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MCQ FOR DBMS

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Note: Correct Answers are highlighted in yellow. If you need any changes or have any additional questions regarding the MCQs, please feel free to contact me at chiranjeevithevar7@gmail.com or on WhatsApp at 7045612672.

Unit 1 Database Management System Concepts

1. The _____is a collection of related data

a) Database
b) Record
c) File
d) Field

2. The basic component of a file in a file system is a _____.

a) File
b) Data item
c) Row
d) Column

3. A group of related data items treated as a single unit by an application is called a _____.

a) Data item
b) Database
c) Record
d) Field

4. UoD stands for _____.

a) Universe of Discourse
b) Universe of Database
c) Universe of Dataitem
d) None of these

5. Relational/SQL data is _____ to query than hierarchical, CODASYL, or some other model.

a) Easier
b) Slow
c) Difficult
d) None of these

6. Data is of _____ importance to an organization and may be confidential.

a) Vital
b) Least
c) No valid
d) None of the these

7. Database Management System is a software package/system to facilitate the _____ and _____ of a computerized database.

A. Separation
B. Deletion
C. Creation
D. Maintenance

a) B, C
b) A, B
c) A, C
d) C, D

8. A database management system is a combination of _____ and _____that can be used to set up and monitor a database.

A. Hardware
B. Data
C. Software
D. Queries

a) B, C
b) A, B
c) A, C
d) D, C

9. _____ and _____ are the two points of view considered by Data independence.

A. Physical data independence
B. Logical data independence
C. DB2 data independence
D. Tuple data independence

a) A, B
b) B, C
c) A, C
d) D, C

10. The _____ and the _____ are the parts of the conceptual design process.

A. Method model
B. Data model
C. Function model
D. Sequence Model

a) C, D
b) B, C
c) A, C
d) A, B

11. Mention the mapping cardinality for a binary relationship set R between entity sets A and B.

A. One-to-one (1:1)
B. One-to-many (1:N)
C. Many-to-one (N:1)
D. Many-to-many

a) A, B, C, D
b) B, C, D
c) D, A, B
d) A, B

12. Mention few representative applications where databases are widely used.

A. Banking
B. Airlines
C. Universities
D Human resources

a) A, D
b) A, B, C, D
c) D, A, B
d) B, C, D

13. Mention the implicit properties of database.

A. A database represents some aspect of the real world
B. A database is a logically coherent collection of data
C. A database is designed, built, and populated with data for a specific purpose
D. A database is designed, built, and populated with data for a not any work

a) A, B, C, D
b) B, C, D
c) D, A, B
d) A, B, C

Unit 02 Database System Architecture

1. DML is a language that enables users to access or manipulate as organized by the appropriate _____.

a) Database
b) Data model
c) Query
d) Stack

2. The _____ translates the various DML statements into low-level file system commands.

a) Complier
b) Database admin
c) Database manager
d) None of these

3. _____ converts DML statement embedded in an application program to normal procedure calls in the host language.

a) DDL Compiler
b) File Manager
c) DML Pre compiler
d) None of these

4. In ICT, the _____is responsible for managing interaction with the end-user.

a) Interface subsystem
b) Rules subsystem
c) Transaction subsystem
d) Data subsystem

5. In practice, a client - server database system generally refers to a _____of personal computers (PCs).

a) System Area Network
b) Metropolitan Area Network
c) Wide Area Network
d) Local Area Network

6. The physical database is the data that is stored on _____ storage devices.

a) Secondary
b) Logical
c) Physical
d) None of the these

7. MySQL is based on a tiered architecture, consisting of_____and _____.

A. Primary subsystems
B. Support components
C. Mapping
D. Secondary subsystems

a) A, B
b) B, C
c) A,C
d) D, C

8. The Query Optimizer checks to see which index should be used to retrieve the data as _____ and _____ as possible.

A. Slowly
B. Quickly
C. Efficiently
D. Non effeciently

a) C, D
b) B, C
c) A, C
d) A, B

9. Mention the major components of a DBMS.

A. DB Manager
B. DML Precompiler
C. DDL Compiler
D. File Manager

a) A, B, C, D
b) B, C, D
c) D, A, B
d) A, B

10. Mention the main components of Oracle 9i Database product.

A. The Oracle Instance
B. The Oracle Database
C. The Oracle ManagerD. The Oracle Server

a) A, D
b) A, B, C, D
c) D, A, B
d) B, C, D

11. Mention the interrelated components of the Query Engine.

A. The Syntax Parser
B. The Query Optimizer
C. The Execution Component
D. The Execution query

a) A, B, C, D
b) B, C, D
c) D, A, B
d) A, B, C

Unit 03 Database Models and Implementation

1. A _____ is an ordered set of values.

a) Record
b) Tuple
c) Query
d) None of these

2. _____ are properties used to describe an entity.

