**Amritsar College of Engineering and Technology**

**Department of Computer Science and Engineering**

**Relational Database Management System II**

**BTCS 602**

**Multiple Choice Questions**

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| 1.. SQL can be used to: |  |
| |  |  | | --- | --- | | [A.](javascript:%20void%200;) | create database structures only. | | [B.](javascript:%20void%200;) | query database data only. | | [C.](javascript:%20void%200;) | modify database data only. | | [D.](javascript:%20void%200;) | All of the above can be done by SQL. | |  |

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| 2. A subquery in an SQL SELECT statement: |
| |  |  | | --- | --- | | [A.](javascript:%20void%200;) | can only be used with two tables. | | [B.](javascript:%20void%200;) | can always be duplicated by a join. | | [C.](javascript:%20void%200;) | has a distinct form that cannot be duplicated by a join. | | [D.](javascript:%20void%200;) | cannot have its results sorted using ORDER BY. | |
| 3. For what purposes are views used? |
| |  |  | | --- | --- | | [A.](javascript:%20void%200;) | To hide columns only | | [B.](javascript:%20void%200;) | To hide rows only | | [C.](javascript:%20void%200;) | To hide complicated SQL statements only | | [D.](javascript:%20void%200;) | All of the above are uses for SQL views. | |
| 4. What is an SQL virtual table that is constructed from other tables? |
| |  |  | | --- | --- | | [A.](javascript:%20void%200;) | Just another table | | [B.](javascript:%20void%200;) | A view | | [C.](javascript:%20void%200;) | A relation | | [D.](javascript:%20void%200;) | Query results | |
| 5. For what purposes are views used? |
| |  |  | | --- | --- | | [A.](javascript:%20void%200;) | To hide columns only | | [B.](javascript:%20void%200;) | To hide rows only | | [C.](javascript:%20void%200;) | To hide complicated SQL statements only | | [D.](javascript:%20void%200;) | All of the above are uses for SQL views. |  |  | | --- | | 6. Which of the following is NOT a type of SQL constraint? | | |  |  | | --- | --- | | [A.](javascript:%20void%200;) | PRIMARY KEY | | [B.](javascript:%20void%200;) | FOREIGN KEY | | [C.](javascript:%20void%200;) | ALTERNATE KEY | | [D.](javascript:%20void%200;) | UNIQUE | | |
| 7. Which statement about sequences is not true? |
| |  |  | | --- | --- | | [A.](javascript:%20void%200;) | A sequence is an object that generates a sequential series of unique numbers. | | [B.](javascript:%20void%200;) | Sequences are most often used to provide values for surrogate keys. | | [C.](javascript:%20void%200;) | NextVal and CurrVal are both sequence methods. | | [D.](javascript:%20void%200;) | Sequences guarantee valid surrogate key values. | |
| 8. In creating a procedure, you may get a message if you have compile errors. Which of the following is true? |
| |  |  | | --- | --- | | [A.](javascript:%20void%200;) | The line numbers reported match the line numbers you see in your text editor. | | [B.](javascript:%20void%200;) | SQL\*Plus will automatically show the errors to you. | | [C.](javascript:%20void%200;) | To see the errors, enter SHOW ERRORS in SQL\*Plus. | | [D.](javascript:%20void%200;) | If there are no syntax errors, you will receive the message "NO ERRORS." | |
| 9. Which of the following is not true about indexes? |
| |  |  | | --- | --- | | [A.](javascript:%20void%200;) | Indexes are created to enforce uniqueness on columns. | | [B.](javascript:%20void%200;) | Indexes are created to enable fast retrieval by column values. | | [C.](javascript:%20void%200;) | Columns that are frequently used with equal conditions in WHERE clauses are good candidates for indexes. | | [D.](javascript:%20void%200;) | Indexes are created with the ALTER TABLE command. | |

