MCQ Bank on Database Management Systems & SQL

1. **Which of the following given statements possibly contains the error?**
   i. select * from EMP where empid = 1003;
   ii. select empid from EMP where empid = 1003;
   iii. select empid from EMP;
   iv. select empid where empid = 1009 and Lastname = 'Geller'; **(Answer: iv √)**

2. **Object-oriented database is an alternative implementation of __ model.**
   i. Logical
   ii. Cross
   iii. Relational √
   iv. Linear
   (Answer: iii √)

3. **Which query is used for sorting data that retrieves all the fields from the EMPINFO table and lists them in an ascending order?**
   i. SELECT * FROM EMPINFO ORDER BY age; √
   ii. SELECT * FROM EMPINFO ORDER age;
   iii. SELECT * FROM EMPINFO ORDER BY COLUMN age;
   iv. SELECT * FROM EMPINFO SORT BY age;
   (Answer: i √)

4. **Which of the following is not the responsibility of DBA?**
   i. Network maintenance √
   ii. Routine maintenance
   iii. Schema definition
   iv. Authorization for data access
   (Answer: i √)

5. **A relation can have only one __ key.**
   i. Candidate
   ii. Primary √
   iii. Unique
   iv. Foreign
   (Answer: ii √)

6. **Which of the following shapes represent an entity in an entity set?**
   i. Circle
   ii. Rectangle √
   iii. Ellipse
   iv. Diamond
   (Answer: ii √)

7. **The overall structure of a database is called _____.**
    i. Schema √
    ii. Instance
    iii. Data Dictionary
    iv. Data Abstraction
    (Answer: i √)

8. **Which of the following is the full form of DDL?**
    i. Data Definition Language √
    ii. Data Derivation Language
    iii. Detailed Data Language
    iv. Dynamic Data Language
    (Answer: i √)

9. **Which of the following is used to represent the relationship between tables?**
    i. Primary key
    ii. Foreign key √
    iii. Super key
    iv. Candidate key
    (Answer: ii √)

10. **Which one of the following refers to the data about data?**
    i. Directory
    ii. Sub-data
    iii. Meta-data √
    iv. Data-warehouse
    (Answer: iii √)

11. **Which of the following refers to the number of tuples in a relation?**
    i. Entity
    ii. Column
    iii. Cardinality √
    iv. NOTA
    (Answer: iii √)

12. **Tree structures are used to store data in:**
    i. Network model
    ii. Hierarchical model √
    iii. Relational model
    iv. Object-oriented model
    (Answer: ii √)

13. **Spurious tuples are generated in _____.**
    i. Equi-join
    ii. Theta-join
    iii. Cartesian product √
    iv. Natural join

(Answer: iii √)

14. **Relational Algebra is a:**
    i. Query language
    ii. Procedural language √
    iii. Non-procedural language
    iv. NOTA
    (Answer: ii √)

15. **Relational Calculus is a:**
    i. Query language
    ii. Procedural language
    iii. Non-procedural language √
    iv. NOTA
    (Answer: iii √)

16. **Which of the following operations is used if we are interested in only certain columns of a table?**
    i. Select
    ii. Project √
    iii. Union
    iv. Intersection
    (Answer: ii √)

17. **In which of the following formats is data stored in a database?**
    i. Tabular √
    ii. Diagonal
    iii. Columnar
    iv. NOTA
    (Answer: i √)

18. **Which one of the following is a fundamental operation in RA?**
    i. Natural Join
    ii. Division
    iii. Set Intersection
    iv. Cross Product √
    (Answer: iv √)

19. **Which of the following establishes a top-to-bottom relationship amongst the items?**
    i. Relational Schema
    ii. Network Schema
    iii. Hierarchical Schema √
    iv. All of these
    (Answer: iii √)

20. **Which of the following is the full form of TCL?**
    i. Ternary Control Language

ii. Transmission Control Language
iii. Transaction Control Language √
iv. Transaction Central Language
(Answer: iii √)

21. **Which of the following sets should be associated with a weak entity for a weak entity to be meaningful?**
    i. Neighbor Set
    ii. Strong Entity Set √
    iii. Owner Set
    iv. Identifying Set √
    (Answers: ii √, iv √)

