples
(2) Mapping between two tables
(3) Set of identical values
(4) None of these

Ans. (1) A relation is order list of tuples

Q.21.Consider the statements given below :

Statement- S1 : The Logical Data Indepe allows us to modify the logical-level schema w affecting the view-level schema.

Statement - S2 : The Physical Data Independence allows us to modify the physical-level schema without affecting the logical-level schema.
Choose the correct option:

(1) S1: True; S2: True (2) S1: True; S2: False
(3) S1: False; S2: True (4) S1: False; S2: False

Ans. (1) S1: True; S2: True

Q.22.Which abstraction level of the database system describes how the data is actually stored?

(1) Logical level (2) Physical level
(3) View level (4) None of the above

Ans. (2) Physical level

Q.23.Typically, a database administrator (DBA) is NOT responsible for :

(1) Authorizing access to the database
(2) Identifying database security breaches
(3) To acquire required hardware and software resources
(4) Populating the records

Ans. (4) Populating the records

Q.24.Suppose Total_Salary attribute of employee entity type is computed using attributes Base_Salary, DA, and Other-Allowances .Choose the most appropriate type for attribute Total_Salary:

(1) Multi valued
(2) Single valued
(3) Single-valued and derived
(4) Composite

Ans. (3) Single-valued and derived

Q.25.Suppose Works_For is a relationship type with two participating entity type Employee and organization. If it represents the full-time job of the employees. What is the appropriate cardinality ratio for "Employee: ortganization"?

(1) 1:1 (2) 1:N
(3) M:N (4) N:1

Ans. (4) N:1

Q.26.Suppose Bank_Account is a relationship type with two participating entity types Person and Account in a bank. What is/are the possible cardinality ratio(s) for "Person: Account"?

(1) Individual relations (2) Multi-valued Attribute
(3) Weak Entity (4) Entity

Ans. (3) Weak Entity

Q.7. The set of permitted values for each attribute called its

(1) Domain (2) Group
(3) Attribute Set (4) Attribute Range

Ans. (1) Domain

Q.8. Student and courses enrolled is an example of

(1) One to One relationship
(2) One to Many relationship
(3) Many to Many relationship
(4) Many to One relationship

Ans. (3) Many to Many relationship

Q.9. E-R Modeling techniques is a

(1) Top-down Approach
(2) Bottom-up Approach
(3) Left-Right approach
(4) None of these

Ans. (1) Top-down Approach

Q.10.The data flow model of an application mainly show

(1) The underlying data and the relationship amon them
(2) Processing requirements and the flow of data
(3) Decision and control information
(4) Communication network structure

Ans. (2) Processing requirements and the flow of data

Q.11.Which of the following model is record based logic model?

(1) Network Model
(2) Object-oriented Model
(3) Relational Mode
(4) Entity-Relationship model

Ans. (1) Network Model

Q.12.A data model is collection of conceptual tools describing

(1) Data and data relationships
(2) Data semantics and consistency constraints
(3) Data, data relationships, and data semantics and consistency constraints
(4) None of the above

Ans. (3) Data, data relationships, and data semantics and consistency constraints

Q.13.Chose the correct sentence

(i) Network model are complicated by physical keys, but the relation model is faster because it use logical keys
(2) Network model are complicated by logical keys, but the relation model is faster because it use physical keys.
(3) Network model are complicated by logical keys, but the relation model is slower because it use physical keys
(4) Network model are complicated by physical keys, but the relation model is slower because it use logical keys

Ans. (1) Network model are complicated by physical keys, but the relation model is faster because it use logical keys

Q.14.Chose the correct sentence

(1) In Network model, data is represented by a collection of records, and relationship among data are represented by links.
(2) In Hierarchical model, data is represented by a collection of records, and relationship among data links respectively.
(3) In Hierarchical model, the records are organized as a collection of arbitrary graphs.
(4) All are correct.

Ans. (3) In Hierarchical model, the records are organized as a collection of arbitrary graphs.

Q.15.In Hierarchical model a record type that does not participate as parent record type in any PCR type is called

(1) Leaf of the hierarchical schema
(2) Root of the hierarchical schema
(3) Parent record set
(4) Child record set

Ans. (1) Leaf of the hierarchical schema

(3) ERD (4) Greater Entity Count

Ans. (2) Maximum cardinality

Q.60.In E-R diagram generalization is represented by

(1) Ellipse (2) Dashed ellipse

(3) Rectangle (4) Triangle

Ans. (4) Triangle

Q.61.The entity set person is classified as student and employee. This process is called _____

(1) Generalization (2) Specialization

(3) Inheritance (4) Constraint generalization

Ans. (2) Specialization

Q.62.Which relationship is used to represent a specialization entity?

(1) IS_A (2) A_IS

(3) ONE_IS (4) WHO_IS

Ans. (1) IS_A

Q.63.The refinement from an initial entity set into successive levels of entity subgroupings represents a _____ design process in which distinctions are made explicit.

(1) Hierarchy (2) Bottom-up

(3) Top-down (4) Radical

Ans. (3) Top-down

Q.64.There are similarities between the instructor entity set and the secretary entity set in the sense that they have several attributes that are conceptually the same across the two entity sets: namely, the identifier, name, and salary attributes. This process is called

(1) Commonality (2) Specialization

(3) Generalization (4) Similarity

Ans. (3) Generalization

Q.65.If an entity set is a lower-level entity set in more than one ISA relationship, then the entity set has

(1) Hierarchy (2) Multilevel inheritance

(3) Single inheritance (4) Multiple inheritance

Ans. (4) Multiple inheritance

Q.66.A _____ constraint requires that an entity belong to no more than one lower-level entity set.

(1) Disjointness (2) Uniqueness

(3) Special (4) Relational

Ans. (1) Disjointness

Q.67.Consider the employee work-team example, and assume that certain employees participate in more than one work team. A given employee may therefore appear in more than one of the team entity sets that are lower level entity sets of employee. Thus, the generalization is _____

(1) Overlapping (2) Disjointness

(3) Uniqueness (4) Relational

Ans. (1) Overlapping

Q.68.The completeness constraint may be one of the following: Total generalization or specialization, Partial generalization or specialization. Which is the default?

(1) Total (2) Partial

(3) Should be specified (4) Cannot be determined

Ans. (2) Partial

Q.69.Functional dependencies are a generalization of

(1) Key dependencies

(2) Relation dependencies

(3) Database dependencies

(4) None of the mentioned

Ans. (1) Key dependencies

Q.70.Which of the following is another name for a weak entity?

(1) Child (2) Owner

(3) Dominant (4) All of the mentioned

Ans. (1) Child

Q.71.The tuples of the relations can be of _____ order.

(1) Any (2) Same

(3) Sorted (4) Constant

Ans. (1) Any

Q.72.A Delete command operates on _____ relation.

(1) One (2) Two

(3) Several (4) Null

Ans. (1) One

(2) Create assertion check 'predicate' 'assertion-name'
(3) Create assertions 'predicates';
(4) All of the mentioned
Ans. (1) Create assertion 'assertion-name' check 'predicate';

Q.48.Data integrity constraints are used to:
(1) Control who is allowed access to the data
(2) Ensure that duplicate records are not entered in the table
(3) Improve the quality of data entered for a spec property (i.e., table column)
(4) Prevent users from changing the values stored in table
Ans. (3) Improve the quality of data entered for a spec property (i.e., table column)

Q.49.An _____ is a set of entities of the same type t share the same properties, or attributes.
(1) Entity set (2) Attribute set
(3) Relation set (4) Entity model
Ans. (1) Entity set

Q.50.Entity is a _____
(1) Object of relation (2) Present working mod
(3) Thing in real world (4) Model of relation
Ans. (3) Thing in real world

Q.51.The descriptive property possessed by each en set is _____
(1) Entity (2) Attribute
(3) Relation (4) Model
Ans. (2) Attribute

Q.52.The function that an entity plays in a relationshi called that entity's _____
(1) Participation (2) Position
(3) Role (4) Instance
Ans. (3) Role

Q.53.The attribute name could be structured as attribute consisting of first name, middle initial last name. This type of attribute is called

(1) Simple attribute (2) Composite attribute
(3) Multivalued attribute (4) Derived attribute
Ans. (2) Composite attribute

Q.54.The attribute AGE is calculated from DATE_OF_BIRTH. The attribute AGE is
(1) Single valued (2) Multi valued
(3) Composite (4) Derived
Ans. (4) Derived

Q.55.Which of the following can be a multivalued attribute?
(1) Phone_number (2) Name
(3) Date_of_birth (4) All of the mentioned
Ans. (1) Phone_number

Q.56.In a relation between the entities the type and condition of the relation should be specified. That is called as_____attribute.
(1) Descriptive (2) Derived
(3) Recursive (4) Relative
Ans. (1) Descriptive

Q.57.The total participation by entities is represented in E-R diagram as
(1) Dashed line (2) Double line
(3) Double rectangle (4) Circle
Ans. (2) Double line

Q.58.Given the basic ER and relational models, which of the following is INCORRECT?
(1) An attribute of an entity can have more than one value
(2) An attribute of an entity can be composite
(3) In a row of a relational table, an attribute can have more than one value
(4) In a row of a relational table, an attribute can have exactly one value or a NULL value
Ans. (3) In a row of a relational table, an attribute can have more than one value

Q.59.Which of the following indicates the maximum number of entities that can be involved in a relationship?
(1) Minimum cardinality (2) Maximum cardinality

(1) S1: True; S2: False; S3: False
(2) S1: False; S2: False; S3: True
(3) S1: True; S2: True; S3: False
(4) S1: False; S2: True; S3: False

Ans. (4) S1: False; S2: True; S3: False

Q.36.Consider two relations $r1$ and $r2$ with schemas $R1$ and $R2$, respectively. Here, $|R1| = m$ | and $|R2| = n$ |. Relation r3 is the natural join of $r1$ and $r2$; i.e., $r3 = r1 * *r2$. Suppose $r1$ and $r2$ share k number of common attributes, where $k > 0$ and $k < \min(m,n)$. Identify the FALSE statement:

(1) The minimum number of attributes in $r3$ is: $\max(m,n)$ + 1.
(2) The number of attributes in $r3$ will be less than $m + n$.
(3) The maximum possible number of attributes in $r3$ is $m + n - 1$.
(4) The scheme of $r3$ will be: $R1 \cup (R2 - \{a1, a2 \ldots ak\})$, where $a1$ to ak are common attributes.

Ans. (1) The minimum number of attributes in $r3$ is: $\max(m,n)$ + 1.

Q.37.A relational database consists of a collection of

(1) Tables (2) Fields
(3) Records (4) Keys

Ans. (1) Tables

Q.38.A _____ in a table represents a relationship among a set of values.

(1) Column (2) Key
(3) Row (4) Entry

Ans. (3) Row

Q.39.The term _____ is used to refer to a row.

(1) Attribute (2) Tuple
(3) Field (4) Instance

Ans. (2) Tuple

Q.40.The term attribute refers to a _____ of a table.

(1) Record (3) Column
(2) Tuple (4) Key

Ans. (2) Column

Q.41.For each attribute of a relation, there is a set of permitted values, called the _____ of that attribute.

(1) Domain (2) Relation
(3) Set (4) Schema

Ans. (1) Domain

Q.42.A domain is atomic if elements of the domain are considered to be _____ units.

(1) Different (2) Indivisible
(3) Constant (4) Divisible

Ans. (2) Indivisible

Q.43.Course(course_id,sec_id,semester)
Here the course_id,sec_id and semester are _____ and course is a _____

(1) Relations, Attribute (2) Attributes, Relation
(3) Tuple, Relation (4) Tuple, Attributes

Ans. (2) Attributes, Relation

Q.44.Database _____ which is the logical design of the database, and the database _____ which is a snapshot of the data in the database at a given instant in time.

(1) Instance, Schema (2) Relation, Schema
(3) Relation, Domain (4) Schema, Instance

Ans. (4) Schema, Instance

Q.45.Foreign key is the one in which the _____ of one relation is referenced in another relation.

(1) Foreign key (2) Primary key
(3) References (4) Check constraint

Ans. (2) Primary key

Q.46.Domain constraints, functional dependency and referential integrity are special forms of ___

(1) Foreign key (2) Primary key
(3) Assertion (4) Referential constraint

Ans. (3) Assertion

Q.47.Which of the following is the right syntax for the assertion?

(1) Create assertion 'assertion-name' check 'predicate';

(1) A statement that enables to start any DBMS
(2) A statement that executed by user when debugging an application
(3) A condition the system tests for the validity of the database user.
(4) A statement that is executed automatically by the system as a side effect of a modification to the database.

Ans. (4) A statement that is executed automatically by the system as a side effect of a modification to the database.

