

MULTIPLE CHOICE QUESTIONS

1. A relational database consists of a collection of

- a) **Tables**
- b) Fields
- c) Records
- d) Keys

2. A _____ in a table represents a relationship among a set of values.

- a) Column
- b) Key
- c) **Row**
- d) Entry

3. The term _____ is used to refer to a row.

- a) Attribute
- b) **Tuple**
- c) Field
- d) Instance

4. The term attribute refers to a _____ of a table.

- a) Record
- b) **Column**
- c) Tuple
- d) Key

5. For each attribute of a relation, there is a set of permitted values, called the _____ of that attribute.

- a) **Domain**
- b) Relation
- c) Set
- d) Schema

6. Database _____ which is the logical design of the database, and the database _____ which is a snapshot of the data in the database at a given instant in time.

- a) Instance, Schema
- b) Relation, Schema
- c) Relation, Domain
- d) **Schema, Instance**

7. Course(course_id,sec_id,semester)

Here the course_id,sec_id and semester are _____ and course is a _____

- a) Relations, Attribute
- b) Attributes, Relation**
- c) Tuple, Relation
- d) Tuple, Attributes

8. Department (dept name, building, budget) and Employee (employee_id, name, dept name,salary)

Here the dept_name attribute appears in both the relations. Here using common attributes in relation schema is one way of relating _____ relations.

- a) Attributes of common
- b) Tuple of common
- c) Tuple of distinct**
- d) Attributes of distinct

9. A domain is atomic if elements of the domain are considered to be _____ units.

- a) Different
- b) Indivisible**
- c) Constant
- d) Divisible

10. The tuples of the relations can be of _____ order.

- a) Any**
- b) Same
- c) Sorted
- d) Constant

11. Which one of the following is a set of one or more attributes taken collectively to uniquely identify a record?

- a) Candidate key
- b) Sub key
- c) Super key**
- d) Foreign key

12. Consider attributes ID, CITY and NAME. Which one of this can be considered as a super key?

- a) NAME
- b) ID**
- c) CITY
- d) CITY, ID

13. A _____ is a property of the entire relation, rather than of the individual tuples in which each tuple is unique.

- a) Rows
- b) Key**
- c) Attribute
- d) Fields

14. Which one of the following attribute can be taken as a primary key?

- a) Name
- b) Street
- c) Id**
- d) Department

15. Which one of the following cannot be taken as a primary key?

- a) Id
- b) Register number
- c) Dept_id
- d) Street**

16 An attribute in a relation is a foreign key if the _____ key from one relation is used as an attribute in that relation.

- a) Candidate
- b) Primary**
- c) Super
- d) Sub

17. A _____ integrity constraint requires that the values appearing in specified attributes of any tuple in the referencing relation also appear in specified attributes of at least one tuple in the referenced relation.

- a) Referential**
- b) Referencing
- c) Specific
- d) Primary

18. Using which language can a user request information from a database?

- a) Query**
- b) Relational
- c) Structural
- d) Compiler

19. Student(ID, name, dept name, tot_cred)

In this query which attributes form the primary key?

- a) Name
- b) Dept
- c) Tot_cred
- d) ID**

20. Which one of the following is a procedural language?

- a) Domain relational calculus
- b) Tuple relational calculus
- c) Relational algebra**
- d) Query language

21. The _____ operation allows the combining of two relations by merging pairs of tuples, one from each relation, into a single tuple.

- a) Select
- b) Join**
- c) Union
- d) Intersection

22. The result which operation contains all pairs of tuples from the two relations, regardless of whether their attribute values match.

- a) Join
- b) Cartesian product**
- c) Intersection
- d) Set difference

23. The _____ operation performs a set union of two “similarly structured” tables

- a) Union**
- b) Join
- c) Product
- d) Intersect

24. The most commonly used operation in relational algebra for projecting a set of tuple from a relation is

- a) Join
- b) Projection
- c) Select**
- d) Union

25. The _____ operator takes the results of two queries and returns only rows that appear in both result sets.

- a) Union
- b) Intersect**
- c) Difference
- d) Projection

26. A _____ is a pictorial depiction of the schema of a database that shows the relations in the database, their attributes, and primary keys and foreign keys.

- a) Schema diagram**
- b) Relational algebra
- c) Database diagram
- d) Schema flow

27. The _____ provides a set of operations that take one or more relations as input and return a relation as an output.

- a) Schematic representation
- b) Relational algebra
- c) Scheme diagram**
- d) Relation flow

28. Which one of the following is used to define the structure of the relation, deleting relations and relating schemas?

- a) DML(Data Manipulation Language)
- b) DDL(Data Definition Language)**
- c) Query
- d) Relational Schema

29. Which one of the following provides the ability to query information from the database and to insert tuples into, delete tuples from, and modify tuples in the database?

