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Question Bank

Class: S.Y.B. Sc.CS

Semester: III

Subject: Database Management Systems

UNIT I

1. Which of the following is an Open Source DBMS?
 - a. MySQL
 - b. Microsoft SQL Server
 - c. Microsoft Access
 - d. Oracle

2. When a primary key is define in the table, DBMS automatically creates a _____ on a primary key column.
 - a. Unique index
 - b. Sequence
 - c. Trigger
 - d. Synonym

3. 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.
 - a) Procedures
 - b) Triggers
 - c) Functions
 - d) None of the mentioned

4. A is a set of column that identifies every row in a table.
 - a. composite key
 - b. candidate key
 - c. foreign key
 - d. super key

5. Which of the following language is used to define the integrity constraints?
 - a. DCL
 - b. DML
 - c. DDL

d. DTL

6. Which of the following is NOT an Oracle-supported trigger?

- a. BEFORE
- b. DURING
- c. AFTER
- d. INSTEAD OF

7. Full Form of TCL is-----

- a. Transaction Control Language
- b. Data Control Language
- c. Data Definition Language
- d. Transaction Central Language

8. A set of possible data values is called

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

9. Match the following

A) Composite attribute ----- i) Attribute whose value is calculated from other attributes

B) Multivalued Attribute ---- ii) Attribute that can be further subdivided to yield additional attributes

C) Derived Attribute ----- iii) Attribute that can have more values

- a. A-i, B-ii, C-iii
- b. A-ii, B-i, C-iii
- c. A-ii, B-iii, C-i
- d. A-iii, B-ii, C-i

10. A stored procedure in SQL is a_____

- a) Block of functions
- b) Group of Transact-SQL statements compiled into a single execution plan.
- c) Group of distinct SQL statements.
- d) None of the mentioned

11. Temporary stored procedures are stored in _____ database.

- a) Master
- b) Model
- c) User specific
- d) Tempdb

12. A unit of storage that can store one or more records in a hash file organization is denoted as

- a) Buckets
- b) Disk pages
- c) Blocks
- d) Nodes

13. The file organization which allows us to read records that would satisfy the join condition by using one block read is

- a) Heap file organization
- b) Sequential file organization
- c) Clustering file organization
- d) Hash file organization

14. Which of the following is not true of the traditional approach to information processing

- a. There is common sharing of data among the various applications
- b. It is file oriented
- c. Programs are dependent on the file
- d. It is inflexible

15. Which of these query will display the the table given above ?

- a. Select employee from name
- b. Select name
- c. Select name from employee
- d. Select employee

16. The query given below will not give an error. Which one of the following has to be replaced to get the desired output?

SELECT ID, name, dept name, salary *1.1

WHERE instructor;

- a) Salary1.1
- b) ID
- c) Where
- d) Instructor

17. Which of the following statements contains an error?

- a) Select from emp where empid = 10003;
- b) Select empid from emp where empid = 10006;
- c) Select empid from emp;
- d) Select empid where empid = 1009 and lastname = ‘GELLER’;

18. A _____ file system is software that enables multiple computers to share file storage while maintaining consistent space allocation and file content.

- a) Storage
- b) Tertiary
- c) Secondary
- d) Cluster

19. An attribute or combination of attributes in one table whose values must either match the primary key in another table or be null is called _____.

- a. Secondary Key
- b. Super key
- c. Candidate Key
- d. Foreign Key

20. How many primary key can a table in database have?

- a. Only one
- b. At least one
- c. More than one
- d. Any number of

21. The number of rows in the table is 10. Suppose all rows are deleted. The new row starts with sequence number _____

- a) 11
- b) 1
- c) 100
- d) 101

22. The AUTO_INCREMENT sequences normally begin at _____

- a. 0
- b. 1
- c. -1
- d. 2

23. What is a Sequence with each new sequence number that is generated by a reference to the sequence pseudo column called?

- a. CURRVAL
- b. NEXTVAL
- c. Both A & B
- d. None of the above

24. Which is a database objects from which multiple users can generate unique integers?

- a. Views
- b. Sequences
- c. Synonyms
- d. None of the above

25. 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.