Q.95._____ are executed when a data manipulation command is performed on a table
(1) Procedure (2) Trigger
(3) Cursor (4) Function
Ans. (2) Trigger

Q.96._____ are subprogram ,which will perform an action and function are generally subprogram that use to compute some value
(1) Procedure (2) Function
(3) Package (4) None of These
Ans. (2) Function

Q.97.A table in which we cannot insert, delete, or update is known as
(1) Dummy table (2) View
(3) Pseudo column (4) Dual table
Ans. (4) Dual table

Q.98._____ is a pointer to point an external file
(1) BFILE (2) NCLOB
(3) ROWID (4) CLOB
Ans. (1) BFILE

Q.99.The _____is an internally generated and maintained binary value that identifies a row of data in your table.
(1) BFILE (2) NCLOB
(3) ROWID (4) CLOB
Ans. (2) NCLOB

Q.100.LONG RAW to store raw data up to _____bytes.
(1) 32760 (2) 256 (3) 100000 (4) 1024
Ans. (1) 32760

Q.101.Error can be trapped in PL/SQL block by
(1) Break Points (2) Error Handlers
(3) Interrupt handling (4) Exception handling
Ans. (4) Exception handling

Q.102.The _____ attribute tells you the total number of rows affected by the most recent SQL statement.
(1) %rowcount (2) %notfound
(3) %found (4) %isopen
Ans. (1) %rowcount

Q.103.Give two union compatible relations *R1 (A,B)* and *R2 (C, D)* what is the result of the operation *R1 = A CAB = DR2 ?*
(1) $R1 \cup R2$ (2) $R1 \times R2$
(3) $R1 - R2$ (4) $R1 \cap R2$
Ans. (4) $R1 \cap R2$

Q.104.Using relational algebra, the query that finds customers, who have a balance of over 1000 is
(1) customer _Name (σ balance > 1000 (DEPOSIT))
(2) customer _Name (σ balance > 1000 (DEPOSIT))
(3) customer _Name σ balance < 1000 DEPOSIT
(4) customer _Name π balance > 1000 (DEPOSIT)
Ans. (1) customer _Name (σ balance $\geq$ 1000 (DEPOSIT))

Q.105.Which of the following Domain relational calculus find all customers who have loan amount more than 12000.
(1) { t | ∃ (Customer_Name | ∈ barrow ∧ t [amount]>12000}
(2) { t | t (Customer_Name | ∈ barrow ∧ t [amount] >12000}
(3) { t | ∃ S ∈ barrow (t [Customer_Name] = S [Customer_Name] ∧ S >12000}
(4) { t | ∃ S ∈ barrow {Customer_Name | ∈ barrow ∧ t [amount]>12000}
Ans. (3) { t | ∃ S ∈ barrow (t [Customer_Name] = S [Customer_Name] ∧ S >12000}

Q.82.What type of join is needed when you wish to include rows that do not have matching values?
(1) Equi-join (2) Natural join
(3) Outer join (4) All of the mentioned
Ans. (3) Outer join

Q.83.How many tables may be included with a join?
(1) One (2) Two
(3) Three (4) All of the mentioned
Ans. (4) All of the mentioned

Q.84.Which are the join types in join condition:
(1) Cross join (2) Natural join
(3) Join with USING clause (4) All of the mentioned
Ans. (4) All of the mentioned

Q.85.Which join refers to join records from the right table that have no matching key in the left table are include in the result set:
(1) Left outer join
(2) Right outer join
(3) Full outer join
(4) Half outer join
Ans. (2) Right outer join

Q.86.The operation which is not considered a basic operation of relational algebra is
(1) Join (2) Selection
(3) Union (4) Cross product
Ans. (1) Join

Q.87.In SQL the statement select * from R, S is equivalent to
(1) Select * from R natural join S
(2) Select * from R cross join S
(3) Select * from R union join S
(4) Select * from R inner join S
Ans. (2) Select * from R cross join S

Q.88.Which of the following creates a virtual relation for storing the query?
(1) Function (2) View
(3) Procedure (4) None of the mentioned
Ans. (2) View

Q.89.Which of the following is the syntax for views where v is view name?
(1) Create view v as "query name";
(2) Create "query expression" as view;
(3) Create view v as "query expression";
(4) Create view "query expression";
Ans. (3) Create view v as "query expression";

Q.90.Materialized views make sure that
(1) View definition is kept stable
(2) View definition is kept up-to-date
(3) View definition is verified for error
(4) View is deleted after specified time
Ans. (2) View definition is kept up-to-date

Q.91.Updating the value of the view
(1) Will affect the relation from which it is defined
(2) Will not change the view definition
(3) Will not affect the relation from which it is defined
(4) Cannot determine
Ans. (1) Will affect the relation from which it is defined

Q.92.Consider two entity sets $A = \{a,b,c,d,e\}$ and $B = \{w,x,y,z\}$ and consider a relation R as a many-to-one relationship from entity set A to entity set B. Assume that A and B participate totally in R. Which one of the following is TRUE about R:
(1) Every entity in A is associated with exactly one entity in B
(2) Every entity in B is associated with at most one entity in A
(3) Every entity in B is associated with exactly one entity in A
(4) Some entity in A is associated with more than one entity in B
Ans. (1) Every entity in A is associated with exactly one entity in B

Q.93.Which of the following is not DML Command
(1) UPDATE (2) CREATE
(3) SELECT (4) DELETE
Ans. (2) CREATE

Q.94.A trigger is

Q.73.The command: Delete from r where P;
(1) Deletes the relation
(2) Clears all entries from the relation
(3) Deletes a particular tuple from the relation
(4) All of the mentioned
Ans. (3) Deletes a particular tuple from the relation

Q.74.Which one of the following deletes all the entries but keeps the structure of the relation.
(1) Delete from r whe e P;
(2) Delete from instructor where dept name= 'Finance';
(3) Delete from instructor where salary between 13000 and 15000;
(4) Delete from instructor;
Ans. (4) Delete from instructor;

Q.75.Which of the following deletes all tuples in the instructor relation for those instructors associated with a department located in the Watson building which is in department relation.
(1) DELETE FROM instructor WHERE dept_name IN 'Watson';
(2) DELETE FROM department WHERE building='Watson';
(3) DELETE FROM instructor WHERE dept_name IN
(4) (SELECT dept name FROM department WHERE building = 'Watson'); None of these
Ans. (3) DELETE FROM instructor WHERE dept_name IN

Q.76.Fill in with correct keyword to update the instructor relation.
UPDATE instructor____ salary= salary * 1.05;
(1) Where (2) Set
(3) In (4) Select
Ans. (2) Set

Q.77.The problem of ordering the update in multiple updates is avoided using
(1) Set (2) Where
(3) Case (4) When
Ans. (3) Case

Q.78.Which of the following relation updates all instructors with salary over $100,000 receive a 3 percent raise, whereas all others receive a 5 percent raise.
(1) UPDATE instructor SET salary = salary * 1.03 WHERE salary > 100000; UPDATE instructor SET salary = salary * 1.05 WHERE salary <= 100000;
(2) UPDATE instructor SET salary = salary * 1.05 WHERE salary < (SELECT avg (salary) FROM instructor);
(3) UPDATE instructor SET salary = CASE WHEN salary <= 100000 THEN salary * 1.03 ELSE salary * 1.05;
(4) None of the mentioned
Ans. (1) UPDATE instructor SET salary = salary * 1.03 WHERE salary > 100000; UPDATE instructor SET salary = salary * 1.05 WHERE salary <= 100000;

Q.79.The____condition allows a general predicate over the relations being joined.
(1) On (2) Using
(3) Set (4) Where
Ans. (1) On

Q.80.Which of the join operations do not preserve non matched tuples?
(1) Left outer join (2) Right outer join
(3) Inner join (4) Natural join
Ans. (3) Inner join

Q.81.SELECT * FROM student JOIN takes USING (ID);
The above query is equivalent to
(1) SELECT * FROM student INNER JOIN takes USING (ID);
(2) SELECT *FROM student OUTER JOIN takes USING (ID);
(3) SELECT * FROM student LEFT OUTER JOIN takes USING (ID);
(4) None of the mentioned
Ans. (1) SELECT * FROM student INNER JOIN takes USING (ID);

Ans. (3) CREATE ROLE instructor;
GRANT DELETE ON takes TO instructor;

Q.128.Which of the following is used to access the database server at the time of executing the program and get the data from the server accordingly?
(1) Embedded SQL
(2) Dynamic SQL
(3) SQL declarations
(4) SQL data analysis
Ans. (2) Dynamic SQL

Q.129.Which of the following is used to access large objects from a database ?
(1) setBlob() (2) getBlob()
(3) getClob() (4) All of the mentioned
Ans. (4) All of the mentioned

Q.130.Relational Algebra is a _____ query language that takes two relations as input and produces another relation as an output of the query.
(1) Relational (2) Structural
(3) Procedural (4) Fundamental
Ans. (3) Procedural

Q.131.The _____ operation, denoted by −, allows us to find tuples that are in one relation but are not in another.
(1) Union (2) Set-difference
(3) Difference (4) Intersection
Ans. (2) Set-difference

Q.132.Which is a unary operation:
(1) Selection operation
(2) Primitive operation
(3) Projection operation
(4) Generalized selection
Ans. (4) Generalized selection

Q.133.A query in the tuple relational calculus is expressed as:

(1) {t | P() | t}
(2) {P(t) | t}
(3) {t | P(t)}
(4) All of the mentioned
Ans. (3) {t | P(t)}

Q.134.Which of the following best describes the query?
(1) Finds the names of all instructors whose department is in the Watson building
(2) Finds the names of all department is in the Watson building
(3) Finds the name of the dapartment whose instructor and building is Watson
(4) Returns the building name of all the departments
Ans. (1) Finds the names of all instructors whose department is in the Watson building

Q.135.Which of the following symbol is used in the place of except?
(1) ^ (2) V
(3) ¬ (4) ~
Ans. (3) ¬

Q.136."Find all students who have taken all courses offered in the Biology department." The expressions that matches this sentence is:
(1) Θ t ε r (Q(t)) (2) ∀ t ε r (Q(t))
(3) ¬ t ε r (Q(t)) (4) ~ t ε r (Q(t))
Ans. (2) ∀ t ε r (Q(t))

Q.137.Which of the following is the comparison operator in tuple relational calculus
(1) ⇒ (2) =
(3) ε (4) All of the mentioned
Ans. (2) =

Q.138.An expression in the domain relational calculus is of the form
(1) $\{P(x1, x2, ..., xn) \mid < x1, x2, ..., xn >\}$
(2) $\{x1, x2, ..., xn \mid < x1, x2, ..., xn >\}$

Q.119.Values of one type can be converted to another domain using which of the following?

(1) Cast (2) Drop type
(3) Alter type (4) Convert

Ans. (1) Cast

Q.120.Consider the following Statement
CREATE DOMAIN YearlySalaryNUMERIC(8,2)
CONSTRAINT salary VALUE test _____;
In order to ensure that an instructor's salary domain allows only values greater than a specified value use:

(1) Value>=30000.00
(2) Not null;
(3) Check(value >= 29000.00);
(4) Check(value)

Ans. (3) Check(value >= 29000.00);

Q.121.Which of the following closely resembles Create view?

(1) CREATE TABLE.... . LIKE
(2) CREATE TABLE. . . AS
(3) With data
(4) CREATE VIEW AS

Ans. (1) CREATE TABLE.... . LIKE

Q.122.In contemporary databases, the top level of the hierarchy consists of _____ each of which can contain _____

(1) Catalogs, schemas
(2) Schemas, catalogs
(3) Environment, schemas
(4) Schemas, Environment

Ans. (1) Catalogs, schemas

Q.123.Which of the following statements creates a new table temp instructor that has the same schema as an instructor.

(1) create table temp_instructor;
(2) Create table temp_instructor like instructor;
(3) Create Table as temp_instructor;

(4) Create table like temp_instructor;

Ans. (2) Create table temp_instructor like instructor;

Q.124.Which of the following is a basic form' of grant statement?

(1) GRANT 'privilege list' ON 'relation name or view name' TO 'user/role list';
(2) GRANT 'privilege list' ON 'user/role list' TO 'relation name or view name';
(3) GRANT 'privilege list' TO 'user/role list'
(4) GRANT 'privilege list' ON 'relation name or view name' ON 'user/role list';

Ans. (1) GRANT 'privilege list' ON 'relation name or view name' TO 'user/role list';

Q.125.Which of the following is used to provide privilege to only a particular attribute?

(1) Grant select on employee to Anita
(2) Grant update(budget) on department to Raghav
(3) Grant update(budget,salary,Rate) on department to Raghav
(4) Grant delete to Anita

Ans. (2) Grant update(budget) on department to Raghav

Q.126.Which of the following statement is used to remove the privilege from the user Ali?

(1) Remove update on department from Ali
(2) Revoke update on employee from Ali
(3) Delete select on department from Rajat
(4) Grant update on employee from Ali

Ans. (2) Revoke update on employee from Ali

Q.127.Which of the following is used to provide delete authorization to instructor?

(1) CREATE ROLE instructor ;
GRANT DELETE TO instructor;
(2) CREATE ROLE instructor;
GRANT SELECT ON takes TO instructor;
(3) CREATE ROLE instructor;
GRANT DELETE ON takes TO instructor;
(4) All of the mentioned

Q.106.In relational algebra the SET DIFFERENCE operation is_____
(1) NOT Commutative
(2) Commutative
(3) Commutative but not Associative
(4) Associative but not Commutative
Ans. (1) NOT Commutative

Q.107.Such a JOIN, where the only equal comparison operator is used, is called
(1) SELFJOIN (2) EQUIJOIN.
(3) NATURAL JOIN (4) OUTERJOIN
Ans. (2) EQUIJOIN.

Q.108.A functional dependency of the form $X \to Y$ is trivial if
(1) $Y \subseteq X$ (2) $Y \subset X$
(3) $X \subseteq Y$ (4) $X \subset Y$ and $Y \subset X$
Ans. (1) $Y \subseteq X$

Q.109.Given the functional dependency $X \to W, X \to Y, Y \to Z$ and $Z \to PQ$; then which of the following does not hold properly
(1) $X \to Y$ (2) $W \to Z$
(3) $X \to WYX$ (4) None of these
Ans. (2) $W \to Z$

Q.110.Let $R = (A, B, C, D,$ and $E, F)$ be a relation schema with the following dependencies.
$C \to F, E \to A, EC \to D, A \to B$ then which of the following is key of R.
(1) CD (2) EC (3) AE (4) AC
Ans. (2) EC

Q.111.To include integrity constraint in an existing relation use :
(1) Create table (2) Modify table
(3) Alter table (4) Drop table
Ans. (3) Alter table

Q.112.Which of the following is not an integrity constraint?
(1) Not null (2) Positive
(3) Unique (4) Check 'predicate'
Ans. (2) Positive

Q.113.Consider the following SQL Statements
CREATE TABLE Manager(ID NUMERIC,Name VARCHAR(20),budget NUMERIC,Details VARCHAR(30));
In order to ensure that the value of budget is non-negative which of the following should be used?
(1) Check(budget>0) (2) Check(budget<0)
(3) Alter(budget>0) (4) Alter(budget<0)
Ans. (1) Check(budget>0)

Q.114.Dates must be specified in the format
(1) mm/dd/yy (2) yyyy/mm/dd
(3) dd/mm/yy (4) yy/dd/mm
Ans. (2) yyyy/mm/dd

Q.115.A _____ on an attribute of a relation is a data structure that allows the database system to find those tuples in the relation that have a specified value for that attribute efficiently, without scanning through all the tuples of the relation.
(1) Index (2) Reference
(3) Assertion (4) Timestamp
Ans. (1) Index

Q.116.Consider the following Statement
Create index studentID_index on student(ID);
Here which one denotes the relation for which index is created?
(1) StudentID_index (2) ID
(3) StudentID (4) Student
Ans. (4) Student

Q.117.Which of the following is used to store movie and image files?
(1) Clob (2) Blob
(3) Binary (4) Image
Ans. (4) Image

Q.118.The user defined data type can be created using
(1) Create datatype (2) Create data
(3) Create definetype (4) Create type
Ans. (4) Create type

Q.161.If one attribute is determinant of second, which in turn is determinant of third, then the relation cannot be:
(1) Well-structured (2) 1NF
(3) 2NF (4) 3NF
Ans. (4) 3NF

Q.162.5NF is designed to cope with :
(1) Transitive dependency
(2) Join dependency
(3) Multi valued dependency
(4) None of these
Ans. (2) Join dependency

Q.163.Third normal form is inadequate in situations where the relation :
(1) has multiple candidate keys
(2) has candidate keys that are composite
(3) has overlapped candidate keys
(4) none of the above
Ans. (4) none of the above

Q.164.A relation is in 2NF if:
(1) All the values of non-key attributes are dependent fully on the candidate key.
(2) Any non-key attribute that are dependent on one part of the candidate key should be moved to another relation where the partial key is the actual full key.
(3) It must be already in the 1NF.
(4) All of the above.
Ans. (4) All of the above.

