BRAINWARE UNIVERSITY

Term End Examination 2021 - 22
Programme – Diploma in Computer Science & Engineering
Course Name – Database Management Systems
Course Code - DCSE402
(Semester IV)

Time allotted : 1 Hrs.15 Min.   **Full Marks : 60**

[The figure in the margin indicates full marks.]

Group-A

(Multiple Choice Type Question)   1 x 60=60

Choose the correct alternative from the following :

(1) The term _____ is used to refer to a row.

a) Attribute   b) Tuple
c) Field   d) Instance

(2) Relational Algebra does not have

a) Selection operator   b) Projection operator
c) Division operator   d) Aggregation operator

(3) The equivalent relational Algebra operation of the SQL "where" clause is

a) SELECT   b) PROJECT
c) RENAME   d) UNION

(4) In ERD derived attribute is represented by

a) dashed ellipse   b) ellipse
c) double rectangle   d) double ellipse

(5) The select command is

a) DDL   b) DML
c) DQL   d) DCL

(6) The _____ operator takes the results of two queries and returns only rows that appear in both result sets.

a) Intersect   b) Difference
c) Union   d) Projection

(7) 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

a) View

b) Order By

c) Group By

d) Having

(8) An attribute in a relation is a foreign key if the _____ key from one relation is used as an attribute in that relation

a) Candidate key

b) Primary

c) Super key

d) Sub

(9) Entity is a _____

a) Object of relation

b) Present working model

c) Thing in real world

d) Model of relation

(10) Which of the following can be a multivalued attribute?

a) Phone_number

b) Name

c) Date_of_birth

d) All of these

(11) A relation is _____, if for any non-trivial functional dependency X-->Y, X must be a super key.

a) 2NF

b) 3 NF

c) BCNF

d) 4NF

(12) In ERD double rectangles represents

a) Weak Entity

b) Strong Entity

c) Attributes of a relationship set

d) Primary key

(13) Which relationship is used to represent a specialization entity?

a) ISA

b) AIS

c) ONIS

d) WHOIS

(14) 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

a) Commonality

b) Specialization

c) Generalization

d) Similarity

(15) Which of the following is another name for a weak entity?

a) Child

b) Owner

c) Dominant

d) All of these

(16) _____ can help us detect poor E-R design

a) Database Design Process

b) E-R Design Process

c) Relational scheme

d) Functional dependencies

(17) 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

a) m+n and 0

b) m+n and |m-n|

c) mn and 0

d) mn and m+n

(18) In which of the following, a separate schema is created consisting of that attribute and the primary key of the entity set.

a) A many-to-many relationship set

b) A multivalued attribute of an entity set

c) A one-to-many relationship set

d) All of these

(19) Which of the following is an attribute that can uniquely identify a row in a table?

a) Secondary key

b) Candidate key

c) Foreign key   d) Alternate key

(20) The relationship between DEPARTMENT and EMPLOYEE is a

a) One-to-one relationship

b) One-to-many relationship

c) Many-to-many relationship

d) Many-to-one relationship

(21) Minimal superkeys are called

a) Super key

b) Candidate key

c) Primary key

d) Unique key

(22) What is the difference between a join and an outer join operation?

a) There is no difference

b) Join preserves a few tuples that are otherwise lost in the outer join

c) Outer join preserves a few tuples that are otherwise lost in the join

d) An outer join can be used only on outer queries whereas a join operation can be used in Subqueries

(23) The join operations that do not retain mismatched tuples are called as _____ operations

a) outer join

b) natural join

c) full outer join

d) inner join

(24) What is the function of a full outer join?

a) It preserves tuples only in the relation named before the operation

b) It preserves tuples only in the relation named after the operation

c) c.It preserved tuples in the relations named on both the sides of the operation

d) It does not preserve any tuples on either side of the relation

(25) Course(course_id, sec_id, semester) Here the course_id, sec_id and semester are _____ and course is a _____

a) Relations, Attribute

b) Attributes, Relation

c) Tuple, Relation

d) Tuple, Attributes

(26) Department (dept name, building, budget) and Employee (employee_id, name, dept name, salary) Here the dept_name attribute appears in both the relations. Here using common attributes in relation schema is one way of relating _____ relations.

a) Attributes of common

b) Tuple of common

c) Tuple of distinct

d) Attributes of distinct

(27) Which one of the following provides the ability to query information from the database and to insert tuples into, delete tuples from, and modify tuples in the database?

a) DML(Data Manipulation Language)

b) DDL(Data Definition Language)

c) Query

d) Relational Schema

(28) An attribute A of datatype varchar(20) has the value "Avi". The attribute B of datatype char(20) has value "Reed". Here attribute A has ____ spaces and attribute B has ____ spaces

a) 3,20

b) 20,4

c) 20,20

d) 3,4

(29) The _____ clause allows us to select only those rows in the result relation of the ____ clause that satisfy a specified predicate

a) Where, from

b) From, select

c) Select, from

d) From, where

(30) PL/SQL block starts with _____ statement

a) BEGIN   b) SET TRANSACTION
c) BEGIN TRANSACTION   d) COMMIT

(31) ____ means that the data used during the execution of a transaction cannot be used by a second transaction until the first one is completed.