22. **A data dictionary does not provide information about**
    i. The size of the database
    ii. Who owns it
    iii. Size of the disk storage device √
    iv. How data is used
    (Answer: iii √)

23. **Additional schema for relationship set is essential for**
    i. 1:1 relationship
    ii. 1: N relationship
    iii. N:1 relationship
    iv. N:M relationship
    (Answer: iv √)

24. **Which of the following is NOT a DDL statement?**
    i. ALTER
    ii. DROP
    iii. CREATE
    iv. SELECT √
    (Answer: iv √)

25. **Which of the following is correct?**
    i. An SQL query automatically eliminates duplicates.
    ii. An SQL query will not work if there are no indices on the relations.
    iii. SQL permits attribute names to be repeated in the same relation.
    iv. NOTA √
    (Answer: iv √)

26. **In order to permanently remove all the data from the STUDENT table without changing its structure, you need to execute which of the following queries?**
    i. DROP TABLE STUDENT;
    ii. DELETE ALL FROM STUDENT;
    iii. DROP ALL FROM STUDENT;
    iv. DELETE FROM STUDENT; √

(Answer: iv √)

27. **One of the short-comings of the file system is**
    i. Data availability
    ii. Fixed records
    iii. Sequential records
    iv. Lack of security √
    (Answer: iv √)

28. **Which of the following is true?**
    i. A super key is always a candidate key.
    ii. Every 3NF schema is also in BCNF.
    iii. Generalization is a bottom-up design approach. √
    iv. NOTA
    (Answer: iii √)

29. **Which one of the following may be specified as a multiple table constraint?**
    i. UNIQUE √
    ii. ASSERTION
    iii. CHECK
    iv. TRIGGER
    (Answer: i √)

30. **What is the name of a trigger that triggers itself?**
    i. Triggering trigger √
    ii. Cascading trigger
    iii. Mutating trigger
    iv. NOTA
    (Answer: i √)

31. **NULL stands for _____.**
    i. Zero
    ii. Garbage
    iii. Space
    iv. Absence of any value √
    (Answer: iv √)

32. **A table joined with itself is called _____.**
    i. Join
    ii. Outer-join
    iii. Self-join √
    iv. Equi-join
    (Answer: iii √)

33. **Domain can be defined as _____.**
    i. Value of a field
    ii. Value of a tuple
    iii. Value of a table

iv. NOTA √

(Answer: iv √)

34. **In SQL, if we apply both WHERE and HAVING after GROUP BY then:**
    i. It gives an error
    ii. Both are applied on tuples
    iii. WHERE is applied on tuples and HAVING on groups √
    iv. Only one works
    (Answer: iii √)

35. **'Grant' command is an example of _____.**
    i. DDL
    ii. DCL √
    iii. DML
    iv. DQL
    (Answer: ii √)

Additional 50 MCQs

36. **Which SQL clause is used to filter groups?**
    i. WHERE
    ii. GROUP BY
    iii. HAVING √
    iv. ORDER BY
    (Answer: iii √)

37. **Which SQL command is used to create a new table in the database?**
    i. CREATE TABLE √
    ii. ADD TABLE
    iii. MAKE TABLE
    iv. NEW TABLE
    (Answer: i √)

38. **Which normal form eliminates partial dependencies?**
    i. 1NF
    ii. 2NF √
    iii. 3NF
    iv. BCNF
    (Answer: ii √)

39. **Which of the following is a DML command?**
    i. SELECT √
    ii. CREATE
    iii. DROP
    iv. ALTER

(Answer: i √)

40. **What does ACID stand for in database transactions?**
    i. Atomicity, Consistency, Isolation, Durability √
    ii. Atomicity, Consistency, Integration, Durability
    iii. Accuracy, Consistency, Isolation, Durability
    iv. Atomicity, Control, Isolation, Durability
    (Answer: i √)

41. **In SQL, which function is used to count the number of rows?**
    i. COUNT() √
    ii. SUM()
    iii. AVG()
    iv. MAX()
    (Answer: i √)

42. **Which SQL statement is used to modify data in a table?**
    i. UPDATE √
    ii. ALTER
    iii. MODIFY
    iv. CHANGE
    (Answer: i √)