a) Derived attribute
b) Composite
c) Attributes
d) Entity

3. Each entity has a single atomic value for the attribute is called _____ attribute.

a) Composite
b) Single valued
c) **Simple**
d) None of these

4. The value for _____ type of attribute can be derived from the values of other related attributes or entities.

(a) **Derived attribute**
(b) Null attribute
(c) Multi-valued
(d) Single valued

5. A _____ is a list of Chapters.

a) Key
b) Attiribute
c) Entity
d) **Profile**

6. The combination of Chapters and Profiles can simplify the _____ of the database to particular users or subject groups.

a) **Tailoring**
b) Simplification
c) Profile
d) None of the these

7. The Associative model differentiates between what it calls _____ and _____.

A. Set

B. Attributes
C. Entities
D. Associations

a) B, C
b) A, B
c) A, C
d) C, D

8. Mention the different combination by which entities are identified.

A. A partial key of the weak entity type
B. Candidate key mapping
C. The particular entity they are related to in the identifying entity type
D.Foreign Key Mapping

a) **B, C**
b) A, B
c) A, C
d) D, C

9. Mention the benefits of one-to-one mapping of object programming language objects to database objects over other storage approaches.

A. Higher performance
B. Better management
C. Mapping
D. Linking

a) **A, B**
b) B, C
c) A, C
d) D, C

10. Mention the two restrictions on the relational models that are sometimes circumvented in practice.

A. Ordering of tuples
B. Duplicate tuples are not permitted
C. No ordering of tuples
D. Tuple Mapping

a) C, D
b) **B, C**
c) A, C
d) A, B

11. Mention the Characteristics of Relations.

A. Each Column has a unique Name

B. Ordering of tuples in a relation r(R)
C. Ordering of attributes in a relation schema R
D. Values in a tuple

a) A, B, C, D
b) **B , C, D**
c) D, A, B
d) A, B

12. Mention the three generations of architectural data model.

A. Classic data models
B. Semantic data models
C. Oracle data models
D. Primitive data models

a) A, D
b) A, B, C, D
c) **D, A, B**
d) B, C, D

13. Mention the set of principles that define a data model.

A. Data definition - a set of principles concerned with how data is structured
B. Data manipulation - a set of principles concerned with how data is operated upon.
C. Data integrity - a set of principles concerned with determining which states are valid for a database.
D. Semantic data

a) A, B, C, D
b) B, C, D
c) **D, A, B**
d) A, B, C

Unit 4 File Organization for Conventional DBMS

1. _____ are classified by the speed with which data can be accessed.

a) Sector
b) **Storage Devices**
c) Read-write head
d) None of these

2. The _____is the fastest and most costly form of storage.

a) Optical storage
b) Magnetic-disk storage
c) **Cache**
d) Flash memory

3. The general-purpose machine instructions operate on_____.

a) Flash memory
b) Tape storage
c) **Main memory**
d) Optical storage

4. A _____has a separate head for each track.

a) **Fixed-head disk**
b) Disk arm
c) Sector
d) Disk controller

5. A _____is designed for efficient processing of records in sorted order based on some search-key.

a) **Sequential file**
b) Disk controller
c) Block
d) Log disk

6. A _____is a contiguous sequence of sectors from a single track of one platter.

a) **Block**
b) Disk controller
c) File
d) Sequential file

7. _____ and _____ were used in high-performance mainframe systems, but are no longer in production.

A. Disk Arm
B. Disk controller
C. Fixed-head disks
D. Multiple-arm disks

a) B, C
b) A, B
c) A, C
d) C, D

8. The disk surface is logically divided into_____, which are subdivided into _____.

A. Tracks
B. Disk arm
C. Sectors
D.Disk Controller

a) B, C

b) A, B
c) **A, C**
d) D, C

9. Each disk platter's has two surfaces which are covered with a _____ , and _____is recorded on the surfaces.

A. Magnetic material
B. Information
C. Platter
D. Tracks

a) **A, B**
b) B, C
c) A, C
d) D, C

10. Mention the different types of storage.

A. Secondary storage
B. Volatile storage
C. Nonvolatile storage
D. Primary Storage

a) C, D
b) **B, C**
c) A, C
d) A, B

11. Mention the different storage media.

A. Cache
B. Main memory
C. Magnetic-disk storage
D. Tape storage

a) B, C, D
b) **A, B, C, D**
c) D, A, B
d) A, B

12 Mention the storage hierarchy.

A. Secondary storage or online storage
B. Tertiary storage, or offline storage
C. Optical-disk jukeboxes
D. Primary storage

a) A, D

b) **A, B, C, D**
c) D, A, B
d) B, C, D

13. Mention the main measures of the qualities of a disk.

A. Capacity
B. Access time
C. Data-transfer rate
D. Reliability

a) **A, B, C, D**
b) B, C, D
c) D, A, B
d) A, B, C

Unit 5 RDBMS – Introduction

1. The _____ constraints in the schema specify an important condition that each instance of the relation has to satisfy.

a) Schema
b) **Domain**
c) Instance
d) None of these

2. The main construct for representing data in the relational model is a _____.

a) Instance
b) Table
c) **Relation**
d) None of these

3. An _____of a relational database is a collection of relation instances.

a) File
b) Schema
c) Instance
d) None of these

4. The relational database schema is the collection of _____for the relations in the database.

a) Schemas
b) Relation
c) Domain Constrains
d) None of these

5. An _____minimizes the redundancy of data.

a) Record
b) Column
c) Row
d) RDBMS

6. A _____is an intersection of a row and a column.

a) Field
b) Table
c) Tuple
d) Record

7. Each column has a _____name and contains _____that are bound by the same type and size.

A. Domain
B. Records
C. Column
D. Values

a) B, C
b) A, B
c) A, C
d) C, D

8. A Table is a basic storage structure of an RDBMS and consists of _____ and_____.

A. Columns
B. Field
C. Rows
D. Record

a) B, C
b) A, B
c) A, C
d) D, B

9. A relation consists of a _____and a_____.

A. Relation schema
B. Relation instance
C. Relation tuple
D. Relation data

a) A, B
b) B, C
c) A, C
d) C, A

10. An instance of a relation is a set of_____, also called _____.

A. Column
B. Tuples
C. Records
D. Row

a) C, D
b) B, C
c) A, C
d) A, B

11. Mention the components of Relational database.

A. Table
B. Row
C. Column
D. Field
E. Primary key
F. Foreign key

a) A, B, C, D, E
b) A, B, C, D, E, F
c) D, A, B, C
d) A, B

12. Mention the various types of data integrity constraints used in RDBMS.

A. Entity
B. Column
C. Referential
D. User-defined constraints

a) A, D
b) A, B, C
c) A, B, C, D
d) B, C, D

13. Mention the different types of keys.

A. Primary Key
B. Candidate Key
C. Concatenated Key
D. Borrowed Key Attributes
E. Foreign Keys

a) A, B, C, D, E
b) A, B, C, D
c) D, A, B
d) A, B, C

Unit 6 SQL Statements

1. The data types supported by SQL depend on the particular _____.

a) Execution
b) Implementation
c) Option
d) None of these

2. _____is a virtual table based on existing tables.

a) Instance
b) Table
c) View
d) None of these

3. SQL is an acronym for _____.

a) Structured Question Language
b) Schema Query Language
c) Structured Query Language
d) None of these

4. SQL was originally defined by _____in 1974.

a) D.D. Chamberlain
b) Charles Babbage
c) Roland Carl Backhouse
d) None of these

5. _____ in SQL is via the create statement.

a) Data
b) Data Manipulation
c) Data control
d) Data definition

6. The _____statement allows the creation of an index for an already existing relation.

a) Create index
b) Drop index
c) Alter index
d) Update index

7. Data manipulation capabilities allow one to ____ and _____ contents of the data base.

A. Delete
B. Update

C. Retrieve
D. Modify

a) B, C
b) A, B
c) A, C
d) C, D

8. The index is named and the ordering for each column used in the index can be specified as either_____ or _____.

A. Ascending
B. No order
C. Descending
D. Mixed

a) B, C
b) A, B
c) A, C
d) C, D

9. Mention the Security aspects.

A. VIEW mechanism
B. GRANT operation
C. ALTER
D. SELECT

a) A, B
b) B, C
c) A, C
d) C, D

10. Mention the major DDL statements to construct and administer the database.

A. DELETE
B. CREATE
C. DROP
D. UPDATE

a) C, D
b) B, C
c) A, C
d) A, D

11. Mention the issues that deal with Data Control.

A. Recovery and Concurrency
B. Security

C. Backup
D. Integrity Constraints

a) A, D
b) A, B, C
c) A, B, D
d) B, C, D

12. Mention the major categories of SQL commands with regard to their functionality.

A. Commands that mess the use of the database
B. To create and maintain the database structure
C. Commands that manipulate the data
D. Commands that control the use of the database