Q.165.4NF is designed to cope with :
(1) Transitive dependency
(2) Join dependency
(3) Multi valued dependency
(4) None of these
Ans. (3) Multi valued dependency

Q.166.A BCNF is :
(1) loss less join and dependency preserving
(2) loss less join but not dependency preserving
(3) not loss less join but dependency preserving

(4) None of these
Ans. (2) loss less join but not dependency preserving

Q.167.Third normal form is based on the concept of _____
(1) Closure Dependency
(2) Transitive Dependency
(3) Normal Dependency
(4) Functional Dependency
Ans. (2) Transitive Dependency

Q.168.Consider the following statements:
Statement- S1: All normal-forms are defined using functional dependencies.
Statement -S2: Normalization is a top-down process to deal with redundancy in data representation.
Choose the correct option:
(1) S1: True; S2: True
(2) S1: True; S2: False
(3) S1: False; S2: True
(4) S1: False; S2: False
Ans. (3) S1: False; S2: True

Q.169.Consider the following statements:
Statement- S1: A relation in which every key contains only one attribute is in 2NF.
Statement- S2 : In a 3NF relation, a non-key attribute may be transitively dependent on the primary key.
Choose the correct option:
(1) S1: True; S2: True
(2) S1: True; S2: False
(3) S1: False; S2: True
(4) S1: False; S2: False
Ans. (2) S1: True; S2: False

Q.170.Consider a relation $R(A, B, C, D, E, F, G)$ and the following FDs:
$\{AB \rightarrow CD, AF \rightarrow F, DE \rightarrow F, C \rightarrow G, F \rightarrow E, G \rightarrow A\}$. **Find out $\{C, F\}+$:**
(1) $\{C, F\}$ (2) $\{C, F, G, E, A\}$
(3) $\{C, F, E, A\}$ (4) $\{C, F, G, E, A, D\}$
Ans. (4) $\{C, F, G, E, A, D\}$

Statement- S1: Conceptual level schema is deriv from the Representational-level schema.
Statement- S2: Representational-level schema derived from the Conceptual level schema.
Choose the correct option:
(1) S1: True; S2: False (2) S1: True; S2: True
(3) S1: False; S2: True (4) S1: False; S2: False
Ans. (3) S1: False; S2: True

Q.150.A dependency exist between two columns when
(1) Together they constitute a composite key for the tab
(2) Knowing the value in one column determines th value stored in another column
(3) The table is in 3NF
(4) Together they constitute a foreign key
Ans. (1) Together they constitute a composite key for the tab

Q.151.Which one is based on multi-valued dependency:
(1) First (2) Second
(3) Third (4) Fourth
Ans. (4) Fourth

Q.152.If every non-key attribute is functiona dependent primary key, then the relation will be i
(1) First normal form
(2) Second normal form
(3) Third form
(4) Fourth normal form
Ans. (2) Second normal form

Q.153.If an attribute of a composite key is dependent an attribute of the other composite key, normalization called _____ is needed.
(1) DKNF (2) BCNF
(3) Fourth (4) Third
Ans. (2) BCNF

Q.154.The term for information that describes what t of data is available in a database is:
(1) Data dictionary (2) data repository
(3) Index data (4) Metadata
Ans. (4) Metadata

Q.155.A table on the many side of a one to many or m to many relationship must:

(1) Be in Second Normal Form (2NF)
(2) Be in Third Normal Form (3NF)
(3) Have a single attribute key
(4) Have a composite key
Ans. (4) Have a composite key

Q.156.Tables in second normal form (2NF):
(1) Eliminate all hidden dependencies
(2) Eliminate the possibility of a insertion anomalies
(3) Have a composite key
(4) Have all non key fields depend on the whole primary key
Ans. (1) Eliminate all hidden dependencies

Q.157.Which-one of the following statements about normal forms is FALSE?
(1) BCNF is stricter than 3 NF
(2) Lossless, dependency -preserving decomposition into 3 NF is always possible
(3) Loss less, dependency – preserving decomposition into BCNF is always possible
(4) Any relation with two attributes is BCNF
Ans. (3) Loss less, dependency – preserving decomposition into BCNF is always possible

Q.158.Functional Dependencies are the types of constraints that are based on_____
(1) Key (2) Key revisited
(3) Superset key (4) None of the mentioned
Ans. (3) Superset key

Q.159.Which is a bottom-up approach to database design that design by examining the relationship between attributes:
(1) Functional dependency (2) Database modeling
(3) Normalization (4) Decomposition
Ans. (3) Normalization

Q.160.The database design prevents some data from being stored due to _____.
(1) Deletion anomalies (2) Insertion anomalies
(3) Update anomalies (4) Selection anomalies
Ans. (2) Insertion anomalies

(3) $\{x1, x2, \ldots, xn \mid x1, x2, \ldots, xn\}$
(4) $\{< x1, x2, \ldots, xn > \mid P\, x1, x2, \ldots, xn\}$

Ans. (4) $\{< x1, x2, \ldots, xn > \mid P\, x1, x2, \ldots, xn\}$

Q.139.A set of possible data values is called
(1) Attribute (2) Degree
(3) Tuple (4) Domain

Ans. (4) Domain

Q.140.The database administrator who authorizes all the new users, modifies the database and takes grants privilege is
(1) Super user
(2) Administrator
(3) Operator of operating system
(4) All of the mentioned

Ans. (4) All of the mentioned

Q.141.Which command is use to make changes to in the structure of table?
(1) UPDATE (2) ROLLBACK
(3) INSERT (4) ATLER

Ans. (4) ATLER

Q.142.Which type of commands are used to remove database objects
(1) DDL (2) DCL
(3) DML (4) DSL

Ans. (1) DDL

Q.143.Which of the following are not the sub language of SQL
(1) DSL (2) DML
(3) DCL (4) None of these

Ans. (1) DSL

Q.144.Which normal form is considered adequate for normal relational database design?
(1) 2NF (2) 3NF
(3 4NF (4) 5NF

Ans. (2) 3NF

Q.145."Every department should be candidate key " is the definition of _____

(1) Project normal form
(2) Domain key normal form
(3) 3NF
(4) 4NF

Ans. (3) 3NF

Q.146.If every non-key attribute is functionally dependent to primary key then the relation will be in
(1) First normal form
(2) Second normal form
(3) Third normal form
(4) Fourth normal form

Ans. (2) Second normal form

Q.147.Which of the following statement is not correct?
(1) NF : A relation R is in first normal form (1NF) if and only if all underlying domains contain atomic values only.
(2) NF: A relation R is in second normal form (2NF) if and only if it is in 1NF and every non-key attribute is fully dependent on the primary key.
(3) NF : A relation R is in third normal form (3NF) if and only if it is in 2NF and every non-key attribute is transitively dependent on the primary key.
(4) BCNF : A relation R is in Boyce-Codd normal form (BCNF) if and only if every determinant is a candidate key.

Ans. (3) NF : A relation R is in third normal form (3NF) if and only if it is in 2NF and every non-key attribute is transitively dependent on the primary key.

Q.148.Which of the following is not true about BCNF?
(1) In 3NF there should be no transitive dependency
(2) It is much stronger than BCNF
(3) In 3NF the functional dependencies are already in 1NF and 2NF.
(4) In 3NF there is preservation of all functional dependencies.

Ans. (2) It is much stronger than BCNF

Q.149.Consider the statements given below:

(1) Aborted (2) Terminated
(3) Closed (4) All of the mentioned
Ans. (1) Aborted

Q.203.If an transaction is performed in a database and committed, the changes are taken to the previous state of transaction by
(1) Flashback.
(2) Rollback
(3) Both Flashback and Rollback
(4) Cannot be done
Ans. (4) Cannot be done

Q.204.Each modification done in database transaction are first recorded into the
(1) Harddrive (2) Log
(3) Disk (4) Datamart
Ans. (2) Log

Q.205.When the transaction finishes the final statement the transaction enters into
(1) Active state
(2) Committed state
(3) Partially committed state
(4) Abort state
Ans. (3) Partially committed state

Q.206.The name of the transaction file shall be provided by the operator and the file that contains the edited transactions ready for execution shall be called
(1) Batch. Exe (2) Trans. Exe
(3) Opt. Exe (4) Edit.Exe
Ans. (3) Opt. Exe

Q.207.Which of the following is an atomic sequence of database actions?
(1) Transaction (2) Concurrency
(3) Relations (4) All of the mentioned
Ans. (1) Transaction

Q.208.If the state of the database no longer reflects a real state of the world that the database is supposed to capture, then such a state is called

(1) Consistent state (2) Parallel state
(3) Atomic state (4) Inconsistent state
Ans. (4) Inconsistent state

Q.209. _____ means that data used during the execution of a transaction cannot be used by a second transaction until the first one is completed.
(1) Serializability (2) Atomicity
(3) Isolation (4) Time stamping
Ans. (3) Isolation

Q.210.DBMS periodically suspends all processing and synchronizes its files and journals through the use of
(1) Checkpoint facility (2) Backup facility
(3) Recovery manager (4) Database change log
Ans. (1) Checkpoint facility

Q.211.Which of the following is not a state in transaction?
(1) Active (2) Terminated
(3) Aborted (4) Partially committed
Ans. (2) Terminated

Q.212.Who is responsible for maintaining a log, and restoring the system to a consistent? state after a crash
(1) Buffer manager (2) Transaction manager
(3) Lock manager (4) Recovery manager
Ans. (4) Recovery manager

Q.213.A _____ consists of a sequence of query and/or update statements.
(1) Transaction (2) Commit
(3) Rollback (4) Flashback
Ans. (1) Transaction

Q.214.Which of the following makes the transaction permanent in the database?
(1) View (2) Commit
(3) Rollback (4) Flashback
Ans. (2) Commit

Q.215.In order to undo the work of transaction after last commit which one should be used?

(4) None of these
Ans. (1) Get stable data structure

Q.180.In 2NF which forms of dependency is removed?
(1) Functional (2) Partial
(3) Associative (4) Transitive
Ans. (2) Partial

Q.181.Which of the following are anomalies that can be caused by redundancy in tables?
(1) Insertion (2) Deletion
(3) Modification (4) All
Ans. (4) All

Q.182.In 3NF a non key attribute must not depend on a _____?
(1) Non key attribute (2) Key attribute
(3) Composite key (4) Sort key
Ans. (1) Non key attribute

Q.183.Different attributes in two different tables having same name are referred to as _____?
(1) Synonym (2) Homonym
(3) Acronym (4) Mutually exclusive
Ans. (2) Homonym

Q.184.Consider money is transferred from
(1) Account-A to account-B and
(2) Account-B to account-A.
then which of the following form a transaction?
(1) Only 1 (2) Only 2
(3) Both 1 and 2 individually (4) Either 1 or 2
Ans. (3) Both 1 and 2 individually

Q.185.A transaction is delimited by statements (or function calls) of the form _____
(1) Begin transaction and end transaction
(2) Start transaction and stop transaction
(3) Get transaction and post transaction
(4) Read transaction and write transaction
Ans. (1) Begin transaction and end transaction

Q.186.Identify the characteristics of transactions
(1) Atomicity
(2) Durability

(3) Isolation
(4) All of the mentioned
Ans. (4) All of the mentioned

Q.187.Which of the following has "all-or-none" property?
(1) Atomicity (2) Durability
(3) Isolation (4) All of the mentioned
Ans. (1) Atomicity

Q.188.The database system must take special actions to ensure that transactions operate properly without interference from concurrently executing database statements. This property is referred as
(1) Atomicity (2) Durability
(3) Isolation (4) All of the mentioned
Ans. (3) Isolation

Q.199.The property of a transaction that persists all the crashes is
(1) Atomicity (2) Durability
(3) Isolation (4) All of the mentioned
Ans. (2) Durability

Q.200._____ states that only valid data will be written to the database.
(1) Consistency (2) Atomicity
(3) Durability (4) Isolation
Ans. (1) Consistency

Q.201.Transaction processing is associated with everything below except
(1) Producing detail summary or exception reports
(2) Recording a business activity
(3) Confirming an action or triggering a response
(4) Maintaining a data
Ans. (3) Confirming an action or triggering a response

Q.202._____ means that the data used during the execution of a transaction cannot be used by a second transaction until the first one is completed.
(1) Consistency (2) Atomicity
(3) Durability (4) Isolation
Ans. (4) Isolation

Q.216.A transaction may not always complete its execution successfully. Such a transaction is termed

Q.171.Consider a relation $R(A, B, C, D, E, F)$ and the given FDs
$\{AB \rightarrow C, C \rightarrow D, B \rightarrow E, DE \rightarrow F, F \rightarrow AB\}$
Choose the incorrect option:
(1) AB is a candidate key of R
(2) BC is a candidate key of R
(3) F is a candidate key of R
(4) CD is a candidate key of R
Ans. (4) CD is a candidate key of R

Q.172.Consider a relation R(part_no, part_description, part_price, supplier_id supplier_address).
The following FDs hold on R:
part_no → part_description
supplier_id → supplier_address
{part_no, supplier_id} → part_price
Find the candidate key of relation R:
(1) part_no (2) {supplier_id, part_no}
(3) supplier_id (4) None of the above
Ans. (2) {supplier_id, part_no}

Q.173.Consider the relation given in the Question 5, and find out which of following statement is TRUE about R
(1) R is in 1NF only
(2) R is in 3NF but not in BCNF
(3) R is in 2NF but not in 3NF
(4) R is in BCNF
Ans. (1) R is in 1NF only

Q.174.Consider a relation $R(A, B, C, D, E, F)$ and the FD set given below
$$F1 = \{AB \rightarrow C, B \rightarrow D, D \rightarrow E, AE \rightarrow F, C \rightarrow A\}$$
Choose the correct option :
(1) R is in 2NF, but not in 3NF
(2) R is not in 2NF
(3) R is in 3NF, but not in BCNF
(4) R is in BCNF
Ans. (2) R is not in 2NF

Q.175.We use _____ to find functional dependencies (FDs) logically implied by the given set of FDs
Choose the most appropriate option :
(1) Trivial FDs (2) Non-Trivial FDs
(3) Armstrong axioms (4) Axioms of sets
Ans. (3) Armstrong axioms

Q.176.Consider the following statements regarding a relational scheme R and a set of FDs F on it:
Statement S1: Lossless, dependency-preserving decomposition of R into 3NF relations wrt F is always possible
Statement S2: Lossless, dependency-preserving decomposition of R into BCNF relations wrt F is always possible.
Choose the correct option:
(1) S1: True; S2: True
(2) S1: True; S2: False
(3) S1: False; S2: True
(4) S1: False; S2: False
Ans. (2) S1: True; S2: False

Q.177.The functional dependencies for a relation $R(A, B, C, D, E, F, G, H, I)$ are
$$S = \{AD \rightarrow G, A \rightarrow F, H \rightarrow B, FB \rightarrow D, D \rightarrow C, I \rightarrow AH\}$$
Which of the following represents $I+$?
(1) $\{I, A, H, F, B, C, D, G\}$ (2) $\{I, A, H, F, B\}$
(3) $\{I, A, H, F\}$ (4) $\{I, A, H\}$
Ans. (1) $\{I, A, H, F, B, C, D, G\}$

Q.178.Consider the following statements:
Statement- S1: Armstrong axioms allow us to compute all elements of F+ for any given F
Statement- S2: Armstrong axioms may sometimes generate an incorrect functional dependency
Choose the correct option:
(1) S1: True; S2: True (2) S1: True; S2: False
(3) S1: False; S2: True (4) S1: False; S2: False
Ans. (2) S1: True; S2: False

Q.179.The goal of normalization is to ___?
(1) Get stable data structure
(2) Increase number of relation
(3) Increase redundancy

Q.242.A system is in a _____ state if there exists a set of transactions such that every transaction in the set is waiting for another transaction in the set.
(1) Idle (2) Waiting
(3) Deadlock (4) Ready
Ans. (3) Deadlock

Q.243.The deadlock state can be changed back to stable state by using _____ statement.
(1) Commit (2) Rollback
(3) Savepoint (4) Deadlock
Ans. (2) Rollback

Q.244.What are the ways of dealing with deadlock?
(1) Deadlock prevention (2) Deadlock recovery
(3) Deadlock detection (4) All of the mentioned
Ans. (4) All of the mentioned

Q.245.When transaction Ti requests a data item currently held by *Tj*, *Ti* is allowed to wait only if it has a timestamp smaller than that of *Tj* (that is, *Ti* is older than *Tj*). Otherwise, *Ti* is rolled back (dies). This is
(1) Wait-die (2) Wait-wound
(3) Wound-wait (4) Wait
Ans. (1) Wait-die

Q.246.When transaction Ti requests a data item currently held by *Tj*, *Ti* is allowed to wait only if it has a timestamp larger than that of *Tj* (that is, Ti is younger than *Tj*). Otherwise, *Tj* is rolled back (Tj is wounded by *Ti*). This is
(1) Wait-die (2) Wait-wound
(3) Wound-wait (4) Wait
Ans. (3) Wound-wait

Q.247.The situation where the lock waits only for a specified amount of time for another lock to be released is
(1) Lock timeout (2) Wait-wound
(3) Timeout (4) Wait
Ans. (1) Lock timeout

Q.248.The deadlock in a set of a transaction can be determined by
(1) Read-only graph (2) Wait graph
(3) Wait-for graph (4) All of the mentioned
Ans. (1) Read-only graph

Q.249.A deadlock exists in the system if and only if the wait-for graph contains a _____
(1) Cycle (2) Direction
(3) Bi-direction (4) Rotation
Ans. (1) Cycle

Q.250.Selecting the victim to be rollbacked to the previous state is determined by the minimum cost. The factors determining cost of rollback is
(1) How long the transaction has computed, and how much longer the transaction will compute before it completes its designated task
(2) How many data items the transaction has used
(3) How many more data items the transaction needs for it to complete
(4) All of the mentioned
Ans. (4) All of the mentioned

Q.251._____ rollback requires the system to maintain additional information about the state of all the running transactions.
(1) Total (2) Partial
(3) Time (4) Commit
Ans. (2) Partial

Q.252.In a granularity hierarchy the highest level represents the
(1) Entire database (2) Area
(3) File (4) Record
Ans. (1) Entire database

Q.253.In a database the file is contained in _____
(1) Entire database
(2) Two area
(3) One area
(4) more than one area
Ans. (3) One area

Q.229.A transaction processing system is also called as _____
(1) Processing monitor (2) Transaction monitor
(3) TP monitor (4) Monitor
Ans. (3) TP monitor

Q.230. _____ servers which is widely used in relational database systems.
(1) Data servers (2) Transaction servers
(3) Query servers (4) Client servers
Ans. (2) Transaction servers

Q.231.If a distributed transactions are well-formed and 2-phasedlocked, then ..... is the correct locking mechanism in distributed transaction as well as in centralized databases.
(1) Two phase locking (2) Three phase locking
(3) Transaction locking (4) Well-formed locking
Ans. (1) Two phase locking

Q.232.In order to maintain transactional integrity and database consistency, what technology does a DBMS deploy?
(1) Triggers (2) Pointers
(3) Locks (4) Cursors
Ans. (3) Locks

Q.233.A lock that allows concurrent transactions to access different rows of the same table is known as a
(1) Database-level lock (2) Table-level lock
(3) Page-level lock (4) Row-level lock
Ans. (4) Row-level lock

Q.234.Which of the following are introduced to reduce the overheads caused by the log-based recovery?
(1) Checkpoints (2) Indices
(3) Deadlocks (4) Locks
Ans. (1) Checkpoints

Q.235.Which of the following protocols ensures conflict serializability and safety from deadlocks?
(1) Two-phase locking protocol
(2) Time-stamp ordering protocol
(3) Graph based protocol
(4) None of the mentioned
Ans. (2) Time-stamp ordering protocol

Q.236.Which of the following is the block that is not permitted to be written back to the disk?
(1) Dead code (2) Read only
(3) Pinned (4) Zapped
Ans. (3) Pinned

Q.237.If transaction Ti gets an explicit lock on the file Fc in exclusive mode, then it has an ..... _____ on all the records belonging to that file.
(1) Explicit lock in exclusive mode
(2) Implicit lock in shared mode
(3) Explicit lock in shared mode
(4) Implicit lock in exclusive mode
Ans. (4) Implicit lock in exclusive mode

Q.238.Which refers to a property of computer to run several operation simultaneously and possible as computers await response of each other
(1) Concurrency (2) Deadlock
(3) Backup (4) Recovery
Ans. (1) Concurrency

Q.239.All lock information is managed by a _____ which is responsible for assigning and policing the locks used by the transactions.
(1) Scheduler (2) DBMS
(3) Lock manager (4) Locking agent
Ans. (3) Lock manager

Q.240.The _____ lock allows concurrent transactions to access the same row as long as they require the use of different fields within that row.
(1) Table-level (2) Page-level
(3) Row-level (4) Field-level
Ans. (4) Field-level

Q.241.Which of the following is a procedure for acquiring the necessary locks for a transaction where all necessary locks are acquired before any are released?
(1) Record controller (2) Exclusive lock
(3) Authorization rule (4) Two phase lock.
Ans. (4) Two phase lock.

(1) View (2) Commit
(3) Rollback (4) Flashback

Ans. (3) Rollback

Q.216. Consider the following set of action:
(1) Commit;
(2) ROLLBACK;
What does Rollback do?
(1) Undoes the transactions before commit
(2) Clears all transactions
(3) Redoes the transactions before commit
(4) No action

Ans. (4) No action

Q.217. In case of any shut down during transaction before commit which of the following statement is done automatically?
(1) View (2) Commit
(3) Rollback (4) Flashback

Ans. (3) Rollback

Q.218. In order to maintain the consistency during transactions, database provides
(1) Commit (2) Atomic
(3) Flashback (4) Retain

Ans. (2) Atomic

Q.219. Transaction processing is associated with everything below except
(1) Conforming an action or triggering a response
(2) Producing detail summary or exception report
(3) Recording a business activity
(4) Maintaining a data

Ans. (1) Conforming an action or triggering a response

Q.220. A transaction completes its execution is said to be
(1) Committed (2) Aborted
(3) Rolled back (4) Failed

Ans. (1) Committed

Q.221. Which of the following is used to get back all transactions back after rollback?

(1) Commit (2) Rollback
(3) Flashback (4) Redo

Ans. (3) Flashback

Q.222. _____ will undo all statements up to commit?
(1) Transaction (2) Flashback
(3) Rollback (4) Abort

Ans. (3) Rollback

Q.223. Commit and rollback are related to.....
(1) Data integrity (2) Data consistency
(3) Data sharing (4) Data security

Ans. (2) Data consistency

Q.224. The transaction wants to edit the data item is called as_____
(1) Exclusive Mode (2) Shared Mode
(3) Inclusive Mode (4) Unshared Mode

Ans. (1) Exclusive Mode

Q.225. For committing a transaction, the DBMS might discard all the records.
(1) After image (2) Before image
(3) Log (4) Redo log

Ans. (2) Before image

Q.226. A sophisticated locking mechanism known as 2-phase locking which includes Growing phase and_____
(1) Shrinking Phase (2) Release phase
(3) Commit phase (4) Acquire Phase

Ans. (1) Shrinking Phase

Q.227. A Transaction ends
(1) Only when it is Committed.
(2) Only when it is Rolled-back
(3) When it is Committed or Rolled-back
(4) Only when it is initialized

Ans. (3) When it is Committed or Rolled-back

Q.228. In _____, each transactions there is a first phase during which new lock are acquired.
(1) Shrinking Phase (2) Release phase
(3) Commit phase (4) Growing Phase

Ans. (4) Growing Phase

Q.254.If a node is locked in an intention mode, explicit locking is done at a lower level of the tree. This is called
(1) Intention lock modes (2) Explicit lock
(3) Implicit lock (4) Exclusive lock
Ans. (1) Intention lock modes

Q.255.If a node is locked in _____ explicit locking is being done at a lower level of the tree, but with only shared-mode locks.
(1) Intention lock modes
(2) Intention-shared-exclusive mode
(3) Intention-exclusive (IX) mode
(4) Intention-shared (IS) mode
Ans. (1) Intention lock modes

Q.256.If a node is locked in _____ the subtree rooted by that node is locked explicitly in shared mode, and that explicit locking is being done at a lower level with exclusive-mode locks.
(1) Intention lock modes
(2) shared and intention-exclusive (SIX) mode
(3) Intention-exclusive (IX) mode
(4) Intention-shared (IS) mode
Ans. (2) shared and intention-exclusive (SIX) mode

Q.257. _____ denotes the largest timestamp of any transaction that executed write(Q) successfully.
(1) W-timestamp(Q) (2) R-timestamp(Q)
(3) RW-timestamp(Q) (4) WR-timestamp(Q)
Ans. (1) W-timestamp(Q)

Q.258.The _____ ensures that any conflicting read and write operations are executed in timestamp order.
(1) Timestamp-ordering protocol
(2) Timestamp protocol
(3) W-timestamp
(4) R-timestamp
Ans. (1) Timestamp-ordering protocol

Q.259.The _____ requires that each transaction Ti executes in two or three different phases in its lifetime, depending on whether it is a read-only or an update transaction.
(1) Validation protocol
(2) Validation-based protocol
(3) Timestamp protocol
(4) Timestamp-ordering protocol
Ans. (1) Validation protocol

Q.260.This validation scheme is called the _____ schema since transactions execute optimistically, assuming they will be able to finish execution and validate at the end.
(1) Validation protocol
(2) Validation-based protocol
(3) Timestamp protocol
(4) Optimistic concurrency-control
Ans. (1) Validation protocol

Q.261.A condition that occurs when two transactions wait for each other to unlock data is known as *a(n)*
(1) Shared lock (2) Exclusive lock
(3) Binary lock (4) Deadlock
Ans. (4) Deadlock

Q.262.A unit of storage that can store one or more records in a hash file organization is denoted as
(1) Buckets (2) Disk pages
(3) Blocks (4) Nodes
Ans. (1) Buckets

Q.263.A lock that prevents the use of any tables in the database from one transaction while another transaction is being processed is called a
(1) Database-level lock (2) Table-level lock
(3) Page-level lock (4) Row-level lock
Ans. (1) Database-level lock

Q.264.The file organization which allows us to read records that would satisfy the join condition by using one block read is
(1) Heap file organization
(2) Sequential file organization

Q.291.In an E-R diagram an entity set is represent by a
(1) rectangle. (2) ellipse.
(3) diamond box. (4) circle.
Ans. (1) rectangle.

Q.292.The property / properties of a database is / are :
(1) It is an integrated collection of logically related records.
(2) It consolidates separate files into a common pool of data records.
(3) Data stored in a database is independent of the application programs using it.
(4) All of the above.
Ans. (4) All of the above.

Q.293.The DBMS language component, which can be embedded in a program, is
(1) The data definition language (DDL).
(2) The data manipulation language (DML).
(3) The database administrator (DBA).
(4) A query language.
Ans. (2) The data manipulation language (DML).

Q.294.An advantage of the database 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
Ans. (3) data is integrated and can be accessed by multiple programs.

Q.295.E-R model uses this symbol to represent weak entity set ?
(1) Dotted rectangle.
(2) Diamond
(3) Doubly outlined rectangle
(4) None of these
Ans. (3) Doubly outlined rectangle

Q.296.DBMS helps achieve
(1) Data independence
(2) Centralized control of data

(3) Neither (1) nor (2)
(4) both (1) and (2)
Ans. (4) both (1) and (2)

Q.297.In E-R Diagram relationship type is represented by
(1) Ellipse (2) Dashed ellipse
(3) Rectangle (4) Diamond
Ans. (4) Diamond

Q.298.In E-R diagram generalization is represented by
(1) Ellipse (2) Dashed ellipse
(3) Rectangle (4) Triangle
Ans. (4) Triangle

Q.299.Which two files are used during operation of the DBMS?
(1) Query languages and utilities
(2) DML and query language
(3) Data dictionary and transaction log
(4) Data dictionary and query language
Ans. (3) Data dictionary and transaction log

Q.300.In an E-R diagram double lines indicate
(1) Total participation.
(2) Multiple participation.
(3) Cardinality N.
(4) None of the above.
Ans. (1) Total participation.

Q.301.When an E-R diagram is mapped to tables, the representation is redundant for
(1) weak entity sets
(2) weak relationship sets
(3) strong entity sets
(4) strong relationship sets
Ans. (2) weak relationship sets

Q.302.In an E-R, *Y* is the dominant entity and *X* is a subordinate entity. Then which of the following is incorrect :
(1) Operationally, if *Y* is deleted, so is *X*
(2) existence is dependent on *Y*.
(3) Operationally, if *X* is deleted, so is *Y*.

(1) Logical operation (2) Redo operation
(3) Logical undo operation (4) Undo operation
Ans. (1) Logical operation

Q.277.Which of the following is used for undo operations alone?
(1) Physical log records
(2) Physical logging
(3) Logical logging
(4) Physical logging and Physical log records
Ans. (3) Logical logging

Q.278.Redo operations are performed exclusively using
(1) Logical logging
(2) Physical logging
(3) Physical log records
(4) Both Physical logging and Physical log records
Ans. (4) Both Physical logging and Physical log records

Q.279.To perform logical redo or undo, the database state on disk must be operation _____ that is, it should not have partial effects of any operation.
(1) Persistent (2) Resistant
(3) Consistent (4) None of the mentioned
Ans. (3) Consistent

Q.280.An operation is said to be _____ if executing it several times in a row gives the same result as executing it once.
(1) Idempotent (2) Changed
(3) Repetitive (4) All of the above
Ans. (1) Idempotent

Q.281.Immediate database modification technique uses
(1) Undo but no redo (2) Redo but no undo
(3) Both undo and redo (4) Neither undo nor redo
Ans. (3) Both undo and redo

Q.282.Shadow paging has
(1) No Redo (2) No Undo
(3) Redo but No Undo (4) Neither Redo nor Undo
Ans. (1) No Redo

Q.283.If _____ are not obtained in undo operation will cause problem in undo-phase.

(1) Higher-level lock (2) Lower-level lock
(3) Read only lock (4) Read write
Ans. (2) Lower-level lock

Q.284.Which one is not component of Oracle's data-block
(1) Table directory (2) Row directory
(3) Free space (4) Query directory
Ans. (4) Query directory

Q.285.The memory buffer that contains data and control information for a server process is known as
(1) Program Global Area (2) Buffer Space
(3) Recovery process (4) Processes monitor
Ans. (1) Program Global Area

Q.286.A collection of interrelated records is called a
(1) Database
(2) Spreadsheet
(3) Text file
(4) Management information system
Ans. (1) Database

Q.287.A database management system
(1) is a collection of programs for managing data in a single file
(2) can do more than a record management system
(3) allows simultaneous access to multiple file
(4) both (b) &(c)
Ans. (4) both (b) &(c)

Q.288.What is a database?
(1) It is a collection of data arranged in rows
(2) It is a collection of data arranged in rows & columns
(3) It is a collection of data arranged in columns
(4) All of the above
Ans. (3) It is a collection of data arranged in columns

Q.289.The view of total database content is
(1) Conceptual view. (2) Internal view.
(3) External view. (4) Physical View.
Ans. (1) Conceptual view

Q.290.In an E-R diagram attributes are represented by
(1) rectangle. (2) square.
(3) ellipse. (4) triangle.
Ans. (3) ellipse.

(3) Clustering file organization
(4) Hash files organization
Ans. (3) Clustering file organization

Q.265. _____ means that data used during the execution of a transaction cannot be used by a second transaction until the first one is completed.
(1) Serializability (2) Atomicity
(3) Isolation (4) Time stamping
Ans. (3) Isolation

Q.266. The extent of the database resource that is included with each lock is called the level of
(1) Impact (2) Granularity
(3) Management (4) DBMS control
Ans. (2) Granularity

Q.267. DBMS periodically suspends all processing and synchronizes its files and journals through the use of
(1) Checkpoint facility (2) Backup facility
(3) Recovery manager (4) Database change log
Ans. (1) Checkpoint facility

Q.268. The log is a sequence of _____ recording all the update activities in the database.
(1) Log records (2) Records
(3) Entries (4) Redo
Ans. (1) Log records

Q.269. In the _____ scheme, a transaction that wants to update the database first creates a complete copy of the database.
(1) Shadow Paging (2) Shadow copy
(3) Update log records (4) All of the mentioned
Ans. (2) Shadow copy

Q.270. If a transaction does not modify the database until it has committed, it is said to use the _____ technique.
(1) Deferred-modification
(2) Late-modification
(3) Immediate-modification
(4) Undo
Ans. (1) Deferred-modification

Q.271. If database modifications occur while the transaction is still active, the transaction is said to use the _____ technique.
(1) Deferred-modification
(2) Late-modification
(3) Immediate-modification
(4) Undo
Ans. (3) Immediate-modification

Q.272. _____ using a log record sets the data item specified in the log record to the old value.
(1) Deferred-modification
(2) Late-modification
(3) Immediate-modification
(4) Undo
Ans. (4) Undo

Q.273. In the _____ phase, the system replays updates of all transactions by scanning the log forward from the last checkpoint.
(1) Repeating (2) Redo
(3) Replay (4) Undo
Ans. (2) Redo

Q.274. The actions which are played in the order while recording it is called _____ history.
(1) Repeating (2) Redo
(3) Replay (4) Undo
Ans. (1) Repeating

Q.275. Which lock should be obtained to prevent a concurrent transaction from executing a conflicting read, insert or delete operation on the same key value.
(1) Higher-level lock (2) Lower-level lock
(3) Read only lock (4) Read write
Ans. (1) Higher-level lock

Q.276. Once the lower-level lock is released, the operation cannot be undone by using the old values of updated data items, and must instead be undone by executing a compensating operation; such an operation is called

(4) who owns or is responsible for the data

Ans. (1) the size of the disk storage disk

Q.330.Example of non-numeric data is

(1) Bank balance (2) Examination score
(3) Employee address (4) All of these

Ans. (3) Employee address

Q.331.Data independency in DBMS is known as _____

(1) Data modelling (2) Data hiding
(3) Data consistency (4) Data capturing

Ans. (1) Data modelling

Q.332.A datawarehouse

(1) contains numerous naming conventions and formats
(2) is organized around important subject areas
(3) contains only current data
(4) can be updated by end users

Ans. (2) is organized around important subject areas

Q.333.The following are components of a database except _____

(1) reports (2) indexes
(3) metadata (4) user data

Ans. (1) reports

Q.334.The smallest logical data entity is called a data item or data

(1) Field (2) Collection
(3) Base (4) Bank

Ans. (1) Field

Q.335. _____ represents raw facts, whereas _____ is data made meaningful.

(1) Data, information (2) Information, reporting
(3) Information, bits (4) Records, bytes

Ans. (1) Data, information

Q.336.Which of the following places the common data elements in order from smallest to largest?

(1) Character, file record, field, database
(2) Character, record, field, file, database
(3) Bit, byte, character, record, field, file, database
(4) Character, field, record, file, database

Ans. (4) Character, field. record, file, database

Q.337.A collection of conceptual tools for describing data, relationships, semantics and constraints is referred to as

(1) DBMS (2) Data model
(3) Database (4) ER model

Ans. (2) Data model

Q.338.The database administrator is, in effect, the coordinator between them _____ and the _____

(1) Database, users
(2) Application program; database
(3) DBMS; database
(4) Application programs; users

Ans. (1) Database, users

Q.339.In order to understand DBMS, it is important to understand?

(1) The physical schema
(2) One sub schema
(3) All sub schema that are system support
(4) Both (a) and (b)

Ans. (2) One sub schema

Q.340.Which of the following component of a computer system is the most important to a database management system?

(1) High speed, large capacity disk
(2) High resolution video display
(3) Mouse
(4) Printer

Ans. (1) High speed, large capacity disk

Q.341.Which database handles full text data, image, audio and video?

(1) Multimedia database
(2) Video on demand database
(3) Graphics database
(4) Transaction database

Ans. (1) Multimedia database

Q.342.The most popular commercial DBMS is

(1) Oracle (2) MySQL
(3) Microsoft Access (4) Microsoft SQL Server

Ans. (1) Oracle

Q.317.It is an abstraction through which relationships are treated as higher level entities
(1) Generalization. (2) Specialization.
(3) Aggregation. (4) Inheritance.
Ans. (3) Aggregation.

Q.318.When an E-R diagram is mapped to tables, the representation is redundant for
(1) weak entity sets
(2) weak relationship sets
(3) strong entity sets
(4) strong relationship sets
Ans. (2) weak relationship sets

Q.319.Relations produced from an E-R model will always be
(1) First normal form. (2) Second normal form.
(3) Third normal form. (4) Fourth normal form.
Ans. (1) First normal form.

Q.320.Relationships among relationships can be represented in an-E-R model using
(1) Aggregation (2) Association
(3) Weak entity sets (4) Weak relationship sets
Ans. (1) Aggregation

Q.321.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.
(4) Definition of physical structure of database system.
Ans. (3) Manipulation & processing of database.

Q.322.DBMS helps achieve
(1) Data independence
(2) Centralized control of data
(3) Neither 1 nor 2
(4) Both 1 and 2
Ans. (4) Both 1 and 2

Q.323.The following are functions of a DBMS except _____
(1) creating and processing forms
(2) creating databases
(3) processing data

(4) administrating databases
Ans. (1) creating and processing forms

Q.324.In a large DBMS
(1) each user can access every sub schema
(2) each sub schema contains every field in the logical schema
(3) each user can "see" only a small part of the entire database
(4) all of these
Ans. (3) each user can "see" only a small part of the entire database

Q.325.In a database, a network structure
(1) allows many-to-many relationship
(2) is a physical representation of the data
(3) allows only one-to-one relationship
(4) none of these
Ans. (1) allows many-to-many relationship

Q.326.Which of the following is at the highest level in the hierarchy of data organization?
(1) Database (2) Data bank
(3) Data file (4) Data record
Ans. (1) Database

Q.327._____ provides total solutions to reduce data redundancy, inconsistency, dependence and unauthorized access of data.
(1) Tables (2) DBMS
(3) Production passwords (4) Database
Ans. (2) DBMS

Q.328.What does the data dictionary identify?
(1) Field formats
(2) Field types
(3) Field names
(4) All of the above
Ans. (4) All of the above

Q.329.A data dictionary doesn't provide information about _____
(1) the size of the disk storage disk
(2) where data is located
(3) how owns or is responsible for the data

(4) Operationally, if X is deleted, & remains the same.

Ans. (3) Operationally, if X is deleted, so is Y.

Q.303.If an entity can belong to only one lower level entity then the constraint is

(1) disjoint (2) partial
(3) overlapping (4) single

Ans. (2) partial

Q.304.The part of a database management system which ensures that the data remains in a consistent state is.

(1) authorization and integrity manager
(2) buffer manager
(3) transaction manager
(4) file manager

Ans. (3) transaction manager

Q.305.The details of a record are called .

(1) field (2) record layout
(3) description (4) file name

Ans. (1) field

Q.306. _____ data type can store unstructured data

(1) RAW (2) CHAR
(3) NUMERIC (4) VARCHAR

Ans. (1) RAW

Q.307.A field that can identify a record uniquely is called _____

(1) secondary key (2) primary key
(3) record key (4) data key

Ans. (2) primary key

Q.308. _____ A contains the address of another record

(1) field (2) data item (3) key (4) pointer

Ans. (4) pointer

Q.309.A chain of records is a _____ created by using pointers.

(1) physical sequence (2) logical sequence
(3) connection (4) organisation

Ans. (2) logical sequence

Q.310.A _____ is a table of records arranged in particular fashion.

(1) file
(2) one-way chain
(3) two-way chain
(4) None of the above

Ans. (1) file

Q.311.Architecture of the database can be viewed as

(1) two levels. (2) four levels.
(3) three levels. (4) one level.

Ans. (3) three levels.

Q.312.In E-R Diagram derived attribute are represented by

(1) Ellipse (2) Dashed ellipse
(3) Rectangle (4) Triangle

Ans. (2) Dashed ellipse

Q.313.DBMS is a collection of _____ that enables user to create and maintain a database.

(1) Keys (2) Translators
(3) Program (4) Language Activity

Ans. (3) Program

Q.314.An advantage of the database 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

Ans. (3) data is integrated and can be accessed by multiple programs

Q.315 _____.is critical in formulating database design.

(1) Row-column order
(2) Number of tables
(3) Functional dependency
(4) None of the choices offered

Ans. (3) Functional dependency

Q.316. _____.technique helps us model real-world systems in the form of software constructs.

(1) Relationship design
(2) Attribute design
(3) Database design
(4) Entity/Relationship modeling.

Ans. (4) Entity/Relationship modeling.

(2) needs data volume and processing frequencies to determine the size of the database.
(3) involves modelling independent of the DBMS.
(4) is designing the relational model.

Ans. (3) involves modelling independent of the DBMS.

Q.370.Which one of the following statements is false?

(1) The data dictionary is normally maintained by the database administrator.
(2) Data elements in the database can be modified by changing the data dictionary.
(3) The data dictionary contains the name and description of each data element.
(4) The data dictionary is a tool used exclusively by the database administrator.

Ans. (2) Data elements in the database can be modified by changing the data dictionary.

Q.371.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.

Ans. (2) DDL and DML.

Q.372.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).

Ans. (4) both (B) and (C).

Q.373.The result of the UNION operation between $R1$ and $R2$ is a relation that includes

(1) all the tuples of R1
(2) all the tuples of R2
(3) all the tuples of R1 and R2
(4) all the tuples of R1 and R2 which have common columns

Ans. (4) all the tuples of R1 and R2 which have common columns

Q.374.An instance of relational schema R (A, B, C) has distinct values of A including NULL values. Which one of the following is true?

(1) A is a candidate key
(2) A is not a candidate key
(3) A is a primary Key
(4) Both (1) and (3)

Ans. (2) A is not a candidate key

Q.375.A logical schema

(1) is the entire database
(2) is a standard way of organizing information into a accessible part
(3) describe how data is actually stored on disk
(4) none of these

Ans. (4) none of these

Q.376.Consider the join of a relation R with relation S. If R has m tuples and S has n tuples, then the maximum size of join is:

(1) mn (2) $m+n$
(3) $(m+n)/2$ (4) $2(m+n)$

Ans. (1) mn

Q.377.Which of the following relational algebra operations do not require the participating tables to be union-compatible?

(1) Union (2) Intersection
(3) Difference (4) Join

Ans. (4) Join

Q.378.According to the levels of abstraction, the schema at the intermediate level is called

(1) Logical schema.
(2) Conceptual schema.
(3) Subschema.
(4) Super schema.