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| 10. The keyword "inverse" is used in which of the following? | |
| |  |  | | --- | --- | | [A.](javascript:%20void%200;) | Class | | [B.](javascript:%20void%200;) | Attribute | | [C.](javascript:%20void%200;) | Relationship | | [D.](javascript:%20void%200;) | All of the above. | | |
| 11. ODL supports which of the following types of association relationships? | |
| |  |  | | --- | --- | | [A.](javascript:%20void%200;) | Unary | | [B.](javascript:%20void%200;) | Unary and Binary | | [C.](javascript:%20void%200;) | Unary and Binary and Ternary | | [D.](javascript:%20void%200;) | Unary and Binary and Ternary and higher | | |
| 12. An extent is which of the following? |
| |  |  | | --- | --- | | [A.](javascript:%20void%200;) | A keyword that indicates that the subclass inherits from a superclass | | [B.](javascript:%20void%200;) | A keyword that indicates that the superclass inherits from a subclass | | [C.](javascript:%20void%200;) | The set of all instances of a class within a database | | [D.](javascript:%20void%200;) | Only one instance of a class within a database | |

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| 13. Identify the class name for the following code: ABC123 course(); |
| |  |  | | --- | --- | | [A.](javascript:%20void%200;) | ABC123 | | [B.](javascript:%20void%200;) | course | | [C.](javascript:%20void%200;) | course() | | [D.](javascript:%20void%200;) | All of the above. |   14. Using ODL, you can define which of the following? |
| |  |  | | --- | --- | | [A.](javascript:%20void%200;) | Attribute | | [B.](javascript:%20void%200;) | Structure | | [C.](javascript:%20void%200;) | Operation | | [D.](javascript:%20void%200;) | All of the above. | |
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| 15. The keyword "inverse" is used in which of the following? | |
| |  |  | | --- | --- | | [A.](javascript:%20void%200;) | Class | | [B.](javascript:%20void%200;) | Attribute | | [C.](javascript:%20void%200;) | Relationship | | [D.](javascript:%20void%200;) | All of the above. | | |
| 16. The object definition language (ODL) is which of the following? |
| |  |  | | --- | --- | | [A.](javascript:%20void%200;) | Used to develop logical schemas | | [B.](javascript:%20void%200;) | A data definition language for OODB | | [C.](javascript:%20void%200;) | A method to implement a logical schema | | [D.](javascript:%20void%200;) | All of the above. | |

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| 17. | An atomic literal is which of the following? |
| |  |  | | --- | --- | | [A.](javascript:%20void%200;) | Strings | | [B.](javascript:%20void%200;) | Boolean | | [C.](javascript:%20void%200;) | Long | | [D.](javascript:%20void%200;) | All of the above. | |
| 18. Which of the following is true concerning an ODBMS? | |
| |  |  | | --- | --- | | [A.](javascript:%20void%200;) | They have the ability to store complex data types on the Web. | | [B.](javascript:%20void%200;) | They are overtaking RDBMS for all applications. | | [C.](javascript:%20void%200;) | They are most useful for traditional, two-dimensional database table applications. | | [D.](javascript:%20void%200;) | All of the above. | | |
| 19. The reserved word enum is used for which of the following? | |
| |  |  | | --- | --- | | [A.](javascript:%20void%200;) | To define a range for an attribute. | | [B.](javascript:%20void%200;) | To define a range for a class. | | [C.](javascript:%20void%200;) | To define a range for a relationship. | | [D.](javascript:%20void%200;) | All of the above. | | |

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| 20. Which of the following is an unordered collection of elements that may contain duplicates? |
| |  |  |  |  | | --- | --- | --- | --- | | [A.](javascript:%20void%200;) | Set | [B.](javascript:%20void%200;) | Bag | | [C.](javascript:%20void%200;) | List | [D.](javascript:%20void%200;) | Dictionary | |

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| 21. Which of the following is true concerning the following statement: class Manager extends Employee |
| |  |  | | --- | --- | | [A.](javascript:%20void%200;) | Manager is a concrete class and a superclass. | | [B.](javascript:%20void%200;) | Manager is a concrete class and a subclass. | | [C.](javascript:%20void%200;) | Manager is an abstract class and a superclass. | | [D.](javascript:%20void%200;) | Manager is an abstract class and a subclass. | |

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| 22. Which of the following is an ordered collection of elements of the same type? |
| |  |  |  |  | | --- | --- | --- | --- | | [A.](javascript:%20void%200;) | Set | [B.](javascript:%20void%200;) | Bag | | [C.](javascript:%20void%200;) | List | [D.](javascript:%20void%200;) | Dictionary | |
| 23. A relationship should be specified how in the ODL? |
| |  |  | | --- | --- | | [A.](javascript:%20void%200;) | One direction starting with the first class | | [B.](javascript:%20void%200;) | One direction starting with the second class | | [C.](javascript:%20void%200;) | Neither direction. | | [D.](javascript:%20void%200;) | Both directions. | |
| 24.Using OQL, you may do which of the following? |
| |  |  | | --- | --- | | [A.](javascript:%20void%200;) | Return an entire collection of elements including duplicates. | | [B.](javascript:%20void%200;) | Return a collection of elements without duplicates. | | [C.](javascript:%20void%200;) | Return a specific subset of elements using a given criteria. | | [D.](javascript:%20void%200;) | All of the above. | |

