**DATABASE ADMINISTRATOR**

**TECHNICAL PAPER II**

1. In which architecture, client can't directly communicate with the server?
   1. 1-tier architecture
   2. 2-tier architecture
   3. 3-tier architecture
   4. None of the above

Ans: c

1. What is present in Server but not in Client?
   1. Database
   2. Application Server
   3. User
   4. None

Ans: a

1. Requests and responses are transformed using \_\_\_\_\_\_\_\_ between different database layers.
   1. Mapping
   2. Deflection
   3. Taping
   4. Reflection

Ans: a

1. DBMS transform requests from the conceptual to the internal level through \_\_\_\_ mapping.
   1. External
   2. Internal
   3. Hidden
   4. External / Conceptual

Ans: b

1. Which Schema is also known as Physical Schema?
   1. Internal
   2. Conceptual
   3. External
   4. None

Ans: a

1. What is TRUE about Conceptual level?
   1. Describes how the entire database is structured conceptually.
   2. Conceptually, a database describes what data will be stored in it and what relationships exist among them.
   3. Details of internal implementation such as a data structure are hidden at the conceptual level.
   4. All of the above

Ans: d

1. \_\_\_\_\_ are collections of similar types of entities.
   1. Relationship Set
   2. Entity Set
   3. ER Set
   4. None of the above

Ans: b

1. Which type of data model is an extension of ER Model?
   1. Relational Data Model
   2. Object-based Data Model
   3. Structured Data Model
   4. Semi-structured Data Model

Ans: b

1. What does object refer to in an Object-based data model?
   1. Data carrying its properties
   2. Objects carrying its properties
   3. Relations carrying its properties
   4. Models carrying its properties

Ans: a

1. What is the process of database creation known as?
   1. Data Creation
   2. Data Processing
   3. Data Modelling
   4. Data Defining

Ans: c

1. Conceptual level, internal level and external level are three components of the three level RDBMS architecture. Which of the following is not part of the conceptual level?
   1. Storage dependent details
   2. Entities, attributes and relationship
   3. Constraints
   4. Semantic information

Ans: a

1. Which type of DBMS provides support for maintaining several versions of same entity?
   1. RDBMS
   2. Hierarchical
   3. Object Oriented DBMS
   4. Network model

Ans: c

1. Semi join strategies are techniques for query processing in distributed DBMS. Which of the following is a semi join technique?
   1. Only the joining attribute are sent from one site to another and then all of the rows are returned.
   2. All of the attributes are sent from one site to another and then only the required rows are returned.
   3. Only the joining attributes are sent from one site to another and then only the required rows are returned.
   4. All of the attributes are sent from one site to another and then only the required rows are returned.

Ans: c

1. Which of the following computing models is not an example of distributed computing environment?
   1. Cloud computing
   2. Cluster computing
   3. Peer-to-peer computing
   4. Parallel computing

Ans: d

1. A data warehouse is always \_\_\_\_\_\_
   1. Subject oriented
   2. Object oriented
   3. Program oriented
   4. Compiler oriented

Ans: a

1. Which of the following statements concerning object oriented database is not true?
   1. Objects in an object oriented database contain not only data but also methods for processing data
   2. Object oriented database store computational instructions in the same place as the data.
   3. Object oriented database are more adept at handling structured data than relational database.
   4. Object oriented database store more types of data than relational databases and access that data faster.

Ans: c

1. Which of the following true regarding the advantages of OODBMS over RDBMS?
2. An OODBMS avoids the impedance mismatch problem
3. An OODBMS avoids the phantom problem
4. An OODBMS provides higher performance concurrency control than most relational database
5. An OODBMS provides faster access to individual data objects once they have been read from disk
   1. I and IV only
   2. II and III only
   3. I, II and III only
   4. I, II and IV only

Ans: a

1. In a hierarchical database, a hashing function is used to locate file
   1. Root
   2. Collision
   3. Foreign key
   4. Records

Ans: a

1. Which of the following is not a type of DBMS?
   1. Sequential
   2. Network
   3. Object Oriented
   4. Hierarchical

Ans: a

1. Which of the following statement is not true regarding data independence?
   1. Hierarchical data model suffers from data independence
   2. Network model suffers from data independence
   3. Relational model suffers from logical data independence
   4. Relational model suffers from physical data independence

Ans: c

1. Which of the following is an essential process in which the intelligent methods are applied to extract data patterns?
   1. Warehousing
   2. Data Mining
   3. Text Mining
   4. Data Selection

Ans: b

1. What is KDD in data mining?
   1. Knowledge Discovery Database
   2. Knowledge Discovery Data
   3. Knowledge Data definition
   4. Knowledge data house

Ans: a

1. For what purpose, the analysis tools pre-compute the summaries of the huge amount of data?
   1. In order to maintain consistency
   2. For authentication
   3. For data access
   4. To obtain the queries response

Ans: d

1. What are the functions of Data Mining?
   1. Association and correctional analysis classification
   2. Prediction and characterization
   3. Cluster analysis and Evolution analysis
   4. All of the above

Ans: d

1. Which of the following statements is incorrect about the hierarchal clustering?
   1. The hierarchal type of clustering is also known as the HCA
   2. The choice of an appropriate metric can influence the shape of the cluster
   3. In general, the splits and merges both are determined in a greedy manner
   4. All of the above

Ans: a

1. Which one of the following statements about the K-means clustering is incorrect?
   1. The goal of the k-means clustering is to partition (n) observation into (k) clusters
   2. K-means clustering can be defined as the method of quantization
   3. The nearest neighbor is the same as the K-means
   4. All of the above

Ans: c

1. Which one of the clustering technique needs the merging approach?
   1. Partitioned
   2. Naïve Bayes
   3. Hierarchical
   4. None of these

Ans: c

1. Which of the following statement is true about the classification?
   1. It is a measure of accuracy
   2. It is a subdivision of a set
   3. It is the task of assigning a classification
   4. None of the above

Ans: b

1. The analysis performed to uncover the interesting statistical correlation between associated -attributes value pairs are known as the \_\_\_\_\_\_\_.
   1. Mining of association
   2. Mining of correlation
   3. Mining of clusters
   4. All of the above

Ans: b

1. Which one of the following correctly defines the term cluster?
   1. Group of similar objects that differ significantly from other objects
   2. Symbolic representation of facts or ideas from which information can potentially be extracted
   3. Operations on a database to transform or simplify data in order to prepare it for a machine-learning algorithm
   4. All of the above

Ans: a

1. Which of the listed below helps to identify abstracted patterns in unlabeled data?
   1. Hybrid learning
   2. Unsupervised learning
   3. Supervised learning
   4. Reinforcement learning

Ans: b

1. Which of the following process is not involved in the data mining process?
   1. Data exploration
   2. Data transformation
   3. Data archaeology
   4. Knowledge extraction

Ans: b

1. Where is data warehousing used?
   1. Logical system
   2. Transaction system
   3. Decision support system
   4. None of the above

Ans: c

1. Which is the correct process of data mining?
   1. Infrastructure, exploration, analysis, interpretation, and exploitation
   2. Exploration, Infrastructure, analysis, interpretation, and exploitation
   3. Exploration, Infrastructure, interpretation, analysis, and exploitation
   4. Exploration, Infrastructure, analysis, exploitation, and analysis

Ans: a

1. Which statement is incorrect regarding data cleaning?
   1. It refers to correcting the inconsistent data.
   2. It refers to the process of data cleaning.
   3. It refers to the conversion of the wrong data to the right data.
   4. All of the above

Ans: d

1. Among which of the following can be used by the warehouse?
   1. Database table
   2. Online database
   3. Flat files
   4. All of the above

Ans: d

1. Which one of the following refers to querying the unstructured textual data?
   1. Information access
   2. Information update
   3. Information retrieval
   4. Information manipulation

Ans: c

1. Which statement is correct regarding query tools?
   1. It is used to query the databases
   2. Attributes to a database can only take numerical values.
   3. Both a and b
   4. None of these

Ans: a

1. Which statement given below closely defines the term data selection?
   1. It is a knowledge discovery process of the actual discovery phase
   2. The selection of correct data for the process of Knowledge Discovery Database
   3. A subject orient integrated data in support of management.
   4. All of the above