- a. for insert, on
- b. On, for insert
- c. For, insert
- d. Both a and c

26. What are the after triggers ?

- a. Triggers generated after a particular operation
- b. These triggers run after an insert, update or delete on a table
- c. These triggers run after an insert, views, update or delete on a table
- d. Both b and c

27.The variables in the triggers are declared using

- a. -
- b. @
- c. /
- d. /@

28.Triggers _____ enabled or disabled

- a. Can be
- b. Cannot be
- c. Ought to be
- d. Always

29..... are used to recreate if trigger already exists.

- a. Cursor
- b. Trigger
- c. Keywords
- d. Replace

30.What command is used to removing trigger?

- a. DROP TRIGGER Trig;
- b. ALTER TRIGGER Trig;
- c. DELETE TRIGGER Trig;
- d. None of the above

31.How to enable all triggers on emp table?

- a. You cannot enable multiple triggers on a table in one command.
- b. ALTER TRIGGERS ON TABLE employees ENABLE;
- c. ALTER employees ENABLE ALL TRIGGERS;
- d. ALTER TABLE employees ENABLE ALL TRIGGERS;

32.Which of the following is not a benefit of a database trigger?

- a. Enforcing referential integrity
- b. Event logging and storing information on table access
- c. Allowing invalid transactions
- d. Generating some derived column values automatically

33.Files are logically partitioned into storage units of fixed length known as

- a. Sectors
- b. tracks
- c. segments
- d. blocks

34.A organized logical sequence of records is called

- a. File
- b. Organization
- c. Scrubbing
- d. Sequencing

35.The method of access which uses key transformation is known as

- a. Direct.
- b. Hash
- c. Random
- d. Sequential

36.The file organization that provides very fast access to any arbitrary record of a file is

- a. Ordered file
- b. Unordered file
- c. B-tree
- d. Hashed file

37.A B-tree of order m has maximum of _____ children

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

38.A clustering index is defined on the fields which are of type

- a. Non-key and ordering
- b. Non-key and non-ordering
- c. Key and ordering
- d. Key and non-ordering

39. Consider a B+-tree in which the maximum number of keys in a node is 5. What is the minimum number of keys in any non-root node?

- a. 1
- b. 2
- c. 3
- d. 4

40. An index is clustered, if

- a) it is on a set of fields that form a candidate key.
- b) it is on a set of fields that include the primary key.
- c) the data records of the file are organized in the same order as the data entries of the index.
- d) the data records of the file are organized not in the same order as the data entries of the index.

41.What are the different in triggers?

- a. Define, Create
- b. Drop, Comment
- c. Insert, Update, Delete
- d. All of the mentioned,

42.Which keyword must be used here to rename the field name?

- a. From
- b. Rename
- c. As
- d. Join

43.By default, the order by clause lists items in _____ order.

- a. Descending
- b. Any
- c. Same
- d. Ascending

44._____ operator is used for appending two strings.

- a. &
- b. %
- c. ||
- d. _

45.The _____ clause is used to list the attributes desired in the result of a query.

- a. Where
- b. Select
- c. From
- d. Distinct

46.SELECT * FROM employee WHERE salary>10000 AND dept_id=101;

Which of the following fields are displayed as output?

- a. Salary, dept_id
- b. Employee
- c. Salary
- d. All the field of employee relation

47.Which of the following statements contains an error?

- a. Select * from emp where empid = 10003;
- b. Select empid from emp where empid = 10006;
- c. Select empid from emp;
- d. Select empid where empid = 1009 and lastname = ‘GELLER’;

48.A _____ indicates an absent value that may exist but be unknown or that may not exist at all.

- a. Empty tuple
- b. New value
- c. Null value
- d. Old value

49.Using the _____ clause retains only one copy of such identical tuples.

- a. Null

- b. Unique
- c. Not null
- d. Distinct

50.In an employee table to include the attributes whose value always have some value which of the following constraint must be used?

- a. Null
- b. Not null
- c. Unique
- d. Distinct

UNIT II

51.Which keyword is used instead of the assignment operator to initialize variables?

- a. NOT NULL
- b. DEFAULT

- c. %TYPE
- d. %ROWTYPE

52. Which statements execute a sequence of statements multiple times?

- a. EXIT
- b. LOOP
- c. Both A & B
- d. None of the above

53. Which statement is not used to control a cursor variable?

- a. OPEN-FOR
- b. FETCH
- c. CLOSE
- d. EXIT

54. Which of the following attribute is used to declare a record that represents a row in a database table, without listing all the columns?

- a. %ROWTYPE
- b. %TYPE
- c. %field
- d. %row

55. Which of the following has a return type in its specification and must return a value specified in that type?

- a. Function
- b. Procedure
- c. Package
- d. Sequence

56. Which of the following executes the query and identifies the result set, consisting of all rows that meet the query search criteria.

- a. Fetching with a Cursor
- b. Opening a cursor
- c. Fetching bulk data with a cursor
- d. Closing the cursor

57. Which statement associates a cursor variable with a multi-row query, executes the query, and identifies the result set?

- a. OPEN-FOR
- b. FETCH
- c. CLOSE
- d. OPEN

58. Which operations cannot be performed on cursor expressions?

- a. BIND
- b. EXECUTE
- c. Both A & B
- d. None of the above

59. Which keyword and parameter used for declaring an explicit cursor?

- a. constraint
- b. cursor_variable_declaration
- c. collection_declaration
- d. cursor_declaration

60.Which of the following declares an instance of an object type?

- a. record_declaration
- b. procedure_declaration
- c. object_declaration
- d. variable_declaration

61.Which of the following returns the current value in a specified sequence.

- a. CURRVAL
- b. NEXTVAL
- c. Both A & B
- d. PREVAL

62.PL/SQL stands for -

- a. Programming Language/SQL
- b. Procedural Language/SQL
- c. Portable Language/SQL
- d. processing language/SQL

63. provides option for entering SQL queries as execution time, rather than at the development stage.

- a) PL/SQL
- b) SQL*Plus
- c) SQL
- d) Dynamic SQL

64. is a procedural extension of Oracle – SQL that offers language constructs similar to those in imperative programming languages.

- a) SQL
- b) PL/SQL
- c) Advanced SQL
- d) PQL

65. combines the data manipulating power of SQL with the data processing power of Procedural languages.

- A) PL/SQL
- B) SQL
- C) Advanced SQL
- D) PQL

66. has made PL/SQL code run faster without requiring any additional work on the part of the programmer.

- A) SQL Server
- B) My SQL

- C) Oracle
- D) SQL Lite

67. A line of PL/SQL text contains groups of characters known as

- A) Lexical Units
- B) Literals
- C) Textual Units
- D) Identifiers

68. A is an explicit numeric, character, string or Boolean value not represented by an identifier.

- A) Comments
- B) Literals
- C) Delimiters
- D) Identifiers

69. If no header is specified, the block is said to be an PL/SQL block.

- A) Strong
- B) Weak
- C) Empty
- D) Anonymous

70. is a sequence of zero or more characters enclosed by single quotes.

- A) Integers literal
- B) String literal
- C) String units
- D) String label

71. How can you generate debugging output from PL/SQL?

- a. DBMS_SQL
- b. DBMS_OUTPUT
- c. DBMS_PIPE
- d. DBMS_LOB

72. What is the output of the following code?

```
DECLARE
    grade char(1) := 'B';
BEGIN
    case
        when grade = 'A' then dbms_output.put_line('Excellent');
        when grade = 'B' then dbms_output.put_line('Very good');
        when grade = 'C' then dbms_output.put_line('Well done');
        when grade = 'D' then dbms_output.put_line('You passed');
        when grade = 'F' then dbms_output.put_line('Better try again');
        else dbms_output.put_line('No such grade');
    end case;
END;
```

- a. It has syntax error, so there will not be any output.

