Unit 7 Querry Processing & Optimization

1. Query ___ is the activity performed in extracting data from the database.

A. Result
B. Inhibition
C. System
D. Processing

Answer: D) Processing

2. Data is ___ from the database using various steps in query processing.

A. Extracted
B. Added
C. Fetched
D. Deleted

Answer: C) Fetched

3. How many steps are involved in fetching the data from the database in query processing?

A. 1
B. 2
C. 3
D. 4

Answer: C) 3

4. What is/are the step(s) involved in fetching the data from the database in query processing?

A. Parsing and translation
B. Optimization
C. Evaluation
D. All of the above

Answer: D) All of the above

5. Initial queries from users are translated into a ____ database language such as SQL.

A. Low-level
B. Medium-level
C. High-level
D. None

Answer: C) High-level

6. The queries are translated into ___ expressions at the level of the file system, which are used there as well.

  A. Virtual
  B. Real
  C. Physical
  D. None

Answer: C) Physical

7. As soon as the queries are translated, they are evaluated and various ___ transformations are performed.

  A. Query-realizing
  B. Query-optimizing
  C. Query-deoptimizing
  D. Query-deletion

Answer: B) Query-optimizing

8. Whenever a computer system processes a query, it ___ first convert it into a language humans can comprehend.

  A. Need not to
  B. Must
  C. Can
  D. Maybe

Answer: C) Can

9. Query languages such as SQL are best suited for humans, however, it is not best suited for the ____ of queries to a system.

  A. Temptation
  B. Processing
  C. Transmission
  D. None

Answer: C) Transmission

10. An ___ representation of a query is best suited to relational algebra.

  A. External
  B. Internal
  C. Both A and B
  D. None of the above

Answer: B) Internal

11. Similar to a query parser, ___ is important in query processing.

    A. Transmission
    B. Translation
    C. Transfusion
    D. Transcreation

Answer: B) Translation

12. A user executes a query which the ___ in the system uses to generate the internal form of the query. In addition to checking the syntax of the query, the ____ verifies the name of the relation in the database, then the tuple, then the attribute value.

    A. Parser
    B. Translation
    C. Optimization
    D. Evaluation

Answer: A) Parser

13. An '_____' is a tree of the query that the parser creates.

    A. Parse-tree
    B. Query-tree
    C. Tree
    D. None

Answer: A) Parse-tree

14. To evaluate the translated ___ expression, it must be annotated with the instructions used to specify and evaluate each operation along with the translation.

    A. Analytical algebra
    B. Relational algebra
    C. Both A and B
    D. None of the above

Answer: B) Relational algebra

15. The system must create a query ____ plan before it can fully evaluate a query.

    A. Optimization
    B. Parser
    C. Translation
    D. Evaluation

Answer: D) Evaluation

16. Depending on the assessment plan, annotations can be added to specify the algorithm to be used for the particular ____.

A. Index
B. Operation
C. Both A and B
D. None of the above

Answer: C) Both A and B

17. Evaluation _____ are a special kind of relational algebra with annotations.

A. Primitives
B. Optimization
C. Advancement
D. None

Answer: A) Primitives

18. In the primitives for ____, all instructions necessary for an operation's ____ are contained.

A. Parser
B. Translation
C. Evaluation
D. Optimization

Answer: C) Evaluation

19. ____ evaluation plans describe the underlying primitive operations that are used to evaluate a query.

A. Query
B. Data
C. Log
D. Array

Answer: A) Query

20. Query evaluation plans are also known as query ____ plans.

A. Execution
B. Enumeration
C. Eternal
D. None

Answer: A) Execution

21. To generate the output of a query, a ___ is responsible.

    A. Query execution engine
    B. Query execution motor
    C. Query execution train
    D. None

Answer: A) Query execution engine

22. In the end, it makes the user's query ____ after taking the query execution plan, executing it, and finally making the ____.

    A. Input
    B. Output
    C. Query
    D. Log

Answer: B) Output

23. What is TRUE about Query Optimization?

    A. The cost of evaluating a query can vary depending on its type.
    B. The evaluation plan is built by the system, so the user need not focus on writing their query efficiently.
    C. An efficient query evaluation plan is generated by a database system, which minimizes its costs.
    D. All of the above