a) B, C, D
b) A, B, C, D
c) D, A, B
d) A, B, C

Unit 7 SQL Advanced functions

1. A ____ is a virtual table which does not actually exist.

a) Record
b) View
c) File
d) None of these

2. If the list of column names is omitted the columns in the view take the same name as in the underlying_____.

a) Columns
b) Rows
c) Tables
d) None of these

3. A view is a relation and can be used in _____expressions.

a) Structured Question Language
b) Schema Query Language
c) Query
d) None of these

4. Views generally are not_____.

a) Stored
b) Retrieved
c) Deleted

d) None of these

5. The base relations on which a view is based are sometimes called the _____relations.

a) Query
b) Data
c) Non-Existing
d) Existing

6. The use of SQL commands within a host language program is called _____ .

a) Embedded SQL
b) SQLCODE
c) SQLSTATE
d) None of these

7. Mention the SQL-92 standard special variables for reporting errors.

A. Simplicity
B. SQLCODE
C. SQLSTATE
D. SQLQUERY

a) B, C
b) A, B
c) A, C
d) C, D

8. Mention the two complications in embedded SQL.

A. SQL is not set-oriented
B. Consistency
C. SQL is set-oriented
D. The data types recognized by SQL may not be recognized by the host language, and vice versa

a) B, C
b) A, B
c) A, C
d) D, C

9. A view which restricts the user to certain rows is called a_____, and a _____restricts the user to certain columns.

A. Straight view
B. Horizontal view
C. Vertical view
D. Tuple view

a) A, B
b) B, C
c) A, C
d) C, A

10. Mention the disadvantages to views.

A. Performance
B. Simplicity
C. Update restrictions
D. Protection from change

a) C, D
b) B, C
c) A, C
d) A, B

11. Mention the advantages to views.

A. Security
B. Date integrity
C. Simplicity
D. Protection from change

a) B, C, D
b) A, D
c) A, B, C, D
d) A, B, C

12. Mention the ISO standard specifications that a view must meet in order to allow updates.

A. The view must not have a DISTINCT clause.
B. The view must only name one table in the FROM clause
C. All the columns must be real columns
D. The WHERE clause must not contain a sub-query
E. There must be no GROUP BY or HAVING clause

a) A, D, E
b) A, B, C
c) A, B, D, C
d) A, B, C, D, E

Unit 08 Relational Algebra

1. _____ yields a vertical subset of the relation.

a) Selection
b) Projection
c) Division

d) Join

2. The first query language to be based on Codd's algebra was _____.

a) DBMS
b) SQL
c) ISBL
d) None of these

3. Relational algebra is a _____language.

a) Structured
b) Schema
c) Procedural
d) None of these

4. The Cartesian product of two relations is the _____ of tuples belonging to the two relations.

a) Concatenation
b) Separation
c) Division
d) None of these

5. Any finite number of _____ connected by Boolean operators may be specified in the selection operation.

a) Query
b) Data
c) Operators
d) Predicates

6. The ____ operator allows the combining of two relations to form a single new relation.

a) Join
b) Selection
c) Division
d) Projection

7. The projection operation is used to either _____the number of attributes in the resultant relation or to _____ attributes.

A. Increase
B. Reduce
C. Reorder
D. Decrease

a) B, C
b) A, B
c) A, C

d) C, D

8. Two common and very useful variants of the join are the ____and the_____.

A. Left join
B. Right join
C. natural join
D. equi-join

a) B, C
b) A, B
c) A, C
d) D, C

9. _____ and _____ are unary operations.