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| 25. The Object Query Language is which of the following"? |
| |  |  | | --- | --- | | [A.](javascript:%20void%200;) | Similar to SQL and uses a select-from-where structure | | [B.](javascript:%20void%200;) | Similar to SQL and uses a select-where structure | | [C.](javascript:%20void%200;) | Similar to SQL and uses a from-where structure | | [D.](javascript:%20void%200;) | Not similar to SQL | |

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| 26. A distributed database has which of the following advantages over a centralized database? |
| |  |  | | --- | --- | | [A.](javascript:%20void%200;) | Software cost | | [B.](javascript:%20void%200;) | Software complexity | | [C.](javascript:%20void%200;) | Slow Response | | [D.](javascript:%20void%200;) | Modular growth | |

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| 27. An autonomous homogenous environment is which of the following? |
| |  |  | | --- | --- | | [A.](javascript:%20void%200;) | The same DBMS is at each node and each DBMS works independently. | | [B.](javascript:%20void%200;) | The same DBMS is at each node and a central DBMS coordinates database access. | | [C.](javascript:%20void%200;) | A different DBMS is at each node and each DBMS works independently. | | [D.](javascript:%20void%200;) | A different DBMS is at each node and a central DBMS coordinates database access. | |

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| 28. A transaction manager is which of the following? |
| |  |  | | --- | --- | | [A.](javascript:%20void%200;) | Maintains a log of transactions | | [B.](javascript:%20void%200;) | Maintains before and after database images | | [C.](javascript:%20void%200;) | Maintains appropriate concurrency control | | [D.](javascript:%20void%200;) | All of the above. | |

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| 29. Location transparency allows for which of the following? |
| |  |  | | --- | --- | | [A.](javascript:%20void%200;) | Users to treat the data as if it is at one location | | [B.](javascript:%20void%200;) | Programmers to treat the data as if it is at one location | | [C.](javascript:%20void%200;) | Managers to treat the data as if it is at one location | | [D.](javascript:%20void%200;) | All of the above. | |

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| 30. A heterogeneous distributed database is which of the following? |
| |  |  | | --- | --- | | [A.](javascript:%20void%200;) | The same DBMS is used at each location and data are not distributed across all nodes. | | [B.](javascript:%20void%200;) | The same DBMS is used at each location and data are distributed across all nodes. | | [C.](javascript:%20void%200;) | A different DBMS is used at each location and data are not distributed across all nodes. | | [D.](javascript:%20void%200;) | A different DBMS is used at each location and data are distributed across all nodes. | |
| 31. Some of the columns of a relation are at different sites is which of the following? |
| |  |  | | --- | --- | | [A.](javascript:%20void%200;) | Data Replication | | [B.](javascript:%20void%200;) | Horizontal Partitioning | | [C.](javascript:%20void%200;) | Vertical Partitioning | | [D.](javascript:%20void%200;) | Horizontal and Vertical Partitioning | |

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| 32. Which of the following is true concerning a global transaction? |
| |  |  | | --- | --- | | [A.](javascript:%20void%200;) | The required data are at one local site and the distributed DBMS routes requests as necessary. | | [B.](javascript:%20void%200;) | The required data are located in at least one nonlocal site and the distributed DBMS routes requests as necessary. | | [C.](javascript:%20void%200;) | The required data are at one local site and the distributed DBMS passes the request to only the local DBMS. | | [D.](javascript:%20void%200;) | The required data are located in at least one nonlocal site and the distributed DBMS passes the request to only the local DBMS. | |
| 33. A homogenous distributed database is which of the following? |
| |  |  | | --- | --- | | [A.](javascript:%20void%200;) | The same DBMS is used at each location and data are not distributed across all nodes. | | [B.](javascript:%20void%200;) | The same DBMS is used at each location and data are distributed across all nodes. | | [C.](javascript:%20void%200;) | A different DBMS is used at each location and data are not distributed across all nodes. | | [D.](javascript:%20void%200;) | A different DBMS is used at each location and data are distributed across all nodes. | |