Ans: b

1. Which of the following clustering algorithm requires the number of clusters to be pre-specified?
   1. Hierarchical clustering
   2. k-means clustering
   3. DBSCAN
   4. Markov clustering algorithm

Ans: b

1. Which of the following makes the transaction permanent in the database?
   1. View
   2. Commit
   3. Rollback
   4. Flash

Ans: b

1. In order to undo the work of transaction after last commit which one should be used?
   1. View
   2. Redo
   3. Rollback
   4. Undo

Ans: c

1. 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: c

1. The deadlock state can be changed back to stable state by using\_\_\_\_\_\_\_\_ statement.
   1. Commit
   2. Rollback
   3. Save point
   4. Deadlock

Ans: b

1. 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. Recovered controller
   2. Exclusive lock
   3. Two phase lock
   4. Authorization rule

Ans: c

1. 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: a

1. OLAP stands for:
   1. Online analytical processing
   2. Online analysis processing
   3. Online transaction processing
   4. Online aggregate processing

Ans: a

1. Data that can be modeled as dimension attributes and measure attributes are called \_\_\_\_\_\_\_ data.
   1. Multidimensional
   2. Single dimensional
   3. Measured
   4. Dimensional

Ans: a

1. The generalization of cross-tab which is represented visually is \_\_\_\_\_\_\_ which is also called as data cube.
   1. Two dimensional cube
   2. Multidimensional cube
   3. N-dimensional cube
   4. Cuboid

Ans: a

1. In SQL the cross-tabs are created using
   1. Slice
   2. Dice
   3. Pivot
   4. All of the above

Ans: a

1. What do data warehouses support?
   1. OLAP
   2. OLTP
   3. Both a and b
   4. Operational databases

Ans: a

1. Ranking of queries is done by which of the following?
   1. Group by
   2. Order by
   3. Having
   4. Both a and b

Ans: b

1. Any recursive view must be defined as the union of two subqueries: a \_\_\_\_\_\_\_ query that is non-recursive and a \_\_\_\_\_ query.
   1. Base, recursive
   2. Recursive, Base
   3. Base, Redundant
   4. View, Base

Ans: a

1. In rank() function if one value is shared by two tuples then
   1. The rank order continues as counting numbers
   2. The rank order continues by leaving one rank in the middle
   3. The user specifies the order
   4. The order does not change

Ans: b

1. The \_\_\_\_\_\_\_ function that does not create gaps in the ordering.
   1. intense\_rank()
   2. continue\_rank()
   3. default\_rank()
   4. dense\_rank()

Ans: d

1. What can be specified in order to simplify the null value confusion in the rank?
   1. Not null
   2. Null last
   3. Null first
   4. Both b and c

Ans: d

1. Which of the following statement is used to remove the privilege from the user Amit?
   1. REMOVE UPDATE ON department FROM Amit
   2. REVOKE UPDATE ON employee FROM Amit
   3. DELETE SELECT ON department FROM Amit
   4. GRANT UPDATE ON employee FROM Amit

Ans: b

1. In authorization graph, if DBA provides authorization to u1 which in turn gives to u2 which of the following is correct?
   1. If DBA revokes authorization from u1 then u2 authorization is also revoked
   2. If u1 revokes authorization from u2 then u2 authorization is revoked
   3. If DBA & u1 revokes authorization from u1 then u2 authorization is also revoked
   4. If u2 revokes authorization then u1 authorization is revoked

Ans: c

1. A stored procedure in SQL is a\_\_\_\_\_\_
   1. Block of functions
   2. Group of Transact-SQL statements compiled into a single execution plan.
   3. Group of distinct SQL statements.
   4. None of these

Ans: b

1. Temporary stored procedures are stored in \_\_\_\_\_ database.
   1. Master
   2. Model
   3. User specific
   4. Tempdb

Ans: d

1. 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.
2. Procedures
3. Triggers
4. Functions
5. None of these

Ans: b

1. 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.
2. for insert, on
3. On, for insert
4. For, insert
5. None of these

Ans: b

1. Which of the following is NOT an Oracle-supported trigger?
2. BEFORE
3. AFTER
4. DURING
5. INSTEAD OF

Ans: c

1. The recovery scheme must also provide
2. High availability
3. Low availability
4. High reliability
5. High durability

Ans: a

1. Which one of the following is a failure to a system?
2. Boot crash
3. Read failure
4. Transaction failure
5. All of the above

Ans: c

1. Which of the following belongs to transaction failure?
2. Read error
3. Boot error
4. Logical error
5. All of the above

Ans: c

1. The assumption that hardware errors and bugs in the software bring the system to a halt, but do not corrupt the non-volatile storage contents, is known as the

a. Stop assumption  
 b. Fail assumption  
 c. Halt assumption  
 d. Fail-stop assumption

Ans: d

1. The log is a sequence of \_\_\_\_\_\_\_\_\_ recording all the update activities in the database.

a. Log records  
 b. Records  
 c. Entries  
 d. Redo

Ans: a

1. In the \_\_\_\_\_\_\_\_\_\_\_ scheme, a transaction that wants to update the database first creates a complete copy of the database.  
    a. Shadow copy  
    b. Shadow Paging  
    c. Update log records  
    d. All of the above

Ans: a

1. The current copy of the database is identified by a pointer, called \_\_\_\_\_\_\_\_\_\_\_\_ which is stored on disk.  
    a. Db-pointer  
    b. Update log  
    c. Update log records  
    d. All of the above

Ans: a

1. If a transaction does not modify the database until it has committed, it is said to use the \_\_\_\_\_\_\_\_\_\_\_ technique.  
    a. Deferred-modification  
    b. Late-modification  
    c. Immediate-modification  
    d. Undo

Ans: a

1. If database modifications occur while the transaction is still active, the transaction is said to use the \_\_\_\_\_\_\_\_\_\_\_technique.  
    a. Deferred-modification  
    b. Late-modification  
    c. Immediate-modification  
    d. Undo

Ans: c

1. \_\_\_\_\_\_\_\_\_\_\_\_ using a log record sets the data item specified in the log record to the old value.  
    a. Deferred-modification  
    b. Late-modification  
    c. Immediate-modification  
    d. Undo

Ans: d

1. A special redo-only log record < Ti, Xj, V1> is written to the log, where V1 is the value being restored to data item Xj during the rollback. These log records are sometimes called  
    a. Log records  
    b. Records  
    c. Compensation log records  
    d. Compensation redo records

Ans: c

1. Which of the following schemas does define a view or views of the database for particular users?  
    a. Internal schema  
    b. Conceptual schema  
    c. Physical schema  
    d. External schema

Ans: d

1. Which of the following are the process of selecting the data storage and data access characteristics of the database?  
    a. Logical database design  
    b. Physical database design  
    c. Testing and performance tuning  
    d. Evaluation and selecting

Ans: d

1. Which of the following terms does refer to the correctness and completeness of the data in a database?  
    a. Data security  
    b. Data constraint  
    c. Data independence  
    d. Data integrity

Ans: d

1. A transaction may not always complete its execution successfully. Such a transaction is termed  
    a. Aborted  
    b. Terminated  
    c. Closed  
    d. All of the above

Ans: a

1. When the transaction finishes the final statement the transaction enters into  
    a. Active state  
    b. Committed state  
    c. Partially committed state

d. Abort state

Ans:

1. 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  
    a. Consistent state  
    b. Parallel state  
    c. Atomic state

d. Inconsistent state

Ans: d

1. Which of the following is not a part of ACID properties of database transaction?
   1. Atomicity
   2. Consistency
   3. Isolation
   4. Deadlock free

Ans: d

1. Which of the following concurrency control protocols ensure both conflict serializability and freedom from deadlock?

I. 2-Phase locking

II. Time-stamp ordering

1. I only
2. II only
3. Both a and b
4. None of the above

Ans: b

1. Consider the following schedules involving two transactions. Which one of the following statements is true?

S1: r1(X); r1(Y),; r2(X), r2(Y), w2(Y); w2(X)