Answer: D) All of the above

24. An efficient query evaluation plan is generated by a database system, which minimizes its costs and it is known as -

    A. Query evaluation
    B. Query optimization
    C. Query parser
    D. Query translation

Answer: B) Query optimization

25. It is mandatory that the query ___ has an estimate of each operation's cost when optimizing a query.

    A. Evaluator
    B. Optimizer
    C. Parser
    D. Translator

Answer: B) Optimizer

26. Costs of memory allocation, execution, and so on are factors that impact the overall ___ cost.

    A. Execution
    B. Allocation
    C. Operation
    D. None

Answer: C) Operation

27. When a query is evaluated, the system produces an output based on the ____ plan selected.

    A. Query plan
    B. Evaluation plan
    C. System plan
    D. Output plan

Answer: B) Evaluation plan

28. Which is the method of processing the plan selected throughout query optimization:

    A. Query execution
    B. Query process
    C. Query optimizer
    D. Query transaction

Correct answer: (A)
Query execution

29. 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

Correct answer: (A)
Concurrency

29. Which is refers to a stalemate situation due to which no further progress is possible as computer await response of each other:

    A. Concurrency
    B. Deadlock
    C. Backup
    D. Recovery

Correct answer: (B)
Deadlock

30. Which is a duplicate copy of a file program that is stored on a different storage media than the original location:

A. Concurrency
B. Deadlock
C. Backup
D. Recovery

Correct answer: (C)
Backup

31. Which is duplication of computer operations and routine backups to combat any unforeseen problems:

A. Concurrency
B. Deadlock
C. Backup
D. Recovery

Correct answer: (D)
Recovery

32. Optimization that is basically related to the rewriter module is termed as _____:

A. Semantic query optimization
B. Global query optimization
C. Both
D. None

Correct answer: (A)
Semantic query optimization

33. Optimization basically related to the Rewrite module is termed as _____:

A. Semantic query optimization
B. Global query optimization
C. Both
D. None

Correct answer: (A)
Semantic query optimization

34. Database security helps organizations to protect data from _____ :

    A. Internal users
    B. External users
    C. Non-external users
    D. Non internal users

Correct answer: (B)
Internal users

35. Copying files to secondary or specific devices is known as _____ :

    A. Retrieve
    B. Backup
    C. Recovery
    D. Deadlock

Correct answer: (B)
Backup

36. How many types of recovery control techniques:

    A. 2
    B. 3
    C. 4
    D. 5

Correct answer: (A)
2

37.   Which is one of the major important components of the relational database:
a.   Query execution
b.   Query process
c.   Query optimizer
d.   Query transaction

38.   Which is refers to the process of restoring the data that has been stored in a compter:
a.   Retrieve
b.   Backup
c.   Recovery
d.   Deadlock

39.   Query processing refers to technique of maintaining managing and manipulating data stored with in the computer system by using_____ queries:
a.   DBMS
b.   RDBMS

c.   SQL
d.   None of these

40.   How many major stages of query processing:
a.   1
b.   2
c.   3
d.   4

41.   Which are the major stages of query processing:
a.   Query execution
b.   Query optimizer
c.   Both
d.   None

42.   In query processor which ordering is related to hash joins by SQL server 7.0:
a.   Interesting ordering
b.   Index intersection
c.   Index joins
d.   Parallel queries

43.   Which Microsoft SQL server makes selection of the most appropriate index every table even if there are many predicates in the query:
a.   Microsoft SQL server6.0
b.   Microsoft SQL server6.5
c.   Microsoft SQL server7.0
d.   Microsoft SQL server7.5

44.   Which is implement it to the index intersection in index joins:
a.   SQL server6.0
b.   SQL server6.5
c.   SQL server7.0
d.   SQL server7.5

45.   Which server can joins the indexes when only multiple indexes combined can cover the query:
a.   SQL
b.   DBMS
c.   RDBMS
d.   All of these

46. How many types of disk I/O:
a.   1
b.   2
c.   3
d.   4

47. In which is types of I/O disk:
a.   Random I/O
b.   Sequential I/O
c.   Both
d.   None

48. Choosing for large and non-indexed tables, specifically for intermediate results can be termed as_____:
a.   Hashing
b.   Parallelism
c.   Disk
d.   Deadlock

49. SMP stands for:
a.   System multi-processing
b.   Server multi-processing
c.   Symmetric multi-processing
d.   Securing multi-processing

50. Which in the database which is a software component in the RDBMS that carries out analysis of SQL statement for finding the best way for its execution:
a.   Query execution
b.   Query process
c.   Query optimizer
d.   Query transaction

51. Which can be defined as the method in which the selected plan is executed at the query optimization stages:
a.   Query execution
b.   Query process
c.   Query optimizer
d.   Query transaction

52. Which refers to technique of maintaining, managing and manipulating data store within the computer system by using SQL queries:
a.   Query execution
b.   Query processing
c.   Query optimizer

d.   Query transaction

53. Which is the method of processing the plan selected throughout query optimization:
a.   Query execution
b.   Query process
c.   Query optimizer
d.   Query transaction

54. 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

55. Which is refers to a stalemate situation due to which no further progress is possible as computer await response of each other:
a.   Concurrency
b.   Deadlock
c.   Backup
d.   Recovery