- a) DML(Data Manipulation Language)**
- b) DDL(Data Definition Language)
- c) Query
- d) Relational Schema

30. **CREATE TABLE** employee (name **VARCHAR**, id **INTEGER**)

What type of statement is this?

- a) DML
- b) DDL**
- c) View
- d) Integrity constraint

31. **SELECT * FROM** employee

What type of statement is this?

- a) DML**
- b) DDL
- c) View
- d) Integrity constraint

32. **INSERT INTO** instructor **VALUES** (10211, 'Smith', 'Biology', 66000);

What type of statement is this?

- a) Query
- b) DML**
- c) Relational
- d) DDL

33. 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
34. The union operation is represented by
- a) \cap
 - b) **U**
 - c) $-$
 - d) $*$
35. The intersection operator is used to get the _____ tuples.
- a) Different
 - b) **Common**
 - c) All
 - d) Repeating
36. The union operation automatically _____ unlike the select clause.
- a) Adds tuples
 - b) Eliminates unique tuples
 - c) Adds common tuples
 - d) **Eliminates duplicate**
37. If we want to retain all duplicates, we must write _____ in place of union.
- a) **Union all**
 - b) Union some
 - c) Intersect all
 - d) Intersect some
38. The number of attributes in relation is called as its
- a) Cardinality
 - b) **Degree**
 - c) Tuples
 - d) Entity
39. 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
40. The primary key must be
- a) Unique
 - b) Not null
 - c) **Both Unique and Not null**
 - d) Either Unique or Not null

41. Which of the following makes the transaction permanent in the database?
- a) View
 - b) Commit**
 - c) Rollback
 - d) Flashback
42. In order to undo the work of transaction after last commit which one should be used?
- a) View
 - b) Commit
 - c) Rollback**
 - d) Flashback
43. To include integrity constraint in an existing relation use :
- a) Create table
 - b) Modify table
 - c) Alter table**
 - d) Drop table
44. Foreign key is the one in which the _____ of one relation is referenced in another relation.
- a) Foreign key
 - b) Primary key**
 - c) References
 - d) Check constraint
45. Domain constraints, functional dependency and referential integrity are special forms of _____
- a) Foreign key
 - b) Primary key
 - c) Assertion**
 - d) Referential constraint
46. Relational Algebra is a _____ query language that takes two relations as input and produces another relation as an output of the query.
- a) Relational
 - b) Structural
 - c) Procedural**
 - d) Fundamental
47. Which of the following is a fundamental operation in relational algebra?
- a) Set intersection
 - b) Natural join
 - c) Assignment
 - d) None of the mentioned**

48. Which of the following is used to denote the selection operation in relational algebra?

- a) Pi (Greek)
- b) Sigma (Greek)**
- c) Lambda (Greek)
- d) Omega (Greek)

49. For select operation the _____ appear in the subscript and the _____ argument appears in the paranthesis after the sigma.

- a) Predicates, relation**
- b) Relation, Predicates
- c) Operation, Predicates
- d) Relation, Operation

50. The _____ operation, denoted by $-$, allows us to find tuples that are in one relation but are not in another.

- a) Union
- b) Set-difference**
- c) Difference
- d) Intersection

51. Which is a unary operation:

- a) Select operation**
- b) Union operation
- c) Join operation
- d) Insert operation

52. Which is a join condition contains an equality operator:

- a) Equijoins**
- b) Cartesian
- c) Natural
- d) Left

53. In precedence of set operators, the expression is evaluated from

- a) Left to left
- b) Left to right**
- c) Right to left
- d) From user specification

54. Which of the following is not outer join?

- a) Left outer join
- b) Right outer join
- c) Full outer join
- d) All of the mentioned**

55. A set of possible data values is called

- a) Attribute
- b) Degree
- c) Tuple
- d) Domain**

56. An _____ is a set of entities of the same type that share the same properties, or attributes.

- a) Entity set**
- b) Attribute set
- c) Relation set
- d) Entity model

57. Entity is a _____

- a) Object of relation
- b) Present working model
- c) Thing in real world**
- d) Model of relation

58. The descriptive property possessed by each entity set is _____

- a) Entity
- b) Attribute**
- c) Relation
- d) Model

59. The function that an entity plays in a relationship is called that entity's _____

- a) Participation
- b) Position
- c) Role**
- d) Instance

60. The attribute *name* could be structured as an attribute consisting of first name, middle initial, and last name. This type of attribute is called

- a) Simple attribute
- b) Composite attribute**
- c) Multivalued attribute
- d) Derived attribute

61. The attribute AGE is calculated from DATE_OF_BIRTH. The attribute AGE is

- a) Single valued
- b) Multi valued
- c) