



BRAINWARE UNIVERSITY
Term End Examination 2020 - 21
Programme – Master of Business Administration
Course Name – Database Management
Course Code - SM301

Semester / Year - Semester III

Time allotted : 75 Minutes

Full Marks : 60

[The figure in the margin indicates full marks. Candidates are required to give their answers in their own words as far as practicable.]

Group-A

(Multiple Choice Type Question)

1 x 60=60

1. *(Answer any Sixty)*

- (i) DBMS provides a convenient and efficient environment
- a) 1 b) Not always true
-
- (ii) Which of the following isn't a level of abstraction?
- a) Physical b) Logical
c) User d) view
-
- (iii) The _____ level helps application programs hide the details of data types
- a) Physical b) Logical
c) User d) view
-
- (iv) The actual content in the database at a particular point
- a) Schema b) Attribute
c) Parameter d) Instance
-
- (v) SQL is _____
- a) Relational b) Network
c) IMS d) Hierarchical
-
- (vi) Choose the correct statement regarding super keys from the followings in DBMS
- a) A superkey is an attribute or a group of b) A super key is a tuple or a set of multiple

multiple attributes that can uniquely identify a tuple

c) Every superkey is a candidate key

tuples that can uniquely identify an attribute

d) A superkey is an attribute or a set of attributes that distinguish the relation from other relations

(vii) What is an Instance of a Database

a) The logical design of the database system

c) The state of the database system at any given point of time

b) The entire set of attributes of the Database put together in a single relation

d) The initial values inserted into the Database immediately after its creation

(viii) What is a foreign key

a) A foreign key is a primary key of a relation which is an attribute in another relation

c) A foreign key is an attribute of a relation that is a primary key of another relation

b) A foreign key is a superkey of a relation which is an attribute in more than one other relations

d) A foreign key is the primary key of a relation that does not occur anywhere else in the schema

(ix) What does the “x” operator do in relational algebra?

a) Output specified attributes from all rows of the input relation. Remove duplicate tuples from the output

c) Output all pairs of rows from the two input relations (regardless of whether or not they have the same values on common attributes)

b) Output pairs of rows from the two input relations that have the same value on all attributes that have the same name

d) Returns the rows of the input relation that satisfy the predicate

(x) In a relational schema, each tuple is divided into fields called

a) Row

c) Value

b) Domains

d) Tuple

(xi) DFD stands for

a) Data Flow Document

b) Data File Diagram

- c) Data Flow Diagram
- d) None of them

(xii) Which of the following is not an appropriate criterion for file organization?

- a) Larger access time
- b) ease of update
- c) simple maintenance
- d) economy of storage

(xiii) Which of the following isn't a part of the file directory?

- a) Attributes
- b) Protocol
- c) Location
- d) Ownership

(xiv) Using which language can a user request information from a database?

- a) Query
- b) Relational
- c) Structural
- d) Compiler

(xv) Student(ID, name, dept name, tot_cred) In this query which attributes form the primary key?

- a) ID
- b) Name
- c) Dept
- d) Tot_cred

(xvi) The _____ operation performs a set union of two "similarly structured" tables

- a) Union
- b) Join
- c) Product
- d) Intersect

(xvii) 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

(xviii) An attribute A of datatype varchar(20) has the value "Avi". The attribute B of data type 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

(xix) Which one of the following is a set of one or more attributes taken collectively to uniquely identify a record?

a) Candidate key

b) Sub key

c) Super key

d) Foreign key

(xx) Consider attributes ID , CITY and NAME . Which one of this can be considered as a super key ?

a) NAME

b) ID

c) CITY

d) CITY , ID

(xxi) Which one of the following attribute can be taken as a primary key ?

a) NAME

b) Street

c) Id

d) Department

(xxii) 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

b) Primary

c) Super

d) Sub

(xxiii) DBMS helps achieve

a) Data independence

b) Centralized control of data

c) Neither Data independence nor Centralized control of data

d) both Data independence and Centralized control of data

(xxiv) The conceptual model is

a) Dependent on hardware.

b) dependent on software

c) dependent on both hardware and software

d) independent of both hardware and software

(xxv) Which of the following is a valid SQL type?

a) CHARACTER

b) NUMERIC

c) FLOAT

d) All of these

(xxvi) Which of the following operations need the participating relations to be union compatible

- a) UNION
- b) INTERSECTION
- c) DIFFERENCE
- d) All of these

(xxvii) Which of the following is an advantage of view?