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| 34. Replication should be used when which of the following exist? |
| |  |  | | --- | --- | | [A.](javascript:%20void%200;) | When transmission speeds and capacity in a network prohibit frequent refreshing of large tables. | | [B.](javascript:%20void%200;) | When using many nodes with different operating systems and DBMSs and database designs. | | [C.](javascript:%20void%200;) | The application's data can be somewhat out-of-date. | | [D.](javascript:%20void%200;) | All of the above. | |
| 35. Storing a separate copy of the database at multiple locations is which of the following? |
| |  |  | | --- | --- | | [A.](javascript:%20void%200;) | Data Replication | | [B.](javascript:%20void%200;) | Horizontal Partitioning | | [C.](javascript:%20void%200;) | Vertical Partitioning | | [D.](javascript:%20void%200;) | Horizontal and Vertical Partitioning | |

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| 36. Which of the following is a disadvantage of replication? |
| |  |  | | --- | --- | | [A.](javascript:%20void%200;) | Reduced network traffic | | [B.](javascript:%20void%200;) | If the database fails at one site, a copy can be located at another site. | | [C.](javascript:%20void%200;) | Each site must have the same storage capacity. | | [D.](javascript:%20void%200;) | Each transaction may proceed without coordination across the network. | |

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| 37. A distributed database can use which of the following strategies? |
| |  |  | | --- | --- | | [A.](javascript:%20void%200;) | Totally centralized at one location and accessed by many sites | | [B.](javascript:%20void%200;) | Partially or totally replicated across sites | | [C.](javascript:%20void%200;) | Partitioned into segments at different sites | | [D.](javascript:%20void%200;) | All of the above | |

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| 38. Which of the following is not one of the stages in the evolution of distributed DBMS? |
| |  |  | | --- | --- | | [A.](javascript:%20void%200;) | Unit of work | | [B.](javascript:%20void%200;) | Remote unit of work | | [C.](javascript:%20void%200;) | Distributed unit of Work | | [D.](javascript:%20void%200;) | Distributed request | |

39. ............................ is the powerful language for working with[RDBMS](http://en.wikipedia.org/wiki/Relational_database_management_system).  
A) Embedded Programs

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B) Dynamic Programs

C) Query Language

D) Static Language Programs

40. The file in DBMS is called as .................. in RDBMS.

A) console

B) schema

C) table

D) object

41. In ..................... , we have a strict parent-child relationship only.

A) [hierarchical databases](http://en.wikipedia.org/wiki/Hierarchical_database_model).

B) network databases

C) object oriented databases

D) relational databases

42. Which normal form is considered adequate for [relational database design](http://en.wikipedia.org/wiki/Database_design)?

A) 2 [NF](http://en.wikipedia.org/wiki/Database_normalization)

B) 3 NF

C) 4 NF

D) [BCNF](http://en.wikipedia.org/wiki/Boyce%E2%80%93Codd_normal_form)

43. What operator tests column for the absence of data?

A) IS NULL operator

B) [ASSIGNMENT operator](http://en.wikipedia.org/wiki/Assignment_%28computer_science%29)

C) LIKE operator

D) NOT operator

44. Which is proper subset designed to support views belonging to different classes of users in order to hide or protectinformation.

A) Schema

B) Sub-schema

C) Non-schema

D) Non-sub schema

45. Which contain information about a file needed by system programs for accessing file records?

A) File blocks

B) File operators

C) File headers

D) None of these

46. A .................... DBMS distributes data processing tasks between the workstation and network server.

A) Network

B) Relational

C) [Client Server](http://en.wikipedia.org/wiki/Client%E2%80%93server_model)

D) Hierarchical

47. The .................... refers to the way data is organized in and accessible from DBMS.

A) database hierarchy

B) data organization

C) data sharing

D) [data model](http://en.wikipedia.org/wiki/Data_model)

48. ................. is a statement that is executed automatically by the system.