56. Which is a duplicate copy of a file program that is stored on a different storage media than the original location:
a.   Concurrency
b.   Deadlock
c.   Backup
d.   Recovery

57. Which is duplication of computer operations and routine backups to combat any unforeseen problems:
a.   Concurrency
b.   Deadlock
c.   Backup
d.   Recovery

58. Optimization that is basically related to the rewriter module is termed as_____:
a.   Semantic query optimization
b.   Global query optimization
c.   Both
d.   None

59. Optimization basically related to the Rewrite module is termed as_____:
a.   Semantic query optimization
b.   Global query optimization
c.   Both
d.   None

60. Database security helps organizations to protect data from_____:
a.   Internal users
b.   External users
c.   Non-external users
d.   Non internal users

61. Copying files to secondary or specific devices is known as_____:
a.   Retrieve
b.   Backup
c.   Recovery
d.   Deadlock

62. How many types of recovery control techniques:
a.   2
b.   3
c.   4
d.   5

63. Which are types of recovery control techniques:
a.   Deferred update
b.   Immediate update
c.   Both
d.   None

This set of Database Multiple Choice Questions & Answers (MCQs) focuses on "Selection Operation".

64. In query processing, the _____ is the lowest-level operator to access data.
a) Index Search
b) Linear search
c) File scan
d) Access paths

Answer: c

65. In a _____ the system scans each file block and tests all records to see whether they satisfy the selection condition.
a) Index Search
b) Linear search
c) File scan
d) Access paths

Answer: b

66. Index structures are referred to as _____ since they provide a path through which data can be located and accessed.
a) Index Search
b) Linear search
c) File scan
d) Access paths

Answer: d

67. Search algorithms that use an index are referred to as
a) Index Search
b) Linear search
c) File scan
d) Access paths

Answer: a.

68. Which algorithm uses equality comparison on a key attribute with a primary index to retrieve a single record that satisfies the corresponding equality condition.
a) A2
b) A4
c) A5
d) A6

Answer: a

69. The strategy can retrieve a single record if the equality condition is on a key; multiple records may be retrieved if the indexing field is not a key is
a) A2
b) A4
c) A5
d) A6

Answer: b
Explanation: A4 – Secondary index, equality.

70. The algorithm that uses a secondary ordered index to guide retrieval for comparison conditions involving $<, \leq, \geq$, or $>$ is
a) A2
b) A4
c) A5
d) A6

Answer: d
Explanation: A6 – Secondary index, comparison.

71. The ___ algorithm scans each index for pointers to tuples that satisfy an individual condition.
a) A2
b) A4
c) A9
d) A6

Answer: c
Explanation: A9 – Conjunctive selection by an intersection of identifiers.

72. If access paths are available on all the conditions of a disjunctive selection, each index is scanned for pointers to tuples that satisfy the individual condition. This is satisfied by
a) A10
b) A7
c) A9
d) A6

Answer: a
Explanation: A10 – Disjunctive selection by union of identifiers.

73. Conjunctive selection using one index. This is
a) A10
b) A7
c) A9
d) A6

Answer: b

74. A_____ is a query that retrieves rows from more than one table or view:
a) Start
b) End
c) Join
d) All of the mentioned

Answer: c

75. A condition is referred to as _____
a) Join in SQL
b) Join condition
c) Join in SQL & Condition
d) None of the mentioned

Answer: b

76. Which oracle is the join condition is specified using the WHERE clause:
a) Oracle 9i
b) Oracle 8i
c) Pre-oracle 9i
d) Pre-oracle 8i

Answer: c

77. How many join types in join condition:
a) 2
b) 3
c) 4
d) 5

Answer: d
Explanation: INNER JOIN, LEFT JOIN, RIGHT JOIN, FULL JOIN, EQUIJOIN.

78. Which are the join types in join condition:
a) Cross join
b) Natural join
c) Join with USING clause
d) All of the mentioned

Answer: d

79. Which product is returned in a join query have no join condition:
a) Equijoins
b) Cartesian
c) Both Equijoins and Cartesian
d) None of the mentioned

Answer: b

80. Which is a join condition contains an equality operator:
a) Equijoins
b) Cartesian
c) Both Equijoins and Cartesian
d) None of the mentioned

Answer: a

81. Which join refers to join records from the write table that have no matching key in the left table are include in the result set:
a) Left outer join
b) Right outer join
c) Full outer join
d) Half outer join

Answer: b

82. Which operation are allowed in a join view:
a) UPDATE
b) INSERT
c) DELETE
d) All of the mentioned

Answer: d

83. Which view that contains more than one table in the top-level FROM clause of the SELECT statement:
a) Join view
b) Datable join view
c) Updatable join view
d) All of the mentioned

Answer: c