43. **Which SQL statement is used to remove a table from a database?**
    i. DELETE TABLE
    ii. DROP TABLE √
    iii. REMOVE TABLE
    iv. ERASE TABLE
    (Answer: ii √)

44. **Which clause is used in SQL to eliminate duplicate rows?**
    i. UNIQUE
    ii. DISTINCT √
    iii. DIFFERENT
    iv. SEPARATE
    (Answer: ii √)

45. **Which of the following constraints uniquely identifies a row in a table?**
    i. Primary key √
    ii. Foreign key
    iii. Unique key
    iv. Candidate key
    (Answer: i √)

46. **What is a foreign key used for?**
    i. Establish referential integrity √
    ii. Create indexes
    iii. Increase storage capacity

iv. Define constraints
(Answer: i √)

47. **Which SQL statement is used to retrieve data from a database?**
    i. SELECT √
    ii. GET
    iii. RETRIEVE
    iv. FETCH
    (Answer: i √)

48. **Which type of join returns all records when there is a match in either left or right table?**
    i. INNER JOIN
    ii. LEFT JOIN
    iii. RIGHT JOIN
    iv. FULL OUTER JOIN √
    (Answer: iv √)

49. **What is a view in SQL?**
    i. A virtual table √
    ii. A physical table
    iii. A stored procedure
    iv. A type of index
    (Answer: i √)

50. **What does the SQL 'LIKE' operator do?**
    i. Performs pattern matching √
    ii. Compares numeric values
    iii. Performs arithmetic operations
    iv. Sorts data
    (Answer: i √)

51. **Which of the following is used to combine rows from two or more tables?**
    i. JOIN √
    ii. MERGE
    iii. UNION
    iv. INTERSECT
    (Answer: i √)

52. **In SQL, what is the difference between UNION and UNION ALL?**
    i. UNION removes duplicates, UNION ALL does not remove duplicates √
    ii. UNION ALL removes duplicates, UNION does not
    iii. They are identical
    iv. None of these
    (Answer: i √)

53. **Which of the following is a transaction property that ensures that transactions do not interfere with each other?**

i. Durability
ii. Isolation √
iii. Atomicity
iv. Consistency
(Answer: ii √)

54. **Which SQL clause is used to group rows that have the same values?**
    i. GROUP BY √
    ii. ORDER BY
    iii. PARTITION BY
    iv. CLUSTER BY
    (Answer: i √)

55. **Which of the following is a set operator in SQL?**
    i. UNION √
    ii. JOIN
    iii. SELECT
    iv. WHERE
    (Answer: i √)

56. **Which SQL command is used to add a column to an existing table?**
    i. ALTER TABLE ADD √
    ii. MODIFY TABLE
    iii. UPDATE TABLE
    iv. CHANGE TABLE
    (Answer: i √)

57. **Which of the following is not a valid aggregate function in SQL?**
    i. SUM
    ii. AVG
    iii. COUNT
    iv. CALC √
    (Answer: iv √)

58. **In relational databases, normalization is used to reduce _____.**
    i. Redundancy √
    ii. Performance issues
    iii. Security issues
    iv. Scalability
    (Answer: i √)

59. **Which normal form is concerned with removing transitive dependencies?**
    i. 1NF
    ii. 2NF
    iii. 3NF √
    iv. BCNF
    (Answer: iii √)

60. **Which command is used to grant privileges to users in SQL?**
    i. GRANT √
    ii. GIVE
    iii. ALLOW
    iv. PERMIT
    (Answer: i √)

61. **Which clause in SQL is used to limit the number of rows returned by a query?**
    i. LIMIT √
    ii. TOP
    iii. WHERE
    iv. FETCH
    (Answer: i √)

62. **In SQL, what is a stored procedure?**
    i. A precompiled collection of SQL statements √
    ii. A dynamic query
    iii. A table function
    iv. A type of index
    (Answer: i √)

63. **Which type of database model organizes data in tables with rows and columns?**
    i. Relational √
    ii. Hierarchical
    iii. Network
    iv. Object-oriented
    (Answer: i √)

64. **What does OLTP stand for?**
    i. Online Transaction Processing √
    ii. Offline Transaction Processing
    iii. Online Technical Processing
    iv. Offline Technical Processing
    (Answer: i √)