A. Division
B. Projection
C. Selection
D. Join

a) A, B
b) B, C
c) A, C
d) D, C

10. The relational algebraic operations can be divided into basic_____ and _____.

A. Set-oriented operations
B. Query-oriented operations
C. Relational-oriented operations
D. Selection-oriented operations

a) C, D
b) B, C
c) A, C
d) A, B

11. Mention the traditional set operations.

A. Union
B. Difference
C. Intersection
D. Cartesian product

a) B, C, D
b) A, D
c) A, B, C, D
d) A, B, C

12. Mention the concatenation operations.

A. R
B. R = P || Q
C. |R| = |P| + |Q| D. |R| = |P|*|Q|

a) A, D
b) A, B, C
c) A, B, D, C
d) B, C, D

Unit 9 Relational Calculus

1. The _____ power of relational algebra is often used as a metric of how powerful a relational database query language is.

a) Expressive
b) Bind
c) Safe
d) None of these

2. In the atomic formula clauses, the quantifiers "'For any"and "For all" are said to _____ the variable R.

a) Free
b) Bind
c) Formula
d) None of these

3. Relational calculus is an alternative to _____.

a) TRC
b) DRC
c) Relational algebra
d) None of these

4. A _____ is a variable that takes on tuples of a particular relation schema as values.

a) Tuple variable
b) Domain variable
c) Query
d) None of these

5. A _____ is defined to be expression of the form { T | p(T) }, where T is the only free variable in the formula p.

a) Variable

b) Function
c) DRC query
d) TRC query

6. A _____ is a variable that ranges over the values in the domain of some attribute.

a) Domain variable
b) Transaction variable
c) Tuple variable
d) None of the these

7. In tuple relational calculus, variables take on _____ values and in domain relational calculus, variables take on ____ values.

A. Domain
B. Variable
C. Tuple
D. Field

a) B, C
b) A, B
c) A, C
d) C, D

8. The language for writing formulas p(T) is at the heart of _____ and is essentially a simple subset of _____ logic.

A. TRC
B. DRC
C. first-order
D. Last order

a) B, C
b) A, B
c) A, C
d) C, A

9. A tuple relational calculus query has the form { T | p(T) } where T is a _____and p(T) denotes a _____ that describes T.

A. Tuple variable
B. Formula
C. Domain variable
D. Method

a) A, B
b) B, C
c) A, C
d) C, A

10. The relational calculus is _____ or _____.

A. Procedural
B. Nonprocedural
C. Declarative
D. Non declarative

a) C, A
b) B, C
c) A, C
d) A, B

Unit 10 Normalization

1. Let X and Y be the two attributes of a relation. Given the value of X, if there is only one value of Y corresponding to it, then Y is said to be _____ dependent on X.

a) Functionally
b) Non-Functionally
c) Attribute
d) None of these

2. Functional dependency may also be based on a _____ attribute.

a) Decomposite
b) Composite
c) Formula
d) None of these

3. Given a relation, if the value of an attribute X uniquely determines the value of all other attributes in a row, then X is said to be the ____of that relation.

a) Tuple
b) File
c) Key
d) None of these

4. The _____ of a relation scheme R = (A1 ,A2,...,An) is its replacement by a set of relation schemes {R1,R2,...,Rm} such that R1 ? R for 1 ? m and R1 U R2 U Rm = R.

a) Decomposition
b) Normalization
c) Updation
d) None of these

5. First Normal Form is also called a____.

a) Straight file

b) Relational file
c) Round file
d) Flat file

6. Converting a relation to the ____ form is the first essential step in normalization.

a) 1NF
b) 3NF
c) 4NF
d) 2NF

7. A relation is in 4NF if it has no more than one_____ , or one_____ .

A. Dependent multivalued dependency
B. Independent multivalued dependency without a functional dependency
C. Independent multivalued dependency
D. Independent multivalued dependency with a functional dependency

a) B, C
b) A, B
c) A, C
d) C, D

8. A relation is said to be in 2NF if it is in____, and non-key attributes are _____ on the key attribute.

A. 1NF
B. Functionally independent
C. Functionally dependent
D. 3NF

a) B, C
b) A, B
c) A, C
d) C, A

9. In the relational model, the problem of _____ and _____ can be remedied by decomposition.

A. Redundancy
B. Inconsistency
C. Updation
D. Availability

a) A, B
b) B, C
c) A, C
d) C, A

10. The problems of Database inconsistency and Redundancy of data are similar to the problems that exist in the _____ and _____ models.