A) trigger

B) assertion

C) durability

D) integrity constraint

49. ............... joins are SQL server default  
A) Outer  
B) Inner  
C) Equi  
D) None of the above  
  
50. The ..................... is essentially used to search for patterns in target string.  
A) Like Predicate  
B) Null Predicate  
C) In Predicate  
D) Out Predicate  
  
51. Which of the following is/are the Database server functions?  
i) Data management            ii) Transaction management  
iii) Compile queries            iv) Query optimization  
A) i, ii, and iv only  
B) i, ii and iii only  
C) ii, iii and iv only  
D) All i, ii, iii, and iv

52. To delete a database ................... command is used  
A) delete database database\_name  
B) Delete database\_name  
C) drop database database\_name  
D) drop database\_name

53. .............. is a combination of two of more attributes used as a primary key  
A) Composite Key  
B) Alternate Key  
C) Candidate Key  
D) Foreign Key  
  
54. Which of the following is not the function of client?  
A) Compile queries  
B) Query optimization  
C) Receive queries  
D) Result formatting and presentation

55. ............. is a special type of stored procedure that is automatically invoked whenever the data in the table is modified.  
A) Procedure  
B) Trigger  
C) Curser  
D) None of the above

56. ................. requires that data should be made available to only authorized users.  
A) Data integrity  
B) Privacy  
C) Security  
D) None of the above  
  
57. Some of the utilities of DBMS are .............  
i) Loading          ii) Backup               iii) File organization          iv) Process Organization  
A) i, ii, and iv only  
B) i, ii and iii only  
C) ii, iii and iv only  
D) All i, ii, iii, and iv  
  
58. ................. allows individual row operation to be performed on a given result set or on the generated by a selected by a selected statement.  
A) Procedure  
B) Trigger  
C) Curser  
D) None of above

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59. The application program typically communicates with a database server, through \_\_\_\_\_\_\_\_\_\_\_, or other protocols, in order to get or store data.  
a) JDBC  
b) ODBC  
c) All of the mentioned  
d) None of the mentioned

60. In SQL, the CREATE TABLESPACE is used  
A) to create a place in the database for storage of scheme objects, rollback segments, and naming the data files to comprise the tablespace.  
B) to create a [database trigger](http://en.wikipedia.org/wiki/Database_trigger).  
C) to add/rename data files, to change storage  
D) All of the above

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61. In a granularity hierarchy the highest level represents the  
a) Entire database  
b) Area  
c) File  
d) Record

62. In a database the file is contained in \_\_\_\_\_\_\_\_  
a) Entire database  
b) Two area  
c) One area  
d) more than one area

63. If a node is locked in an intention mode, explicit locking is done at a lower level of the tree. This is called  
a) Intention lock modes  
b) Explicit lock  
c) Implicit lock  
d) Exclusive lock

64. If a node is locked in \_\_\_\_\_\_\_\_\_\_\_ , explicit locking is being done at a lower level of the tree, but with only shared-mode locks.  
a) Intention lock modes  
b) Intention-shared-exclusive mode  
c) Intention-exclusive (IX) mode  
d) Intention-shared (IS) mode

65. If a node is locked in \_\_\_\_\_\_\_\_\_\_\_\_\_, then explicit locking is being done at a lower level, with exclusive-mode or shared-mode locks.  
a) Intention lock modes  
b) Intention-shared-exclusive mode  
c) Intention-exclusive (IX) mode  
d) Intention-shared (IS) mode

66. 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.  
a) Intention lock modes  
b) shared and intention-exclusive (SIX) mode  
c) Intention-exclusive (IX) mode  
d) Intention-shared (IS) mode

67. \_\_\_\_\_\_\_\_\_\_\_\_ denotes the largest timestamp of any transaction that executed write(Q) successfully.  
a) W-timestamp(Q)  
b) R-timestamp(Q)  
c) RW-timestamp(Q)  
d) WR-timestamp(Q)

68. The \_\_\_\_\_\_\_\_\_\_\_\_\_ ensures that any conflicting read and write operations are executed in timestamp order.  
a) Timestamp-ordering protocol  
b) Timestamp protocol  
c) W-timestamp  
d) R-timestamp

69. 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.  
a) Validation protocol  
b) Validation-based protocol  
c) Timestamp protocol  
d) Timestamp-ordering protocol

70. This validation scheme is called the \_\_\_\_\_\_\_\_\_- scheme since transactions execute optimistically, assuming they will be able to finish execution and validate at the end.  
a) Validation protocol  
b) Validation-based protocol  
c) Timestamp protocol  
d) Optimistic concurrency-control