- b. B
- c. Very good
- d. No such grade

73.Which of the following is true about the following PL/SQL CASE statement syntax?

CASE selector

```
WHEN 'value1' THEN S1;  
WHEN 'value2' THEN S2;  
WHEN 'value3' THEN S3;  
...  
ELSE Sn; -- default case
```

END CASE;

- a. It is wrongly written.
- b. It is perfectly written.
- c. It is you can specify the literal NULL for all the S expressions and the default Sn.
- d. All the expressions like the selector, the value and the returns values, need not be of the same data type.

74.To get the server output result and display it into the screen, you need to write –

- a. set serveroutput on
- b. set server output on
- c. set dbmsoutput on
- d. set dbms output on

75.Which of the following is not true about PL/SQL constants and literals?

- a. A constant holds a value that once declared, does not change in the program.
- b. The CONSTANT declaration cannot impose the NOT NULL constraint.
- c. A constant is declared using the CONSTANT keyword.
- d. A CONSTANT declaration requires an initial value.

76.What value will be assigned to the variable declared as below –

```
counter binary_integer;
```

- a. 0
- b. 1
- c. NULL
- d. -1

77.Which of the following is not a PL/SQL unit?

- a. Table
- b. Type
- c. Trigger
- d. Package

78.What will be the output of the following code snippet?

```

DECLARE
    a number (2) := 21;
    b number (2) := 10;
BEGIN
    IF ( a <= b ) THEN
        dbms_output.put_line(a);
    END IF;
    IF ( b >= a ) THEN
        dbms_output.put_line(a);
    END IF;
    IF ( a <> b ) THEN
        dbms_output.put_line(b);
    END IF;
END;

```

- a. 2
- b. 21
- c. 10
- d. 21, 10

79.Which of the following is not true about the PL/SQL language?

- a. It supports embedded SQL statements.
- b. It has all the features of a modern structured programming language.
- c. It is not a block-structured language.
- d. Applications developed using PL/SQL are not portable.

80.Which of the following is not true about the execution section of a PL/SQL block?

- a. It should have more than one executable line of code.
- b. It may have just a NULL command to indicate that nothing should be executed.
- c. The statements must always end with a semicolon.
- d. The section may contain SQL commands, logical control commands, assignment commands, as well as other commands.

81.Which of the following is not true about the exception handling section of a PL/SQL block?

- a. This section starts with the EXCEPTION keyword.
- b. It is a mandatory section.
- c. It contains exception(s) that handle errors in the program.
- d. This section starts with the ERROR keyword.

82.Which of the following is not true about the declaration section of a PL/SQL block?

- a. This section starts with the DECLARE keyword.
- b. It is a mandatory section.
- c. It defines all variables, cursors, subprograms, and other elements to be used in the program.

d. It also defines other elements to be used in the program.

83.Which of the following statements is true about implicit cursors?

- a. Implicit cursors are used for SQL statements that are not named.
- b. Developers should use implicit cursors with great care.
- c. Implicit cursors are used in cursor for loops to handle data processing.
- d. Implicit cursors are no longer a feature in Oracle.

84.Which of the following is not a feature of a cursor FOR loop?

- a. Record type declaration.
- b. Opening and parsing of SQL statements.
- c. Fetches records from cursor.
- d. Requires exit condition to be defined.

85.Which three of the following are implicit cursor attributes?

- a. %found
- b. %notfound
- c. %rowcount
- d. %rowtype

86.If left out, which of the following would cause an infinite loop to occur in a simple loop?

- a. LOOP
- b. END LOOP
- c. IF-THEN
- d. EXIT

87.Which line in the following statement will produce an error?

- a. cursor action_cursor is
- b. select name, rate, action
- c. into action_record
- d. from action_table;

88.The command used to open a CURSOR FOR loop is

- a. open
- b. fetch
- c. parse
- d. None, cursor for loops handle cursor opening implicitly.

89.What happens when rows are found using a FETCH statement

- a. It causes the cursor to close
- b. It causes the cursor to open
- c. It loads the current row values into variables
- d. It creates the variables to hold the current row values

90.What is the maximum number of handlers processed before the PL/SQL block is exited when an exception occurs?

- a. Only one
- b. All that apply
- c. All referenced
- d. Zero

91.Which identifier is valid?

- a. customer_12
- b. loop
- c. customer@orgA
- d. 12customer

92.Which function can be used with any datatype?

- a. SUM
- b. DIV
- c. MAX
- d. AVG

93.Select incorrect variable declarations

- a. foo_number varchar2(10);
- b. foo_char char(1) := 'Y';
- c. foo_time date;
- d. foo_text varchar2(10) := 'hello world';

94.Select invalid variable types

- a. CHAR
- b. VARCHAR1
- c. VARCHAR2
- d. INTEGER

95.List the correct sequence of commands to process a set of records when using explicit cursors

- a. INITIALIZE, GET, CLOSE
- b. CURSOR, GET, FETCH, CLOSE
- c. OPEN, FETCH, CLOSE
- d. CURSOR, FETCH, CLOSE

96.Where do you declare an explicit cursor in the PL/SQL language?

- a. In the PL/SQL working storage section
- b. In the PL/SQL declaration section
- c. In the PL/SQL body section
- d. In the PL/SQL exception section

97.The || is is an example of what function

```
SELECT last_name || ',' || first_name || '' || middle_name  
FROM employees;
```

- a. Incantination
- b. Integration
- c. Continuation
- d. Concatenation

98. Which of the following is not a grouping function.

- a. COUNT
- b. SUM
- c. DISTINCT
- d. MIN

99. Using GROUP BY has the effect of removing duplicates from the data.

- a. with aggregates
- b. with order by
- c. without order by
- d. without aggregates

100. If you don't specify a mode for a parameter, what is the default mode?

- a. a.OUT
- b. b.IN
- c. c.COPY
- d. d.DEFAULT

UNIT III

101. A _____ consists of a sequence of query and/or update statements.

- a. Transaction
- b. Commit
- c. Rollback
- d. Flashback

102. Which of the following makes the transaction permanent in the database?

- a. View
- b. Commit
- c. Rollback
- d. Flashback

103. Consider the following action: TRANSACTION.....Commit; ROLLBACK; What does Rollback do?

- a. Undoes the transactions before commit
- b. Clears all transactions
- c. Redoes the transactions before commit
- d. No action

104. Transaction processing is associated with everything below except

- a. Conforming an action or triggering a response
- b. Producing detail summary or exception report
- c. Recording a business activity
- d. Maintaining a data

105. Which of the following is used to input the entry and give the result in a variable in a procedure?

- a. Put and get
- b. Get and put
- c. Out and In
- d. In and out

106. Consider money is transferred from (1)account-A to account-B and (2) account-B to account-A. Which of the following form a transaction?

- a) Only 1
- b) Only 2
- c) Both 1 and 2 individually
- d) Either 1 or 2

107. A transaction is delimited by statements (or function calls) of the form _____

- a) Begin transaction and end transaction
- b) Start transaction and stop transaction
- c) Get transaction and post transaction
- d) Read transaction and write transaction

108. Each modification done in database transaction are first recorded into the

- a) Harddrive
- b) Log
- c) Disk
- d) Datamart

109. Which of the following has “all-or-none” property?

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

110. The database system must take special actions to ensure that transactions operate properly without interference from concurrently executing database statements. This property is referred to as

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

111. The property of a transaction that persists all the crashes is

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

d) All of the mentioned

112. _____ states that only valid data will be written to the database.

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

113. Transaction processing is associated with everything below except

- a) Producing detail summary or exception reports
- b) Recording a business activity
- c) Confirming an action or triggering a response
- d) Maintaining a data

114. 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

115. _____ means that the data used during the execution of a transaction cannot be used by a second transaction until the first one is completed.