A. Parallel
B. Hierarchical
C. Network
D. Star

a) C, A
b) B, C
c) A, C
d) A, B

11. Mention the different Anomalies in a Database.

A. Redundancy
B. Update Anomalies
C. Insertion Anomalies
D. Deletion Anomalies

a) A, B, C, D
b) C, D
c) D, A, C
d) A, B, C

12. Mention the Properties of Normalized Relations.

A. No data value should be duplicated in different rows unnecessarily.
B. A value must be specified (and required) for every attribute in a row.
C. Each relation should be self-contained
D. When a row is added to a relation, other relations in the database should not be affected.
E. A value of an attribute in a tuple may be changed independently

a) D, E, A
b) B, C, D, E
c) A, B, C
d) A, B, C, D, E

13. Mention the concept on which the higher normalization steps are based.

A. Dependencies among attributes in a relation
B. Identification of an attribute or a set of attributes as the key of a relation
C. Non Dependencies among attributes in a relationD. Multivalued dependency between attributes.

a) B, C, D
b) A, B, D
c) A, B, C
d) C, B, D, A

Unit 11 Query Processing and Optimization

1. The typical external sorting algorithm uses a ____ strategy.

a) Sort-merge
b) Linear search
c) Binary search
d) None of these

2. _____ is one of the Primary algorithms used in query processing that are suitable for large files of records stored on disk that do not fit entirely in main memory.

a) SELECT operation
b) External Sorting
c) JOIN operation
d) Outer Join

3. A _____ contains a single SELECT-FROM-WHERE expression.

a) Tuple block
b) File block
c) Query block
d) None of these

4.An SQL query is first translated into an _____ expression-represented as a query tree data structure-that is then optimized.

a) Equivalent extended relational algebra
b) Normalized
c) Updated
d) None of these

5. When the optimization phase is over then detailed strategy is observed and the best evaluation plan is found out by the _____for processing the query.

a) Query engine
b) Execution engine
c) Process engine
d) Evaluation engine

6. _____ is a set of activities to obtain the desired information from a database system in a predictable and reliable fashion.

a) Query processing
b) Query optimization
c) Query Evaluation
d) None of the these

7. Query processing is a set of activities to obtain the desired information from a database system in a _____ and _____ fashion.

A. Optimized
B. Processed
C. Predictable
D. Reliable

a) B, C
b) A, B
c) A, C
d) C, D

8. _____ and _____ is done because Query in High Level language is suitable for human use only.

A. Parsing
B. Evaluation
C. Translation
D. Selection

a) B, C
b) A, B
c) A, C
d) C, A

9. _____ and _____ is done because Query in High Level language is suitable for human use only.

A. Parsing
B. Evaluation
C. Translation
D. Selection

a) B, C
b) A, B
c) A, C
d) C, A

10. In _____ and _____ systems, optimization is left for the most part to the application programmer.

A. Parallel
B. Hierarchical
C. Network
D. Star

a) C, A
b) B, C
c) A, C
d) A, B

11. Mention the different algorithm for executing query operations.

A. EXTERNAL sorting

B. SELECT operation
C. JOIN operation
D. PROJECT & SET operation

a) A, B, C, D
b) C, D
c) D, A, C
d) A, B, C

12. Mention few examples of some of the search algorithms that can be used to implement a select operation.

A. Linear search
B. Binary search
C. Using a primary index to retrieve multiple records
D. Using a clustering index to retrieve multiple records
E. Using a secondary (BPlus-tree) index on an equality comparison

a) D, E, A
b) B, C, D, E
c) A, B, C
d) A, B, C, D, E

13. Mention the Methods for implementing Joins.

A. Nested-loop join
B. Single-loop join
C. Sort-merge join
D. Hash-join

a) A, C, D
b) A, B, D
c) A, B, C, D
d) C, B, D, A

Unit 12 Distributed Databases

1. Availability is crucial for database systems used for ____ applications.

a) Real-time
b) Run-time
c) Offline
d) None of these

2. Depending upon the design of the distributed database system, each local administrator may have a different degree of _____ which is often a major advantage of distributed databases.

a) Memory
b) Autonomy

c) Transaction
d) None of these

3. In a _____ system, the database administrator of the central site controls the database.

a) Local
b) Distributed
c) Centralized
d) None of these

4. A _____ is a transaction that accesses accounts in the one single site, at which the transaction was initiated.

a) Local transaction
b) Distributed transaction
c) Global transaction
d) None of these

5. A distributed database system consists of a collection of sites, each of which maintains a _____ databases system.

a) Distributed
b) Global
c) Centralized
d) Local

6. In a _____ database system, the database is stored on several computers.
Question 6 options:

a) Distributed
b) Centralized
c) Local
d) None of the these

7. A large geographical area type of network is referred to as a _____ network and a small geographical area type of network is referred to as a _____ network.