Ans. (2) Conceptual schema.

Q.379.What is data integrity?

(1) It is the data contained in database that is non redundant.
(2) It is the data contained in database that is accurate and consistent.
(3) It is the data contained in database that is secured.
(4) It is the data contained in database that is shared.

Ans. (2) It is the data contained in database that is accurate and consistent.

(3) describes how data is actually stored on disk. (4) both (1) and (3)

Ans. (1) is the entire database.

Q.358.A subschema expresses

(1) the logical view. (2) the physical view.
(3) the external view. (4) all of the above.

Ans. (3) the external view.

Q.359.In a relation database, every tuples divided into the fields are known as the _____

(1) Queries (2) Domains
(3) Relations (4) All of the above

Ans. (2) Domains

Q.360.State true or false.

(i) The select operator is not a unary operator.
(ii) The project operator chooses a subset of attributes or columns of a relation.

(1) i-True, ii-False (2) i-True, ii-True
(3) i-False, ii-True (4) i-False, ii-False

Ans. (3) i-False, ii-True

Q.361.Which of the following is true for relational calculus?

(1) $\forall x(P(x)) \equiv \leftarrow (\exists x)(\leftarrow P(x))$
(2) $\forall x(P(x)) \equiv \leftarrow (\exists x)(P(x))$
(3) $\forall x(P(x)) \equiv (\exists x)(\leftarrow P(x))$
(4) $\forall x(P(x)) \equiv (\exists x)(P(x))$

Ans. (1) $\forall x(P(x)) \equiv \leftarrow (\exists x)(\leftarrow P(x))$

Q.362.We can use the following three rules to find logically implied functional dependencies. This collection of rules is called

(1) Axioms
(2) Armstrong's axioms
(3) Armstrong
(4) Closure

Ans. (2) Armstrong's axioms

Q.363.The relation employee(ID,name,street,Credit,street,city,salary) is decomposed into
employee1 (ID, name)

employee2 (name, street, city, salary)
This type of decomposition is called

(1) Lossless decomposition
(2) Lossless-join decomposition
(3) All of the mentioned
(4) None of the mentioned

Ans. (4) None of the mentioned

Q.364.Consider a relation R(A,B,C,D,E) with the following functional dependencies:
ABC -> DE **and**
D -> AB
The number of superkeys of *R* is:

(1) 2 (2) 7
(3) 10 (4) 12

Ans. (3) 10

Q.365.Relational Algebra is a _____ query language that takes two relations as input and produces another relation as an output of the query.

(1) Relational (2) Structural
(3) Procedural (4) Fundamental

Ans. (3) Procedural

Q.366.Which of the following is used to denote the selection operation in relational algebra?

(1) Pi (Greek) (2) Sigma (Greek)
(3) Lambda (Greek) (4) Omega (Greek)

Ans. (2) Sigma (Greek)

Q.367.The result which operation contains all pairs of tuples from the two relations, regardless of whether their attribute values match.

(1) Join (2) Cartesian product
(3) Intersection (4) Set difference

Ans. (2) Cartesian product

Q.368.The way a particular application views the data from the database that the application uses is a

(1) module. (2) relational model.
(3) schema. (4) sub schema.

Ans. (4) sub schema.

Q.369.Conceptual design

(1) is a documentation technique.

Q.343.Which of the following is not a type of database?
(1) Relational (2) Hierarchical
(3) Network (4) Transition
Ans. (4) Transition

Q.344.The overall description of a database is called _____:
(1) Data definition (2) Data manipulation
(3) Data integrity (4) Database schema
Ans. (4) Database schema

Q.345.Which is not the feature of database :
(1) Data redundancy (2) Independence
(3) Flexibility (4) Data Integrity
Ans. (1) Data redundancy

Q.346.In the relational modes, cardinality is termed as :
(1) Number of tuples.
(2) Number of attributes.
(3) Number of tables.
(4) Number of constraints.
Ans. (1) Number of tuples.

Q.347.Relational calculus is a
(1) Procedural language.
(2) Non- Procedural language.
(3) Data definition language.
(4) High level language.
Ans. (2) Non- Procedural language.

Q.348.Cartesian product in relational algebra is
(1) a Unary operator. (2) a Binary operator.
(3) a Ternary operator. (4) not defined.
Ans. (2) a Binary operator.

Q.349.In tuple relational calculus P1->P2 is equivalent t
(1) $\neg P_1 \vee P_2$ (2) $P_1 \vee P_2$
(3) $P_1 \wedge P_2$ (4)
Ans. (1) $\neg P_1 \vee P_2$

Q.350.Relational Algebra is
(1) Data Definition Language
(2) Meta Language
(3) Procedural query Language

(4) None of the above
Ans. (3) Procedural query Language

Q.351.Relational Algebra does not have
(1) Selection operator. (2) Projection operator.
(3) Aggregation operators. (4) Division operator.
Ans. (3) Aggregation operators.

Q.352.Which of the operations constitute a basic set of operations for manipulating relational data?
(1) Predicate calculus (2) Relational calculus
(3) Relational algebra (4) None of the above
Ans. (3) Relational algebra

Q.353.A relational algebra operation annotated with instructions on how to evaluate it is called _____.
(1) Evaluation algebra
(2) Evaluation plan
(3) Evaluation primitive
(4) Evaluation engine
Ans. (3) Evaluation primitive

Q.354.Using Relational Algebra the query that finds customers, who have a balance of over 1000 is
(1) $\prod_{\text{Customer\_name}}(\sigma_{\text{balance}>1000}(\text{Deposit}))$
(2) $\sigma_{\text{Customer\_name}}(\prod_{\text{balance}>1000}(\text{Deposit}))$
(3) $\prod_{\text{Customer\_name}}(\sigma_{\text{balance}>1000}(\text{Borrow}))$
(4) $\sigma_{\text{Customer\_name}}(\prod_{\text{balance}>1000}(\text{Borrow}))$
Ans. (1) $\prod_{\text{Customer\_name}}(\sigma_{\text{balance}>1000}(\text{Deposit}))$

Q.355.The operation which is not considered a basic operation of relational algebra is
(1) Join. (2) Selection.
(3) Union. (4) Cross product.
Ans. (1) Join.

Q.356.The database schema is written in
(1) HLL (2) DML (3) DDL (3) DCL
Ans. (3) DDL

Q.357.A logical schema
(1) is the entire database.
(2) is a standard way of organizing information into accessible parts.

(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
Ans. (1) Parent-Child relationship between the tables that connect them

Q.408.A _____ represents the number of entities to which another entity can be associated
(1) mapping cardinality (2) table
(3) schema (4) information
Ans. (1) mapping cardinality

Q.409.Which two files are used during operation of the DBMS
(1) Query languages and utilities
(2) DML and query language
(3) Data dictionary and transaction log
(4) Data dictionary and query language
Ans. (3) Data dictionary and transaction log

Q.410.A _____ is a set of column that identifies every row in a table.
(1) composite key (2) candidate key
(3) foreign key (4) super key
Ans. (4) super key

Q.411. _____ table store information about database or about the system.
(1) SQL (2) Nested
(3) System (4) None of these
Ans. (3) System

Q.412. _____ 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
Ans. (2) Schema

Q.413. _____ clause is an additional filter that is applied to the result.
(1) Select (2) Group-by
(3) Having (4) Order by
Ans. (3) Having

Q.414.A logical schema
(1) is the entire database
(2) is a standard way of organizing information into accessible parts.
(3) Describes how data is actually stored on disk.
(4) All of the above
Ans. (2) is a standard way of organizing information into accessible parts.

Q.415. _____ is a full form of SQL.
(1) Standard query language
(2) Sequential query language
(3) Structured query language
(4) Server side query language
Ans. (3) Structured query language

Q.416 A relational database developer refers to a record as
(1) a criteria (2) a relation
(3) a tuple (4) an attribute
Ans. (3) a tuple

Q.417. _____ keyword is used to find the number of values in a column.
(1) TOTAL (2) COUNT (3) ADD (4) SUM
Ans. (2) COUNT

Q.418.Key to represent relationship between tables is called
(1) primary key (2) secondary key
(3) foreign key (4) none of the above
Ans. (3) foreign key

Q.419.Grant and revoke are ..... statements.
(1) DDL (2) TCL
(3) DCL (4) DML
Ans. (3) DCL

Q.420. _____ command can be used to modify a column in a table
(1) alter (2) update (3) set (3) create
Ans. (1) alter

Q.421.The candidate key is that you choose to identify each row uniquely is called _____.
(1) Alternate Key (2) Primary Key

(1) INSTR (2) SUBSTRING
(3) SUBSTR (4) POS

Ans. (3) SUBSTR

Q.394.Which of the following is TRUE for the System Variable $date$?

(1) Can be assigned to a global variable.
(2) Can be assigned to any field only during design time.
(3) Can be assigned to any variable or field during run time.
(4) Can be assigned to a local variable.

Ans. (2) Can be assigned to any field only during design time.

Q.395.What are the different events in Triggers?

(1) Define, Create (2) Drop, Comment
(3) Insert, Update, Delete (4) Select, Commit

Ans. (3) Insert, Update, Delete

Q.396.Which is the subset of SQL commands used to manipulate Oracle Database Structures, including tables?

(1) Data Definition Language
(2) Data Manipulation Language
(3) Data Described Language
(4) Data Retrieval Language

Ans. (1) Data Definition Language

Q.397.The SQL statement SELECT SUBSTR('123456789', INSTR('abcabcabc','b'), 4) FROM EMP; prints

(1) 6789 (2) 2345
(3) 1234 (4) 456789

Ans. (2) 2345

Q.398.Which of the following SQL command can be used to modify existing data in a database table?

(1) MODIFY (2) UPDATE
(3) CHANGE (4) NEW

Ans. (2) UPDATE

Q.399.When SQL statements are embedded inside 3GL, we call such a program as _____

(1) nested query
(2) nested programming
(3) distinct query
(4) embedded SQL

Ans. (4) embedded SQL

Q.400. _____ provides option for entering SQL queries as execution time, rather than at the development stage.

(1) PL/SQL (2) SQL*Plus
(3) SQL (4) Dynamic SQL

Ans. (4) Dynamic SQL

Q.401.The RDBMS terminology for a row is

(1) tuple (2) relation
(3) attribute (4) degree

Ans. (1) tuple

Q.402.To change column value in a table the _____ command can be used.

(1) create (2) insert
(3) alter (4) update

Ans. (4) update

Q.403.The full form of DDL in Database Management System is

(1) Dynamic Data Language
(2) Detailed Data Language
(3) Data Definition Language
(4) Data Derivation Language

Ans. (3) Data Definition Language

Q.404.To pass on granted privileges to other user the _____ clause is used

(1) create option (2) grant option
(3) update option (4) select option

Ans. (2) grant option

Q.405.A set of possible data values is called

(1) attribute (2) degree
(3) tuple (4) domain

Ans. (4) domain

Q.406. _____ is critical in formulating database design.

(1) row column order
(2) number of tables
(3) functional dependency
(4) normalizing

Ans. (3) functional dependency

Q.407.A primary key if combined with a foreign key creates

Q.380.Which of the following is an attribute that can uniquely identify a row in a table?
(1) Secondary key (2) Candidate key
(3) Foreign key (4) Alternate key
Ans. (2) Candidate key

Q.381.The relationship between DEPARTMENT and EMPLOYEE is a
(1) One-to-one relationship
(2) One-to-many relationship
(3) Many-to-many relationship
(4) Many-to-one relationship
Ans. (2) One-to-many relationship

Q.382.A relational algeb a operation annotated with instructions on how to evaluate it is called _____
(1) Evaluation algebra
(2) Evaluation plan
(3) Evaluation primitive
(4) Evaluation engine
Ans. (3) Evaluation primitive

Q.383.Which of the following is not a set operation
(1) Union (2) Intersection
(3) And operation (4) Set difference
Ans. (3) And operation

Q.384.Which of the following is not a characteristic of a relational database model?
(1) Table
(2) Tree like structure
(3) Complex logical relationship
(4) Records
Ans. (2) Tree like structure

Q.385. _____ operator is used to compare a value to a list of literals values that have been specified.
(1) Like (2) COMPARE
(3) BETWEEN (4) IN
Ans. (1) Like

Q.386.It is an abstraction through which relationships are treated as higher level entities.
(1) Generalization (2) Specialization
(3) Aggregation (4) Inheritance
Ans. (3) Aggregation

Q.387.Cartesian product in relational algebra is
(1) a Unary operator (2) a Binary operator
(3) a Ternary operator (4) not defined
Ans. (2) a Binary operator

Q.388.Ensuring isolation property is the responsibility of the
(1) Recovery-management component of the DBMS
(2) Concurrency-control component of the DBMS
(3) Transaction-management componerit of the DBMS
(4) Buffer management component in DBMS
Ans. (2) Concurrency-control component of the DBMS

Q.389.Which of following is the characteristics of a relational database model?
(1) Tables
(2) records
(3) Complex logical relationship
(4) All of these
Ans. (4) All of these

Q.390.Foreign key is the one in which the _____ of one relation is referenced in another relation.
(1) Primary key (2) Candidate key
(3) Check constraint (4) References
Ans. (1) Primary key

Q.391.In SQL, which command is used to issue multiple CREATE TABLE, CREATE VIEW and GRANT statements in a single transaction?
(1) CREATE PACKAGE (2) CREATE SCHEMA
(3) CREATE CLUSTER (4) All of the above
Ans. (2) CREATE SCHEMA

Q.392.In SQL, the CREATE TABLESPACE is used
(1) to create a place in the database for storage of scheme objects, rollback segments, and naming the data files to comprise the tablespace.
(2) to create a database trigger.
(3) to add/rename data files, to change storage
(4) All of the above
Ans. (1) to create a place in the database for storage of scheme objects, rollback segments, and naming the data files to comprise the tablespace.

Q.393.Which character function can be used to return a specified portion of a character string?