- a) Data security
- b) Derived columns
- c) Hiding of complex queries
- d) All of these

(xxviii) A set of possible data values is called

- a) attribute.
- b) degree.
- c) tuple.
- d) domain

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

- a) Child
- b) Owner
- c) Dominant
- d) All of these

(xxx) NULL is

- a) the same as 0 for integer
- b) the same as blank for character
- c) the same as 0 for integer and blank for character
- d) Not a value

(xxxii) A file manipulation command that extracts some of the records from a file is called

- a) SELECT
- b) PROJECT
- c) JOIN
- d) PRODUCT

(xxxiii) A primary key is combined with a foreign key creates

- a) Parent-Child relationship between the tables that connect them
- b) Many to many relationship between the tables that connect them.
- c) Network model between the tables that connect them
- d) None of these

(xxxiiii) In E-R Diagram derived attribute are represented by

- a) Ellipse
- b) Dashed ellipse
- c) Rectangle
- d) Triangle

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

- a) A is a candidate key
- b) A is not a candidate key
- c) A is a primary Key
- d) Both A is a candidate key and A is a primary Key

(xxxv) In E-R Diagram relationship type is represented by

- a) Ellipse
- b) Dashed Ellipse
- c) Rectangle
- d) Diamond

(xxxvi) A logical schema

- a) is the entire database
- b) is a standard way of organizing information into a accessible part
- c) describe how data is actually stored on disk
- d) none of these

(xxxvii) A B-tree of order m has maximum of _____ children

- a) m
- b) m+1
- c) m-1
- d) m/2

(xxxviii) In E-R diagram generalization is represented by

- a) Ellipse
- b) Dashed Ellipse
- c) Rectangle
- d) Diamond

(xxxix) An actual attribute is a _____ in a relation.

- a) Row
- b) Bar
- c) Value
- d) None of these

(xl) What is the main limitation of Hierarchical Databases?

- a) Limited capacity (unable to hold much data)
- b) Limited flexibility in accessing data

c) Overhead associated with maintaining indexes d) The performance of the database is poor

(xli) The separation of the data definition from the program is known as:

- a) Data dictionary b) Data independence
- c) Data integrity d) Referential integrity

(xlii) In the client / server model, the database:

- a) Is downloaded to the client upon request b) Is shared by both the client and server
- c) Resides on the client side d) Resides on the server side

(xliii) The traditional storage of data that is organized by customer, stored in separate folders in filing cabinets is an example of what type of 'database' system?

- a) Hierarchical b) Network
- c) Object oriented d) Relational

(xliv) The purpose of an N-Ary association is:

- a) To capture a parent-child relationship b) To deal with one to many relationships
- c) To deal with relationships that involve more than two tables d) To represent an inheritance relationship

(xlv) Which of the following is a property of transactions?

- a) Atomicity b) Durability
- c) Isolation d) All of the mentioned

(xlvi) Which of the following is not a property of a transaction?

- a) Atomicity b) Simplicity
- c) Isolation d) Durability

(xlvii) Which of the following is not a transaction state?

- a) Active b) Partially committed
- c) Failed d) Compensated

(xlviii) The scheme that controls the interaction between executing transactions is called as _____

- a) Concurrency control scheme
- b) Multiprogramming scheme
- c) Serialization scheme
- d) Schedule scheme

(xlix) Which of the following concurrency control protocols ensure both conflict serializability and freedom from deadlock? I. 2-phase locking II. Time-stamp ordering

- a) I only
- b) II only
- c) Both of I only and II only
- d) None

(l) The deadlock in a set of transaction can be determined by

- a) Read-only graph
- b) Wait graph
- c) Wait-for graph
- d) All of the mentioned

(li) Selecting the victim to be roll backed to the previous state is determined by the minimum cost. The factors determining cost of rollback is

- a) How long the transaction has computed, and how much longer the transaction will compute before it completes its designated task.
- b) How many data items the transaction has used.
- c) How many more data items the transaction needs for it to complete and how many transactions will be involved in the rollback.
- d) All of these

(lii) Which of these is data type long literal?

- a) 0x99ffL
- b) ABCDEFG
- c) 0x99ffa
- d) 99671246

(liii) A transaction for which all committed changes are permanent is called:

- a) Atomic
- b) Consistent
- c) Isolated
- d) durable

(liv) Which of the following occurs when a transaction rereads data it has previously read and finds modification or deletions caused by a committed transaction?

- a) No repeatable read
- b) Phantom read
- c) Dirty read
- d) Consistent read

(lv) _____ 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

(lvi) The Oracle RDBMS uses the _____ statement to declare a new transaction start and its properties

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

(lvii) When the recovery procedure uses _____, the database is immediately updated by transaction operations during the transaction's execution, even before the transaction reaches its commit point.

- a) write-through
- b) deferred write
- c) immediate write
- d) unbuffered

(lviii) A(n) _____ lock exists when concurrent transactions are granted Read access on the basis of a common lock.

- a) Binary
- b) field-level
- c) Shared
- d) exclusive

(lix) _____ 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) Atomicity
- b) Consistency
- c) Durability
- d) Isolation

(lx) When the recovery procedure uses _____, the database is immediately updated by transaction operations during the transaction's execution, even

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