S2: r1(X); r2(X),; r2(Y), w2(Y), r1(Y); w1(X)

1. Both S1 and S2 are conflict serializable
2. S1 conflict serializable and S2 is not conflict serializable
3. S1 is not conflict serializable and S2 is conflict serializable
4. Both S1 and S2 are not conflict serializable

Ans: c

1. Amongst the ACID properties of a transactio, the durability property requires that the changes made to the database by a successful transaction persist.
   1. Except in case of OS crash
   2. Except in case of a Disk crash
   3. Except in case of Power failure
   4. Always even if there is a failure of any kind

Ans: d

1. Which level of locking provides highest degree of concurrency in a relational database?
   1. Page
   2. Table
   3. Row
   4. Both a and b

Ans: c

1. Suppose a database system crashes again while recovering from a previous crash. Assume checkpoints is not done by the database either during the transactions or during recovery. Which of the following statement(s) is/are true?
   1. The same undo and redo list will be used while recovering again
   2. The database will become inconsistence
   3. The system cannot recover any further
   4. None of these

Ans: a

1. Which of the following scenarios may lead to irrecoverable error in database system?
   1. A transaction writes a data item after it is read by an uncommitted transaction
   2. A transaction reads a data item after it is read by an uncommitted transaction
   3. A transaction reads a data item after it is written by a committed transaction
   4. A transaction reads a data item after it is written by an uncommitted transaction

Ans: d

1. Which of the following is the highest isolation level in transaction management?
   1. Serializable
   2. Repeated Read
   3. Committed Read
   4. Uncommitted Read

Ans: d

1. To maintain transactional integrity and database consistency DBMS will use:
   1. Locks
   2. Protocol
   3. Cursors
   4. Triggers

Ans: a

1. What is the function of Global locks?
   1. Synchronize access to local resources
   2. Synchronize access to global resources
   3. Prevent access to global resources
   4. Prevent access to local resources

Ans: b

1. In conservative two phase locking protocol, a transaction
   1. Should release all the locks only at the beginning of transaction
   2. Should release exclusive locks only after the commit operation
   3. Should acquire all the exclusive locks at the beginning of transaction
   4. Should acquire all the locks at beginning of transaction

Ans: d

1. Assume transaction A holds a shared lock R. If transaction B also requests for a shared lock on R. It will
   1. Deadlock situation
   2. Rejected
   3. Immediately granted
   4. None of these

Ans: c

1. In transaction management of DBMS; “After a transaction completes successfully the changes it has made to the database persists even if there are system failure ”. This property is known as \_\_\_\_\_\_
   1. Durability
   2. Atomicity
   3. Isolation
   4. Consistency

Ans: a

1. In concurrency control a situation where “A transaction may be waiting for an X-lock on an item, while a sequence of other transactions request and are granted on S-lock on the same attribute”. This situation may lead to \_\_\_\_\_\_\_\_\_\_\_\_\_
   1. Starvation
   2. Deadlock
   3. Conflict
   4. No affect

Ans: a

1. On which situation immediate updates protocol as recovery is preferred?
   1. Writes are more than reads
   2. Reads are more than write
   3. Does not matter
   4. None of these

Ans: a

1. Which of the following statement is not true?
   1. 2P locking protocol suffers from deadlock
   2. Time-stamp protocol suffer from abort
   3. Time-stamp protocol suffers from cascading rollback where as 2P locking protocol do not
   4. None of these

Ans: d

1. Usage of pre-emption and transaction rollback prevents\_\_\_\_\_\_\_
   1. Unauthorized usage of data file
   2. Deadlock
   3. Data manipulation
   4. File pre-emption

Ans: b

1. Which of the following is a Time-stamp ordering protocol?
   1. Thomas-write
   2. Thomas-read
   3. Jackson Protocol
   4. None of these

Ans: a

1. Which of the following is maintained by Transaction manager?
   1. Maintain a log of transactions
   2. Maintain before and after database images
   3. Maintain appropriate concurrency control
   4. All of the above

Ans: d

1. A transaction can include following basic database access operation:
   1. read\_item(X)
   2. write\_item(Y)
   3. Both a and b
   4. None of these

Ans: c