a) Consistency   b) Atomicity

c) Durability   d) Isolation

(32) Which one is DML?

a) create   b) Alter

c) drop   d) delete

(33) Which is the subset of SQL commands used to manipulate Oracle Database Structures, including tables?

a) Data Definition Language   b) Data Manipulation Language

c) Data Described Language   d) Data Retrieval Language

(34) Which of the following SQL command can be used to modify existing data in a database table?

a) MODIFY   b) UPDATE

c) CHANGE   d) NEW

(35) Let a relational set R(A,B,C,D) with FD={ A-->B, C-->D} is decomposed into R1(A,B) and R2(C,D). The decomposition is

a) Lossless   b) Lossy

c) Cannot predict   d) none of these

(36) What is the full form of JDBC?

a) Java Database Connectivity   b) Java Database Co-Operation

c) JSP Database Committee   d) Java Database Creation

(37) A _____ is a statement that the system executes whenever a database is modified

a) Triggers   b) Packages

c) Functions   d) None of these

(38) A table on the many side of a one to many or many to many relationship must:

a) Be in Second Normal Form (2NF)   b) Be in Third Normal Form (3NF)

c) Have a single attribute key   d) Have a composite key

(39) Tables in second normal form (2NF)

a) Eliminates partial dependencies   b) Eliminate the possibility of a insertion anomalies

c) Have a composite key   d) Have all non key fields depend on the whole primary key

(40) Which is a bottom-up approach to database design that design by examining the relationship between attributes

a) Functional dependency   b) Database modeling

c) Normalization   d) Decomposition

(41) Let a relational set R(ABC) having a set of FDs={AB-->C,A-->B,B-->C}. The cannonical cover of the above relation is

a) AB-->C   b) A-->B, B-->C

c) A-->B, A-->C   d) none of these

(42) We can use the following three rules to find logically implied functional dependencies.

This collection of rules is called

a) Axioms

b) Armstrong's axioms

c) Armstrong

d) Closure

(43) If a multivalued dependency holds and is not implied by the corresponding functional dependency, it usually arises from one of the following sources.

a) A many-to-many relationship set

b) A multivalued attribute of an entity set

c) A one-to-many relationship set

d) Both A many-to-many relationship set and A multivalued attribute of an entity set

(44) A relation is in upto _____ if there is no transitive dependency obtained.

a) 2NF

b) 3NF

c) BCNF

d) 1NF

(45) A _____ Fc for F is a set of dependencies such that F logically implies all dependencies in Fc, and Fc logically implies all dependencies in F.

a) Canonical cover

b) Complete cover

c) Canonical dependency

d) Canonical clause

(46) ____ ensures that once transaction changes are done, they cannot be undone or lost, even in the event of a system failure.

a) Atomicity

b) Consistency

c) Durability

d) Isolation

(47) Deadlocks are possible only when one of the transactions wants to obtain a(n) ____ lock on a data item.

a) binary

b) exclusive

c) shared

d) complete

(48) If a transaction has obtained a _____ lock, it can read but cannot write on the item

a) Shared mode

b) Exclusive mode

c) Read only mode

d) Write only mode

(49) If a transaction has obtained a _____ lock, it can both read and write on the item

a) Shared mode

b) Exclusive mode

c) Read only mode

d) Write only mode

(50) The two phase locking protocol consists which of the following phases?

a) Growing phase

b) Shrinking phase

c) Both a and b

d) None of these

(51) _____ states that only valid data will be written to the database.

a) Atomicity

b) Consistency

c) Durability

d) Isolation

(52) Which of the following has "all-or-none" property?

a) Atomicity

b) Consistency

c) Durability

d) Isolation

(53) A _____ integrity constraint requires that the values appearing in specified attributes of any tuple in the referencing relation also appear in specified attributes of at least one tuple in the referenced relation.

a) Referential

b) Referencing

c) Specific

d) Primary

(54) An _____ is a set of entities of the same type that share the same properties, or attributes

    a) Entity set   b) Attribute set

    c) Relation set   d) Entity model

(55) Which of the following gives a logical structure of the database graphically?

    a) Entity-relationship diagram   b) Entity diagram

    c) Database diagram   d) Architectural representation

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

    a) Total   b) Partial

    c) Should be specified   d) Cannot be determined

(57) Which one of the following is used to define the structure of the relation, deleting relations and relating schemas?

    a) DML(Data Manipulation Language)   b) DDL(Data Definition Language)

    c) Query   d) Relational Schema

(58) The basic data type char(n) is a _____ length character string and varchar(n) is _____ length character.

    a) Fixed, equal   b) Equal, variable

    c) Fixed, variable   d) Variable, equal

(59) Not applicable condition can be represented in relation entry as

    a) NA   b) 0

    c) NULL   d) Blank Space

(60) What are the different events in Triggers?

    a) Define, Create   b) Drop, Comment

    c) Insert, Update, Delete   d) Select, Commit