(1) Equi-join (2) Natural join
(3) Outer join (4) Cartesian join
Ans. (1) Equi-join

Q.447.By using the pointer for the first record in the index, we can traverse the.
(1) forward chain (2) reverse chain
(3) opposite chain (4) two-way chain
Ans. (1) forward chain

Q.448.Which of the following is valid SQL for an Index?
(1) CREATE INDEX ID; (2) CHANGE INDEX ID;
(3) ADD INDEX ID; (4) REMOVE INDEX ID;
Ans. (1) CREATE INDEX ID;

Q.449.*R (A,B,C,D)* is a relation. Which of the following does not have a lossless join dependency preserving BCNF decomposition
(1) *A->B, B->CD* (2) *A->B, B->C, C->D*
(3) *AB->C, C->AD* (4) *A->BCD*
Ans. (4) *A->BCD*

Q.450.Consider the join of relation *R* with a relation *S*. If *R* has m tuples and *S* has *n* tuples, then the maximum and minimum size of the join respectively are
(1) $m+n$ and 0 (2) $m+n$ and $|m-n|$
(3) mn and 0 (4) mn and $m+n$
Ans. (3) mn and 0

Q.451.Maximum height of a *B+* tree of order *m* with *n* key values is
(1) Log $m(n)$ (2) $(m+n)/2$
(3) Log $m/2(m+n)$ (4) None of these
Ans. (4) None of these

Q.452.The normal form that is not necessarily dependency preserving is
(1) *2NF* (2) *3NF*
(3) *BCNF* (4) *4NF*
Ans. (1) *2NF*

Q.453.The division operator divides a dividend *A* of degree $m+n$ by a divisor relation *B* of degree *n* and produces a result of degree

(1) $m-1$ (2) $m+1$
(3) $m*m$ (4) $\frac{m}{m}$
Ans. (4) m

Q.454.The _____ is graphical representation of a query
(1) B-Tree (2) graph
(3) Query Tree (4) directed graph
Ans. (3) Query Tree

Q.455.In b-tree the number of keys in each node is _____ than the number of its children.
(1) one less (2) same
(3) one more (4) half
Ans. (1) one less

Q.456.Which normal form is considered adequate for normal relational database design?
(1) 2NF (2) 5NF
(3) 4NF (4) 3NF
Ans. (4) 3NF

Q.457.If $\alpha \rightarrow \beta$ holds then so does
(1) $\gamma\alpha \rightarrow \gamma\beta$ (2) $\alpha \rightarrow\rightarrow \gamma\beta$
(3) both (A) and (B) (4) None of the above
Ans. (1) $\gamma\alpha \rightarrow \gamma\beta$

Q.458.State true or false: A hash index organizes the search keys, with their associated pointers, into a hash file structure
(1) True (2) False
(3) May be (4) Can't say
Ans. (1) True

Q.459.What is a disjoint less constraint?
(1) It requires that an entity belongs to no more than one level entity set.
(2) The same entity may belong to more than one level.
(3) The database must contain an unmatched foreign key value.
(4) An entity can be joined with another entity in the same level entity set.
Ans. (1) It requires that an entity belongs to no more than one level entity set.

Q.435.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 of the above
Ans. (2) Total and partial

Q.436. _____ **data type can store unstructured data**
(1) RAW (2) CHAR
(3) NUMERIC (4) VARCHAR
Ans. (1) RAW

Q.437.'AS' clause is used in SQL for
(1) Selection operation. (2) Rename operation.
(3) Join operation. (4) Projection operation.
Ans. (2) Rename operation.

Q.438.Count function in SQL returns the number of
(1) values. (2) distinct values.
(3) groups. (4) columns.
Ans. (1) values.

Q.439.Which of the following is a legal expression in SQL?
(1) SELECT NULL FROM EMPLOYEE;
(2) SELECT NAME FROM EMPLOYEE;
(3) SELECT NAME FROM EMPLOYEE WHERE SALARY = NULL;
(4) None of the above
Ans. (2) SELECT NAME FROM EMPLOYEE;

Q.440.The clause in SQL that specifies that the query result should be sorted in ascending or descending order based on the values of one or more columns is
(1) View (2) Order by
(3) Group by (4) Having
Ans. (2) Order by

Q.441.In SQL the statement select * from *R*, *S* is equivalent to
(1) Select * from *R* natural join *S*.
(2) Select * from *R* cross join *S*.
(3) Select * from *R* union join *S*.
(4) Select * from *R* inner join *S*.
Ans. (2) Select * from *R* cross join *S*.

Q.442.The keyword to eliminate duplicate rows from the query result in SQL is
(1) DISTINCT (2) NO DUPLICATE
(3) UNIQUE (4) None of the above
Ans. (3) UNIQUE

Q.443.A _____ **is a special kind of a store procedure that executes in response to certain action on the table like insertion, deletion or updation of data.**
(1) Procedures
(2) Triggers
(3) Functions
(4) None of the mentioned
Ans. (2) Triggers

Q.444.The CREATE TRIGGER statement is used to create the trigger. THE _____ **clause specifies the table name on which the trigger is to be attached. The** _____ **specifies that this is an AFTER INSERT trigger.**
(1) for insert, on (2) On, for insert
(3) For, insert (4) Both a and c
Ans. (2) On, for insert

Q.445.Find the SQL statement below that is equal to the following:
SELECT NAME FROM CUSTOMER WHERE STATE = 'VA';
(1) SELECT NAME IN CUSTOMER WHERE STATE IN ('VA');
(2) SELECT NAME IN CUSTOMER WHERE STATE = 'VA';
(3) SELECT NAME IN CUSTOMER WHERE STATE = 'V';
(4) SELECT NAME FROM CUSTOMER WHERE STATE IN ('VA');
Ans. (4) SELECT NAME FROM CUSTOMER WHERE STATE IN ('VA');

Q.446.The following SQL is which type of join:
SELECT CUSTOMER_T. CUSTOMER_ID, ORDER_T. CUSTOMER_ID, NAME, ORDER_ID
FROM CUSTOMER_T,ORDER_T
WHERE CUSTOMER_T. CUSTOMER_ID = ORDER_T.CUSTOMER_ID

(3) Foreign Key (4) None of the above
Ans. (2) Primary Key

Q.422. _____ is used to determine whether a table contains duplicate rows.
(1) Unique predicate (2) Like Predicate
(3) Null predicate (4) In predicate
Ans. (1) Unique predicate

Q.423.To eliminate duplicate rows _____ is used
(1) NODUPLICATE (2) ELIMINATE
(3) DISTINCT (4) None of these
Ans. (3) DISTINCT

Q.424.State true or false
(i) A candidate key is a minimal super key.
(ii) A candidate key can also refer to a surrogate key.
(1) i-true, ii-false (2) i-false, ii-true
(3) i-true, ii-true (4) i-false, ii-false
Ans. (3) i-true, ii-true

Q.425.DCL stands for
(1) Data Control Language
(2) Data Console Language
(3) Data Console Level
(4) Data Control Level
Ans. (1) Data Control Language

Q.426. _____ is the process of organizing data into related tables.
(1) Normalization (2) Generalization
(3) Specialization (4) None of the above
Ans. (1) Normalization

Q.427.A _____ does not have a distinguishing attribute if its own and most are dependent entities, which are part of some another entity.
(1) Weak entity
(2) Strong entity
(3) Non-attributes entity
(4) Dependent entity
Ans. (1) Weak entity

Q.428. _____ is the complex search criteria in the where clause.
(1) Substring (2) Drop Table
(3) Predict (4) Predicate
Ans. (4) Predicate

Q.429. _____ is the preferred method for enforcing data integrity
(1) Constraints (2) Stored Procedure
(3) Triggers (4) Cursors
Ans. (1) Constraints

Q.430.The number of tuples in a relation is called its _____. While the number of attributes in a relation is called it's _____
(1) Degree, Cardinality (2) Cardinality, Degree
(3) Rows, Columns (4) Columns, Rows.
Ans. (2) Cardinality, Degree

Q.431.The language that requires a user to specify the data to be retrieved without specifying exactly how to get it is
(1) Procedural DML
(2) Non-Procedural DML
(3) Procedural DDL
(4) Non-Procedural DDL
Ans. (2) Non-Procedural DML

Q.432.Which two files are used during the operation of the DBMS?
(1) Query languages and utilities
(2) DML and query language
(3) Data dictionary and transaction log
(4) Data dictionary and query language
Ans. (3) Data dictionary and transaction log

Q.433.Which of the following are the properties of entities?
(1) Groups (2) Table
(3) Attributes (4) Switchboards
Ans. (3) Attributes

Q.434.Which database level is closest to the users?
(1) External (2) Internal
(3) Physical (4) Conceptual
Ans. (1) External

(1) Index entry (2) Index hash
(3) Index cluster (4) Index map
Ans. (1) Index entry

Q.483.In a _____ clustering index, the index record contains the search-key value and a pointer to the first data record with that search-key value and the rest of the records will be in the sequential pointers.
(1) Dense (2) Sparse
(3) Straight (4) Continuous
Ans. (1) Dense

Q.484.Incase the indices values are larger, index is created for these values of index. This is called
(1) Pointed index (2) Sequential index
(3) Multilevel index (4) Multiple index
Ans. (3) Multilevel index

Q.485.A hash table can store a maximum of 10 records, currently there are records in location 1, 3,4,7,8,9,10. The probability of a new record going into location 2, with hash functions resolving collisions by linear probing is
(1) 0.1 (2) 0.6 (3) 0.2 (4) 0.5
Ans. (2) 0.6

Q.486.We create an index in SQL using _____ command
(1) Create index (2) New index
(3) Create new index (4) Develop index
Ans. (1) Drop index

Q.487.We delete and index in SQL using the _____ command
(1) Remove index (2) Delete index
(3) Drop index (4) None of the mentioned
Ans. (3) Drop index

Q.488.In ordered indices the file containing the records is sequentially ordered, a _____, is an index whose search key also defines the sequential order of the file.
(1) Clustered index (2) Structured index
(3) Unstructured index (4) Nonclustered index
Ans. (1) Clustered index

Q.489.Which of the following operations can be performed on an extendable hash structure?
(1) Lookup (2) Insertion
(3) Deletion (4) All of the mentioned
Ans. (4) All of the mentioned

Q.490.Hash structures are not the best choice for which of the following?
(1) A search key on which individual point queries are likely
(2) A search key which is invalid
(3) A search key on which range queries are likely
(4) A search key on which multi-level queries are likely
Ans. (3) A search key on which range queries are likely

Q.491.A bitmap is _____
(1) An array of bits
(2) An index of bits
(3) A function mapping all the bits of data
(4) None of the mentioned
Ans. (1) An array of bits

Q.492.Wait-for graph is used for
(1) detecting view serializability.
(2) detecting conflict serializability.
(3) deadlock prevention
(4) deadlock detection
Ans. (4) deadlock detection

Q.493.The expression sq1(E1⋈q2E2) is the same as
(1) $E1 \triangleright\triangleleft q1 \wedge q2\,E2$ (2) $sq1\ E1 \wedge sq2\,E2$
(3) $E1 \triangleright\triangleleft q1 \vee q2\,E2$ (4) None of the above
Ans. (1) $E1 \triangleright\triangleleft q1 \wedge q2\,E2$

Q.494.Which of the following is not a consequence of non-normalized database?
(1) Update Anomaly (2) Insertion Anomaly
(3) Redundancy (4) Lost update problem
Ans. (4) Lost update problem

Q.495.Which of the following addressing modes permits relocation without any change over in the code?
(1) Indirect addressing
(2) Indexed addressing

(1) sequential search (2) index search
(3) direct search (4) binary search
Ans. (2) index search

Q.471.A complex SELECT statement is called as
(1) sub-query (2) filter
(3) join (4) conjunctive condition
Ans. (1) sub-query

Q.472.Insertion of data into B-tree may cause
(1) Increase in height
(2) No change in height &number of nodes
(3) split of nodes
(4) Any of the above
Ans. (4) Any of the above

Q.473.The association role defines:
(1) How tables are related in the database
(2) The relationship between the class diagram and the tables in the database
(3) The tables that each attribute is contained
(4) Which attribute is the table's primary key
Ans. (1) How tables are related in the database

Q.474.The purpose of an N-Ary association is:
(1) To capture a parent-child relationship
(2) To deal with one to many relationships
(3) To deal with relationships that involve more than two tables
(4) To represent an inheritance relationship
Ans. (3) To deal with relationships that involve more than two tables

Q.475.A _____ on the attribute A of relation r consists of one bitmap for each value that A can take.
(1) Bitmap index (2) Bitmap
(3) Index (4) Array
Ans. (1) Bitmap index

Q.476.Bitmaps can be combined with regular B+-tree indices for relations where a few attribute values are extremely common, and other values also occur, but much less frequently.

(1) Bitmap, B-tree (2) Bitmap, B+tree
(3) B-tree, Bitmap (4) B+tree, Bitmap
Ans. (2) Bitmap, B+tree

Q.477.In a B+-tree index _____ would normally maintain a list of all records with that value for the indexed attribute.
(1) Leaf (2) Node (3) Root (4) Link
Ans. (1) Leaf

Q.478.If an index is _____ the metadata and statistics continue to exists
(1) Disabling (2) Dropping
(3) Altering (4) Both Disabling and Dropping
Ans. (1) Disabling

Q.479.Key value pairs is usually seen in
(1) Hash tables
(2) Heaps
(3) Both Hash tables and Heaps
(4) Skip list
Ans. (1) Hash tables

Q.480.What is the best definition of a collision in a hash table?
(1) Two entries are identical except for their keys
(2) Two entries with different data have the exact same key
(3) Two entries with different keys have the same exact hash value
(4) Two entries with the exact same key have different hash values
Ans. (1) Two entries are identical except for their keys

Q.481.Which of the following scenarios leads to linear running time for a random search hit in a linear-probing hash table?
(1) All keys hash to same index
(2) All keys hash to different indices
(3) All keys hash to an even-numbered index
(4) All keys hash to different even-numbered indices
Ans. (1) All keys hash to same index

Q.482.An _____ consists of a search-key value and pointers to one or more records with that value as their search-key value.

Q.460.The natural join is equal to :
(1) Cartesian Product
(2) Combination of Union and Cartesian product
(3) Combination of selection and Cartesian product
(4) Combination of projection and Cartesian product
Ans. (4) Combination of projection and Cartesian product

Q.461.Which one of the following is not true for a view:
(1) View is derived from other tables.
(2) View is a virtual table.
(3) A view definition is permanently stored as part of the database.
(4) View never contains derived columns.
Ans. (4) View never contains derived columns.