A. Global-area
B. Short-haul
C. Long-haul
D. Local-area

a) B, C
b) A, B
c) A, C
d) C, D

8. The primary advantage of distributed database systems is the ability to _____ and ____data in a reliable and efficient manner.

A. Share
B. Processing overhead
C. Access
D. Execute

a) B, C
b) A, B
c) A, C
d) C, A

9. According to____ and _____, the failure of one site must be detected by the system, and appropriate action may be needed to recover from the failure.

A. Reliability
B. Availability
C. Speedup of query processing
D. Non availability

a) A, B
b) B, C
c) A, C
d) C, A

10. Mention the different schemes for fragmenting a relation.

A. Parallel fragmentation
B. Horizontal fragmentation
C. Vertical fragmentation
D. Straight fragmentation

a) C, A
b) B, C
c) A, C
d) A, B

11. Mention the disadvantages of data distribution in a distributed database systems.

A. Software development cost
B. Decreased processing overhead
C. Greater potential for bugs
D. Increased processing overhead

a) A, C, D
b) C, D
c) D, B, C
d) A, B, C

12. Mention the advantages of data distribution in a distributed database systems.

A. Slow down of query processing
B. Sharing of data
C. Reliability and Availability
D. Speedup of query processing

a) D, A
b) B, C, D
c) A, B, C
d) A, B, D

13. Mention the major differences among various topologies configurations.

A. Installation cost
B. Communication cost
C. Reliability
D. Availability

a) B, C, D
b) A, B, D
c) A, B, C, D
d) C, B, A

Unit 13 Object Oriented Database Management System

1. The industry introduces novel Data manipulation Language and Data Definition Language constructs for a data model based on semantic and _____ models.

a) Functional data
b) Non Functional data
c) Method
d) None of these

2. Database languages can be embedded in host _____ languages.

a) Query
b) Programming
c) Database
d) None of these

3. Artificial intelligence and expert systems represent information as facts and rules that can be collectively viewed as a_____.

a) Database
b) Query base
c) Knowledge base
d) None of these

4. A database system is usually organized according to a _____ model.

a) Data
b) Object
c) Query
d) None of these

5. KDBMS is used to support the management of the shared_____.

a) Framework.
b) Query
c) Applications
d) Knowledge

6. _____ means that a new object may be created by extending an existing object.

a) Inheritance
b) Class
c) Object
d) None of the these

7. _____ and _____ represent information as facts and rules that can be collectively viewed as a knowledge base.

A. Knowledge
B. Relational
C. Artificial intelligence
D. Expert systems

a) B, C
b) A, B
c) A, C
d) C, D

8. Applications may require access to multimedia data on the basis of the structure of a _____ or by following_____.

A. **Graphical item**
B. Processing link
C. **Logical links**
D. Physical links

a) B, C
b) A, B
c) A, C
d) C, A

9. Mention the different directions in which Research in model and process complex data has gone.

A. Extending the functionality of RDBMS
B. Developing and implementing OODBMS
C. Extending then nonfunctionality of RDBMS
D. Developing and implementing DBMS

a) A, B
b) B, C
c) A, C
d) C, A

10. RDBMSs were originally designed for ____ computer and _____ data processing applications.

A. Supper
B. Mainframe
C. Business
D. Non business

a) C, A
b) B, C
c) A, C
d) A, B

11. In modern office information or other multi-media systems, data includes not only text and numbers but also _____, _____ and _____.

A. Images
B. Text
C. Graphics
D. Digital audio and video

a) A, C, D
b) C, D
c) D, B, C
d) A, B, C

12. Mention the features of Object Oriented System.

A. Reduced maintenance
B. Real-world modelling
C. Improved reliability
D. High code reusability

a) D, A
b) A, B, C, D
c) A, B, C
d) A, B, D

13. Mention the applications whose nature of the data does not fit well into the relational framework.

A. Design databases
B. Multimedia databases
C. Knowledge bases
D. Availability

a) B, C, D
b) A, B, D
c) A, B, C
d) C, B, D, A

Unit 14 Object Relational Mapping

1. When two classes are related via join table, one of the classes must be designated as the _____ .

a) Join manager
b) Join method
c) Join class
d) None of these

2. ORM is an acronym for _____ .

a) Object-record mapping
b) Object-relational mapping
c) Object-relational method
d) None of these