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

116. In order to maintain transactional integrity and database consistency, what technology does a DBMS deploy?

- a) Triggers
- b) Pointers
- c) Locks
- d) Cursors

117. A lock that allows concurrent transactions to access different rows of the same table is known as
a

- a) Database-level lock
- b) Table-level lock
- c) Page-level lock
- d) Row-level lock

118. Which of the following are introduced to reduce the overheads caused by the log-based recovery?

- a) Checkpoints
- b) Indices
- c) Deadlocks
- d) Locks

119. Which of the following protocols ensures conflict serializability and safety from deadlocks?

- a) Two-phase locking protocol
- b) Time-stamp ordering protocol
- c) Graph based protocol
- d) None of the mentioned

120. Which of the following is the block that is not permitted to be written back to the disk?

- a) Dead code
- b) Read only
- c) Pinned
- d) Zapped

121. If transaction T_i gets an explicit lock on the file F_c in exclusive mode, then it has an _____ on all the records belonging to that file.

- a) Explicit lock in exclusive mode
- b) Implicit lock in shared mode
- c) Explicit lock in shared mode
- d) Implicit lock in exclusive mode

122. Which refers to a property of computer to run several operation simultaneously and possible as computers await response of each other

- a) Concurrency
- b) Deadlock
- c) Backup
- d) Recovery

123. All lock information is managed by a _____ which is responsible for assigning and policing the locks used by the transactions.

- a) Scheduler
- b) DBMS
- c) Lock manager
- d) Locking agent

124. The _____ lock allows concurrent transactions to access the same row as long as they require the use of different fields within that row.

- a) Table-level
- b) Page-level
- c) Row-level
- d) Field-level

125. 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?

- a) Record controller
- b) Exclusive lock

- c) Authorization rule
- d) Two phase lock

126. 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

127. The deadlock state can be changed back to stable state by using _____ statement.

- a) Commit
- b) Rollback
- c) Savepoint
- d) Deadlock

128. What are not the way of dealing with deadlock?

- a) Deadlock prevention
- b) Deadlock recovery
- c) Deadlock detection
- d) Deadlock maintenance

129. When transaction T_i requests a data item currently held by T_j , T_i is allowed to wait only if it has a timestamp smaller than that of T_j (that is, T_i is older than T_j). Otherwise, T_i is rolled back (dies).

This is

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

130. When transaction T_i requests a data item currently held by T_j , T_i is allowed to wait only if it has a timestamp larger than that of T_j (that is, T_i is younger than T_j). Otherwise, T_j is rolled back (T_j is wounded by T_i). This is

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

131. 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

132. The deadlock in a set of a transaction can be determined by

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

133. 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

134. If an transaction is performed in a database and committed, the changes are taken to the previous state of transaction by

- a) Flashback
- b) Rollback
- c) Both Flashback and Rollback
- d) Cannot be done

135. _____ rollback requires the system to maintain additional information about the state of all the running transactions.

- a) Total
- b) Partial
- c) Time
- d) Commit

136. The log is a sequence of _____ recording all the update activities in the database.

- a) Log records
- b) Records
- c) Entries
- d) Redo

137. 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

138. 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

139. 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

140. 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

141. 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

142. _____ 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

143. 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

144. The actions which are played in the order while recording it is called _____ history.

- a) Repeating
- b) Redo
- c) Replay
- d) Undo

145. A special redo-only log record $\langle T_i, X_j, V_1 \rangle$ is written to the log, where V_1 is the value being restored to data item X_j during the rollback. These log records are sometimes called

- a) Log records
- b) Records
- c) Compensation log records
- d) Compensation redo records

146.Which of the following is not a state in transaction?

- a) Active
- b) Terminated
- c) Aborted
- d) Partially committed

147.DBMS periodically suspends all processing and synchronizes its files and journals through the use of

- a) Checkpoint facility
- b) Backup facility
- c) Recovery manager
- d) Database change log

148._____ means that data used during the execution of a transaction cannot be used by a second transaction until the first one is completed.

- a) Serializability
- b) Atomicity
- c) Isolation
- d) Time stamping

149.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

150.When the transaction finishes the final statement the transaction enters into

- a) Active state
- b) Committed state
- c) Partially committed state
- d) Abort state