Choose the correct or the best alternative in the following 30 questions (Each Question carries 1 mark):

1. Which of the following relational algebra operations do not require the participating tables to be union-compatible?
(A) Union (B) Intersection
(C) Difference (D) Join
Ans: (D)

2. Which of the following is not a property of transactions?
(A) Atomicity (B) Concurrency
(C) Isolation (D) Durability
Ans: (B)

3. Relational Algebra does not have
(A) Selection operator. (B) Projection operator.
(C) Aggregation operators. (D) Division operator.
Ans: (C)

4. Tree structures are used to store data in
(A) Network model. (B) Relational model.
(C) Hierarchical model. (D) File based system.
Ans: (C)

5. The language that requires a user to specify the data to be retrieved without specifying exactly how to get it is
(A) Procedural DML. (B) Non-Procedural DML.
(C) Procedural DDL. (D) Non-Procedural DDL.
Ans: (B)

6. The rule that a value of a foreign key must appear as a value of some specific table is called a
(A) Referential constraint. (B) Index.
(C) Integrity constraint. (D) Functional dependency.
Ans: (A)
The rule that a value of a foreign key must appear as a value of some specific table is called a referential constraint.
(Referential integrity constraint is concerned with foreign key)

7. The clause in SQL that specifies that the query result should be sorted in ascending or descending order based on the values of one or more columns is
(A) View (B) Order by
(C) Group by (D) Having
Ans: (B)
The clause in SQL that specifies that the query result should be sorted in ascending or descending order based on the values of one or more columns is ORDER BY.
(ORDER BY clause is used to arrange the result of the SELECT statement)

8. It is an abstraction through which relationships are treated as higher level entities
(A) Generalization. (B) Specialization.
(C) Aggregation. (D) Inheritance.
Ans: (C)
It is an abstraction through which relationships are treated as higher level entities Aggregation. (In ER diagram, aggregation is used to represent a relationship as an entity set.)

9. What is data integrity?
(A) It is the data contained in database that is non redundant.
(B) It is the data contained in database that is accurate and consistent.
(C) It is the data contained in database that is secured.
(D) It is the data contained in database that is shared.
Ans: (B)
(Data integrity means that the data must be valid according to the given constraints. Therefore, the data is accurate and consistent.)

10.The operation which is not considered a basic operation of relational algebra is
(A) Join. (B) Selection.
(C) Union. (D) Cross product.
Ans: (A)

11. In SQL the statement select * from R, S is equivalent to
(A) Select * from R natural join S. (B) Select * from R cross join S.
(C) Select * from R union join S. (D) Select * from R inner join S.
Ans: (B)

12. As per equivalence rules for query transformation, selection operation distributes over
(A) Union. (B) Intersection.
(C) Set difference. (D) All of the above.
Ans: (D)

13. When R âˆ© S = Ï†, then the cost of computing R >< S is
(A) the same as R Ã— S (B) greater the R Ã— S
(C) less than R Ã— S (D) cannot say anything
Ans: (A)

14. In SQL the word â€˜naturalâ€™ can be used with
(A) inner join (D) full outer join
(C) right outer join (D) all of the above
Ans: (A)

15. If two relations R and S are joined, then the non matching tuples of both R and S are ignored in
(A) left outer join (B) right outer join
(C) full outer join (D) inner join
Ans: (D)

16. The keyword to eliminate duplicate rows from the query result in SQL is
(A) DISTINCT (B) NO DUPLICATE
(C) UNIQUE (D) None of the above
Ans: (C)

17. Which one is correct statement?
Logical data independence provides following without changing application programs:
(i) Changes in access methods.
(ii) Adding new entities in database
(iii) Splitting an existing record into two or more records
(iv) Changing storage medium

(A) (i) and (ii) (B) (iv) only, (C) (i) and (iv) (D) (ii) and (iii)

Ans: (D)

18. Relational Algebra is
(A) Data Definition Language . (B) Meta Language
(C) Procedural query Language (D) None of the above
Ans: (C)

19. Which of the following aggregate functions does not ignore nulls in its results?.
(A) COUNT (B) COUNT (*)
(C) MAX (D) MIN
Ans: (B)

20. Consider the join of relation R with a relation S. If R has m tuples and S has n tuples, then the maximum and minimum size of the join respectively are
(A) m+n and 0 (B) m+n and |m-n|
(C) mn and 0 (D) mn and m+n
Ans: (C)

21. Which of the following statement on the view concept in SQL is invalid?
(A) All views are not updateable
(B) The views may be referenced in an SQL statement whenever tables are referenced.
(C) The views are instantiated at the time they are referenced and not when they are defined.
(D) The definition of a view should not have GROUP BY clause in it.
Ans: (D)

22. The common column is eliminated in
(A) theta join (B) outer join
(C) natural join (D) composed join
Ans: (C)

23. In SQL, testing whether a subquery is empty is done using
(A) DISTINCT (B) UNIQUE
(C) NULL (D) EXISTS
Ans: (D)

24. Use of UNIQUE while defining an attribute of a table in SQL means that the attribute values are
(A) distinct values (B) cannot have NULL
(C) both (A) & (B) (D) same as primary key
Ans: (C)

25. A transaction is in state after the final statement has been executed.
(A) partially committed (B) active
(C) committed (D) none of the above
Ans: (C)

26.The division operator divides a dividend A of degree m+n by a divisor relation B of degree n and produces a result of degree
(A) m â€“ 1 (B) m + 1
(C) m * m (D) m
Ans: (D)

27. Which of the following is not a characteristic of a relational database model?
(A) Table (B) Tree like structure
(C) Complex logical relationship (D) Records

Ans: (B)

28. Union operator is a :
(A) Unary Operator (B) Ternary Operator
(C) Binary Operator (D) Not an operator
Ans: (C)

29. Manager salary details are hidden from the employee .This is
(A) Conceptual level data hiding. (B) External level data hiding.
(C) Physical level data hiding. (D) None of these.
Ans: (A)

30. Which of the following is true for network structure?
(A) It is a physical representation of the data.
(B) It allows many to many relationship.
(C) It is conceptually simple.
(D) It will be the dominant database of the future.
Ans: (A)