3. Mention the advantage of ORM.

a) Reduces the amount of query needed to be written
b) Increases the amount of code needed to be written
c) Reduces the amount of code needed to be written
d) None of these

4. Superset mappings can be used to create _____ that hide the underlying data model.

a) View classes
b) Object
c) Query
d) None of these

5. Under _____ mapping, each concrete class in the tree is mapped to a different table.

a) Filtered
b) None of these
c) Vertical
d) Horizontal

6. In _____ mapping, all concrete classes in the tree are mapped to the same table.

a) Filtered
b) Horizontal
c) Vertical
d) None of the these

7. Under VBSF an aggregation relationship is defined by means of an _____ attribute, and an association relationship by means of a _____ attribute.

A. Knowledge collection
B. Object Collection
C. Owned Collection
D. Referenced Collection

a) B, C
b) A, B
c) A, C
d) C, D

8. Mention the two types of class-to-table mappings supported by VBSF.

A. SUBSET
B. SUBCLASS
C. SUPERSET
D. SUPPERCLASS

a) B, C
b) A, B
c) A, C
d) C, D

9. Applications that use _____ or _____, the client and the database are very tightly coupled where GUI code, business logic, and SQL statements are all interwoven throughout the application source code.

A. Data-aware widgets
B. Controls
C. Non Controls
D. Non data

a) A, B
b) B, C
c) A, C
d) A,B,C

10. Mention the two different paradigms for converting data in ORM.

A. Application
B. Relational database
C. Object-oriented programming language

D. DBMS

a) C, A
b) B, C
c) A, C
d) A, B

11. Mention the different methods a class inheritance tree can be mapped in the RDBMS.

A. Vertical mapping
B. Horizontal mapping
C. Filtered mapping
D. Straight mapping

a) B, C, D
b) A, B, D
c) A, B, C
d) C, B, D, A

12. Mention few reasons why Object-relational impedance mismatch.

A. Objects can't be directly saved to and retrieved from relational databases
B. Objects have identity, state, and behaviour in addition to data whereas RDBMS stores data only.
C. Objects are traversed using direct references while RDBMS tables are related via like values in foreign and primary keys
D. Current RDBMS have no parallel to Java's object inheritance

a) A, B, C, D
b) C, D
c) D, B, C
d) A, B, C

13. Mention the different objects relationship based on multiplicity.

A. Many-to-all relationships
B. One-to-one relationships
C. One-to-many relationships D. Many-to-many relationships

a) D, A
b) B, C, D
c) A, B, C
d) A, B, D

Unit 15 Technological Trends in DBMS

1. _____ in cloud computing technology takes up the idea of using internet to run software on any individual's computer.

a) Software

b) Cloud
c) Internet
d) AWS

2. Name the component through which the cloud user interacts.

a) Program
b) Application
c) User interface
d) Program

3. In cloud storage, data is stored on multiple _____.

a) Centralised
b) third-party servers
c) Decentralised
d) Public

4. Name the first software with multitenant platform that charged based on usage instead of buying the software.

a) Salesforce
b) AWS
c) System
d) Application

5. _____ is the familiar Microsoft Office now available on cloud as SaaS

a) Protocol
b) Google
c) Office 365
d) Microsoft

6. AWS stands for _____

a) Anytime Webservices
b) Any where web services
c) All time webservices
d) Amazon Web Services

7. Temporal databases are the technique which record _____ data.

a) Intermediete
b) Temperorry
c) Time-referenced
d) Application

8. Financial function of temporal database includes:

a) Banking
b) accounting
c) portfolio organisation
d) all of the above

9. Big data supports 3 Vs: Volume, Velocity and _____.

a) Value
b) Vector
c) Variety
d) Validity

10. MapReduce is introduced by _____.

a) BigData
b) Google
c) Amazon
d) Intent

11. Neo4J is a _____based database.

a) Distributed
b) Vector
c) Simple
d) Graph

12. Key to cloud computing is a massive network of servers or even individual PCs interconnected in a grid [True/False].

a) **True**
b) False

13. NoSQL does not prohibit SQL. [True/False]

a) **True**
b) False

14 Data consistency is high in NoSQL as compared to relational databases. [True/ False]

a) True
b) **False**