Q.461.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
(1) i, ii, iii (2) i and ii
(3) i, ii, iv (4) i, iv
Ans. (3) i, ii, iv

Q.462.Given the relation
Supplier(s_id, p_order, s_name, qty)
Given that there is a unique s_name for each s_id and that s_id, p_order is a composite key, find the correct statement among the following:
(i) this relation is a BCNF
(ii) this is 3 NF relation
(iii) this is a 2 NF relation
(iv) this is a 1 NF relation
(1) i and ii (2) ii and iii
(3) i and iv (4) i and iii
Ans. (4) i and iii

Q.463.The first step in query processing is _____
(1) decomposition
(2) optimisation
(3) choosing low level operations
(4) execution
Ans. (2) optimisation

Q.464.The last step in query processing is _____.
(1) decomposition
(2) optimisation
(3) choosing low level operations
(4) execution
Ans. (4) execution

Q.465.In _____, the query is transformed into an abstract syntax tree.
(1) decomposition
(2) optimisation
(3) choosing low level operations
(4) execution
Ans. (1) decomposition

Q.466.The output of the _____ is that the query is transformed into a canonical form.
(1) decomposition
(2) optimisation
(3) choosing low level operations
(4) execution
Ans. (2) optimisation

Q.467.In the _____ approach, the table is scanned only once.
(1) list and join (2) list merge
(3) driver index (4) list driver
Ans. (3) driver index

Q.468.In the _____ approach, the table is scanned twice.
(1) list and join (2) list merge
(3) driver index (4) list driver
Ans. (2) list merge

Q.469.In _____, the entire table is scanned.
(1) sequential search (2) index search
(3) direct search (4) binary search
Ans. (1) sequential search

Q.470.In _____, the entire table is not scanned.

Q.524.EXP command is used _____
(1) to take Backup of the Oracle Database
(2) to import data from the exported dump file
(3) to create Rollback segments
(4) to create Schedule.
Ans. (1) to take Backup of the Oracle Database

Q.525.The simplest approach to introducing redundancy is to duplicate every disk is called _____
(1) mirroring (2) imaging
(3) copying (4) All of the above
Ans. (2) imaging

Q.526.In the _____, one transaction inserts a row in the table while the other transaction is halfway through its browsing of the table.
(1) transaction read a problem
(2) one way read a problem
(3) serial read problem
(4) phantom read problem
Ans. (4) phantom read problem

Q.527.Transaction processing is associated with everything below except.
(1) producing detail. summary, or exception reports
(2) recording a business activity
(3) confirming an action or triggering a response
(4) maintaining data
Ans. (3) confirming an action or triggering a response

Q.528. _____ helps solve the concurrency problem.
(1) locking
(2) transaction monitor
(3) transactionserializability
(4) two-phase commit
Ans. (1) locking

Q.529.If a transaction acquires a shared lock, then it can perform _____ operation.
(1) read (2) write
(3) read and write (4) update
Ans. (1) read

Q.530.If a transaction obtains a shared lock on a row, it means that the transaction wants to _____that row.

(1) write (2) insert
(3) execute (4) read
Ans. (1) read

Q.531.The node where the distributed transaction originates is called the _____
(1) local coordinator
(2) starting coordinator
(3) global coordinator
(4) originating node
Ans. (3) global coordinator

Q.532.If a transaction obtains an exclusive lock on a row, it means that the transaction wants to _____ that row.
(1) select (2) update
(3) view (4) read
Ans. (2) update

Q.533.If a transaction acquires an exclusive lock, then it can perform ..... operation.
(1) read (2) write
(3) read and write (4) update
Ans. (3) read and write

Q.534. _____.is a specific concurrency problem wherein two transactions depend on each other for something.
(1) phantom read problem
(2) transaction read a problem
(3) deadlock
(4) locking
Ans. (3) deadlock

Q.535.If a database server is referenced in a distributed transaction, the value of its commit point strength determines which role it plays in the _____
(1) two-phase commit (2) two-phase locking
(3) transaction locking (4) checkpoints
Ans. (1) two-phase commit

Q.536.Transaction _____ ensures that the transaction is being executed successfully.
(1) concurrency (2) consistency
(3) serializability (4) non-serialiasability
Ans. (3) serializability

Q.509. _____ is an essential part of any backup system.
(1) Filter (2) Recovery
(3) Security (4) Scalability
Ans. (1) Filter

Q.510.Media recovery deals with _____.
(1) disk errors (2) hard errors
(3) system errors (4) power failures
Ans. (3) system errors

Q.511.For a backup/restore system, _____ is a prerequisite for service in a enterprise.
(1) Filter (2) Recovery
(3) Security (4) Scalability
Ans. (4) Scalability

Q.512.Failure recovery and media recovery fall under _____
(1) transaction recovery (2) database recovery
(3) system recovery (4) value recovery
Ans. (3) system recovery

Q.513.The _____ consists of the various applications and database that play a role in a backup and recovery strategy.
(1) Recovery Manager environment
(2) Recovery Manager suit
(3) Recovery Manager file
(4) Recovery Manager database
Ans. (1) Recovery Manager environment

Q.514.In which the database can be restored up to the last consistent state after the system failure?
(1) Backup (2) Recovery
(3) Both (4) None
Ans. (2) Recovery

Q.515.A _____ is a block of Recovery Manager(RMAN)job commands that is stored in the recovery catalogue.
(1) recovery procedure
(2) recovery block
(3) stored block
(4) stored script
Ans. (1) recovery procedure

Q.516.In log based recovery, the log is sequence of _____
(1) filter (2) records (3) blocks (4) numbers
Ans. (1) filter

Q.517.The enrolling of a database in a recovery catalogue is called _____
(1) set up (2) registration
(3) start up (4) enrolment
Ans. (1) set up

Q.518. _____. is an alternative of log based recovery.
(1) Disk recovery (2) Shadow paging
(3) Dish shadowing (4) Crash recovery
Ans. (4) Crash recovery

Q.519.Most backup and recovery commands in _____.are executed by server sessions.
(1) Backup Manager
(2) Recovery Manager
(3) Backup and Recovery Manager
(4) Database Manager
Ans. (3) Backup and Recovery Manager

Q.520. _____systems typically allows to replace failed disks without stopping access to the system.
(1) RAM (2) RMAN (3) RAD (4) RAID
Ans. (2) RMAN

Q.521.An _____ is an exact copy of a single datafile, archived redo log file, or control file.
(1) image copy (2) datafile copy
(3) copy log (4) control copy
Ans. (1) image copy.

Q.522. _____ known as memory-style error correcting-code(ECC) organization, employs parity bits.
(1) RAID level 1 (2) RAID level 2
(3) RAID level 3 (4) RAID level 4
Ans. (2) RAID level 2

Q.523.The remote backup site is sometimes called the _____ site.
(1) primary (2) secondary
(3) ternary (4) None of the above
Ans. (3) ternary

(3) PC relative addressing
(4) Base register addressing
Ans. (2) Indexed addressing

Q.496.A sequence of primitive operations that can be used to evaluate a query are called as _____
(1) Query evaluation algebra
(2) Query evaluation plan
(3) Query evaluation primitive
(4) Query evaluation engine
Ans. (2) Query evaluation plan

Q.497.Sorting of relations that do not fit in memory is called as _____
(1) Internal sorting (2) External sorting
(3) Overflow sorting (4) Overload sorting
Ans. (2) External sorting

Q.498.If nested loop join is done on a per block basis rather than on a per tuple basis, it is called as
(1) Equi join (2) Hash join
(3) Nested loop join (4) Block nested loop join
Ans. (4) Block nested loop join

Q.499.Theta join operations are
(1) Commutative
(2) Associative
(3) Distributive under projection
(4) All of the mentioned
Ans. (4) All of the mentioned

Q.500.What is the disadvantage of cost based optimizers?
(1) It is too expensive
(2) It is inefficient in producing results
(3) It does not perform the desired function
(4) None of the mentioned
Ans. (1) It is too expensive

Q.501.Optimizers use _____ to reduce the cost of optimization.
(1) Analyzers (2) Statistics
(3) Heuristics (4) Caches
Ans. (3) Heuristics

Q.502.What technique is used for the evaluation of a query with a nested sub query?

(1) Caching
(2) Decorrelated evaluation
(3) Correlated evaluation
(4) Time based evaluation
Ans. (3) Correlated evaluation

Q.503.Caching and reuse of query plans is called as _____
(1) Query caching (2) Plan caching
(3) Plan memorizing (4) None of the mentioned
Ans. (2) Plan caching

Q.504.The _____ merges the sorted relation with leaf entries of the secondary B+ tree index.
(1) Merge join algorithm
(2) Hybrid merge join algorithm
(3) Hash join algorithm
(4) Hybrid Hash join algorithm
Ans. (2) Hybrid merge join algorithm

Q.505.A sequence of primitive operations that can be used to evaluate a query are called as _____
(1) Query evaluation algebra
(2) Query evaluation plan
(3) Query evaluation primitive
(4) Query evaluation engine
Ans. (2) Query evaluation plan

Q.506.Which of the following is not a recovery technique?
(1) Deferred update (2) Immediate update
(3) Two-phase commit (4) Recovery management
Ans. (2) Immediate update

Q.507.Checkpoints are a part of
(1) Recovery measures
(2) Security measures
(3) Concurrency measures
(4) Authorization measures
Ans. (1) Recovery measures

Q.508. _____ deals with soft errors, such as power failures.
(1) system recovery (2) media recovery
(3) database recovery (4) failure recovery
Ans. (2) media recovery

Q.563.The two possible communication errors are, Lost messages and _____

(1) Network Partitions (2) Lost acknowledgment
(3) Timeout (4) log error

Ans. (2) Lost acknowledgment

Q.564.The only way to undo the effects of a committed transaction is to execute a _____

(1) committed transaction
(2) compensating transaction
(3) supplementary transactio
(4) update query

Ans. (1) committed transaction

Q.565.In _____, one or more users/programs attempt to access the same data at the same time.

(1) concurrency (2) transaction control
(3) locking (4) two-phase locking

Ans. (1) concurrency

○○○

(1) recovery management
(2) concurrency control
(3) storage management
(4) query evaluation engine
Ans. (1) recovery management

Q.551.The activity of ensuring atomicity in the presence of Transaction aborts is called _____
(1) transaction control (2) transaction management
(3) transaction recovery (4) concurrency control
Ans. (4) concurrency control

Q.552.A _____.is a set of rules that state when a transaction may lock or unlock each of the data items in the database
(1) concurrency control (2) transaction control
(3) validation control (4) locking protocol
Ans. (3) validation control

Q.553. _____ is a collection of programs performing all necessary action associated with a database.
(1) Database associated
(2) Database administrator
(3) Database application
(4) Database management system
Ans. (1) Database associated

Q.554.Which protocol permits the release of exclusive locks only at the end of the transaction?
(1) Graph-based protocol
(2) The strict two-phase locking protocol
(3) Two-phase locking protocol
(4) Rigorous Two-phase locking protocol
Ans. (2) The strict two-phase locking protocol

Q.555.The activity of providing Durability of the transaction is called _____
(1) database control
(2) transaction management
(3) transaction recovery
(4) database recovery
Ans. (4) database recovery

Q.556.Which protocol allows a transaction to lock a new data item only if that transaction has not yet unlocked data item?

(1) Graph-based protocol.
(2) The strict two-phase locking protocol
(3) Two-phase locking protocol
(4) Timestamp ordering scheme
Ans. (2) The strict two-phase locking protocol

Q.557 _____ is a collection of application programs that interact with the database along with DBMS.
(1) A database system
(2) A database application
(3) Database administration
(4) Data system
Ans. (2) A database application

Q.558._____ensures that once the transaction completes successfully, the results of the operations become permanent.
(1) serializability
(2) synchronizability
(3) atomicity
(4) durability
Ans. (2) synchronizability

Q.559.A _____ contains information for undoing or redoing all the actions performed by the transactions.
(1) save point (2) log
(3) node (4) commit_point
Ans. (2) log

Q.560.A _____ is a unit of program execution that accesses and possibly updates various data items.
(1) DBMS (2) monitor
(3) transaction (4) transistor
Ans. (4) transistor

Q.561.A transaction is an action used to perform some manipulation on data stored in the _____
(1) Memory (2) Record
(3) Database (4) All of these
Ans. (1) Memory

Q.562.A transaction is terminated if it has _____
(1) aborted (2) committed
(3) running state (4) aborted or committed
Ans. (2) committed

Q.537.The situation in which a transaction holds a data item and waits for the release of data item held by some other transaction, which in turn waits for another transaction, is called _____
(1) serializable schedule (2) process waiting
(3) concurrency (4) deadlock
Ans. (4) deadlock

Q.538. _____ protocol grantees that a set of transactions becomes serializable.
(1) two-phase locking (2) two-phase commit
(3) transaction locking (4) checkpoints
Ans. (1) two-phase locking

Q.539.The global coordinator forgets about the transaction phase is called _____
(1) Prepare phase (2) Commit phase
(3) Forget phase (4) Global phase
Ans. (3) Forget phase

Q.540.In two-phase commit, _____ coordinates the synchronization of the commit or rollback operations.
(1) database manager
(2) central coordinator
(3) participants
(4) concurrency control manager
Ans. (2) central coordinator

Q.541.In two-phase locking protocol, a transaction obtains locks in _____.phase.
(1) shrinking phase (2) growing phase
(3) running phase (4) initial phase
Ans. (2) growing phase

Q.542.A transaction processing system is also called as _____
(1) processing monitor (2) transaction monitor
(3) TP monitor (4) monitor
Ans. (3) TP monitor

Q.543.After the nodes are prepared, the distributed transaction is said to be _____
(1) in-doubt (2) in-prepared
(3) prepared transaction (4) in-node
Ans. (1) in-doubt

Q.544.In _____, we have many mini transactions within the main transaction.
(1) transaction control (2) chained transaction
(3) nested transaction (4) calling transaction
Ans. (2) chained transaction

Q.545.In a two-phase locking protocol, a transaction release locks in _____ phase.
(1) shrinking phase (2) growing phase
(3) running phase (4) initial phase
Ans. (1) shrinking phase

Q.546.A mechanism which ensures that simultaneous execution of more than one transaction does not lead to any database inconsistencies is called _____ mechanism.
(1) transaction control
(2) transaction management
(3) concurrency parallelism
(4) concurrency control
Ans. (2) transaction management

Q.547.The transaction wants only to read the data item of the mode is called as _____
(1) Exclusive Mode (2) Shared Mode
(3) Inclusive Mode (4) Unshared Mode
Ans. (1) Exclusive Mode

Q.548.Any execution of a set of transactions is called as its _____
(1) non-serial schedule (2) serial schedule
(3) schedule (4) interleaved schedule
Ans. (4) interleaved schedule

Q.549 _____ is a program or set of program that interacts with the database at some point in its execution.
(1) A database system
(2) A database application
(3) Both
(4) none
Ans. (3) Both

Q.550 _____ component of a database is responsible for ensuring atomicity and durability.