71. 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.  
a) Idle  
b) Waiting  
c) Deadlock  
d) Ready

72. The deadlock state can be changed back to stable state by using \_\_\_\_\_\_\_\_\_\_\_\_\_ statement.  
a) Commit  
b) Rollback  
c) Savepoint  
d) Deadlock

73. What are the ways of dealing with deadlock ?  
a) Deadlock prevention  
b) Deadlock recovery  
c) Deadlock detection  
d) All of the mentioned

74. 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  
a) Wait-die  
b) Wait-wound  
c) Wound-wait  
d) Wait

75. 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  
a) Wait-die  
b) Wait-wound  
c) Wound-wait  
d) Wait

76. The situation where the lock waits only for a specified amount of time for another lock to be released is  
a) Lock timeout  
b) Wait-wound  
c) Timeout  
d) Wait

77. 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

78. A deadlock exists in the system if and only if the wait-for graph contains a \_\_\_\_\_\_\_\_\_\_\_.  
a) Cycle  
b) Direction  
c) Bi-direction  
d) Rotation

79. Selecting the victim to be rollbacked 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.  
d) How many transactions will be involved in the rollback.

80. \_\_\_\_\_\_\_\_\_\_ rollback requires the system to maintain additional information about the state of all the running transactions.  
a) Total  
b) Partial  
c) Time  
d) Commit

81. The log is a sequence of \_\_\_\_\_\_\_\_\_\_\_, recording all the update activities in the database.  
a) Log records  
b) Records  
c) Entries  
d) Redo

82. 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 mentioned

83. The \_\_\_\_\_\_\_\_\_\_\_\_ scheme uses a page table containing pointers to all pages; the page table itself and all updated pages are copied to a new location.  
a) Shadow copy  
b) Shadow Paging  
c) Update log records  
d) All of the mentioned

84. 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 mentioned

85. 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

86. 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

87. \_\_\_\_\_\_\_\_\_\_\_\_ 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

88. In the \_\_\_\_\_\_\_\_\_\_ phase, the system replays updates of all transactions by scanning the log forward from the last checkpoint.  
a) Repeating  
b) Redo  
c) Replay  
d) Undo

89. The actions which are played in the order while recording it is called \_\_\_\_\_\_\_\_\_\_\_\_\_\_ history.  
a) Repeating  
b) Redo  
c) Replay  
d) Undo

90. A special redo-only log record 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

91. OLAP stands for  
a) Online analytical processing  
b) Online analysis processing  
c) Online transaction processing  
d) Online aggregate processing

92. Data that can be modeled as dimension attributes and measure attributes are called \_\_\_\_\_\_\_ data.  
a) Multidimensional  
b) Singledimensional  
c) Measured  
d) Dimensional

93. The generalization of cross-tab which is represented visually is \_\_\_\_\_\_\_\_\_\_\_\_ which is also called as data cube.  
a) Two dimensional cube  
b) Multidimensional cube  
c) N-dimensional cube  
d) Cuboid

94. The process of viewing the cross-tab (Single dimensional) with a fixed value of one attribute is  
a) Slicing  
b) Dicing  
c) Pivoting  
d) Both a and b

95. The operation of moving from finer-granularity data to a coarser granularity (by means of aggregation ) is called a \_\_\_\_\_\_\_\_.  
a) Rollup  
b) Drill down  
c) Dicing  
d) Pivoting

96. In SQL the cross-tabs are created using  
a) Slice  
b) Dice  
c) Pivot  
d) All of the mentioned

97. { (item name, color, clothes size), (item name, color), (item name, clothes size), (color, clothes size), (item name), (color), (clothes size), () }  
This can be achieved by using which of the following ?  
a) group by rollup  
b) group by cubic  
c) group by  
d) None of the mentioned

98. What do data warehouses support?  
a) OLAP  
b) OLTP  
c) OLAP and OLTP  
d) Operational databases

99. Select item name, color, clothes size, sum(quantity) from sales group by rollup(item name, color, clothes size); How many grouping is possible in this rollup?  
a) 8  
b) 4  
c) 2  
d) 1

100. Which one of the following is the right syntax for DECODE ?  
a) DECODE (search, expression, result [, search, result]… [, default])  
b) DECODE (expression, result [, search, result]… [, default], search)  
c) DECODE (search, result [, search, result]… [, default], expression)  
d) DECODE (expression, search, result [, search, result]… [, default])