65. **What does OLAP stand for?**
    i. Online Analytical Processing √
    ii. Offline Analytical Processing
    iii. Online Logarithmic Analysis
    iv. Offline Linear Analysis
    (Answer: i √)

66. **Which of the following is used to enforce referential integrity in a relational database?**
    i. Foreign key constraint √
    ii. Primary key
    iii. Check constraint

iv. Unique constraint
(Answer: i √)

67. **Which SQL keyword is used to modify the structure of a table after creation?**
    i. ALTER √
    ii. UPDATE
    iii. MODIFY
    iv. CHANGE
    (Answer: i √)

68. **Which type of join returns only the rows that have matching values in both tables?**
    i. INNER JOIN √
    ii. LEFT JOIN
    iii. RIGHT JOIN
    iv. FULL OUTER JOIN
    (Answer: i √)

69. **What is the purpose of indexing in a database?**
    i. To improve query performance √
    ii. To increase storage
    iii. To normalize data
    iv. To enforce constraints
    (Answer: i √)

70. **Which command is used to remove duplicate rows from a result set in SQL?**
    i. DISTINCT √
    ii. UNIQUE
    iii. REMOVE
    iv. FILTER
    (Answer: i √)

71. **What is a composite key?**
    i. A key composed of multiple columns √
    ii. A key that is auto-incremented
    iii. A key that is also a foreign key
    iv. A key that is unique across databases
    (Answer: i √)

72. **Which of the following is an example of a non-relational database?**
    i. MongoDB √
    ii. MySQL
    iii. Oracle
    iv. PostgreSQL
    (Answer: i √)

73. **What does the term 'data independence' refer to in databases?**
    i. The separation of data structure from application programs √

ii. The ability to access data from anywhere
iii. The lack of data redundancy
iv. The elimination of data anomalies
(Answer: i √)

74. **Which SQL statement is used to create an index on a table?**
    i. CREATE INDEX √
    ii. MAKE INDEX
    iii. ADD INDEX
    iv. NEW INDEX
    (Answer: i √)

75. **Which clause in SQL is used to retrieve data from multiple tables based on a related column?**
    i. JOIN √
    ii. WHERE
    iii. GROUP BY
    iv. ORDER BY
    (Answer: i √)

76. **Which command is used to remove a view from the database?**
    i. DROP VIEW √
    ii. DELETE VIEW
    iii. REMOVE VIEW
    iv. ERASE VIEW
    (Answer: i √)

77. **In database design, what is an entity-relationship (ER) diagram used for?**
    i. To model data and relationships √
    ii. To execute SQL queries
    iii. To define access permissions
    iv. To monitor database performance
    (Answer: i √)

78. **Which constraint ensures that all values in a column are different?**
    i. UNIQUE √
    ii. PRIMARY KEY
    iii. FOREIGN KEY
    iv. CHECK
    (Answer: i √)

79. **Which SQL clause is used to specify the order of the result set?**
    i. ORDER BY √
    ii. GROUP BY
    iii. HAVING
    iv. SORT BY
    (Answer: i √)

80. **What is the function of the SQL 'BETWEEN' operator?**
    i. To filter the result set within a certain range √
    ii. To match patterns
    iii. To aggregate values
    iv. To join tables
    (Answer: i √)

81. **Which SQL statement is used to add a new row of data into a table?**
    i. INSERT INTO √
    ii. ADD RECORD
    iii. NEW ENTRY
    iv. CREATE ROW
    (Answer: i √)

82. **Which of the following is a feature of the object–oriented database model?**
    i. Inheritance √
    ii. Hierarchical structure
    iii. Flat file storage
    iv. Data redundancy
    (Answer: i √)

83. **What is a schema in the context of databases?**
    i. A blueprint of the database structure √
    ii. A physical data file
    iii. A type of query
    iv. A database application
    (Answer: i √)

84. **Which of the following best describes a candidate key?**
    i. A minimal set of attributes that uniquely identifies a tuple √
    ii. Any key that is not primary
    iii. A non-unique key
    iv. A foreign key
    (Answer: i √)

85. **Which of the following SQL clauses can be used to filter rows after an aggregate function is applied?**
    i. HAVING √
    ii. WHERE
    iii. ORDER BY
    iv. GROUP BY
    (Answer: i √)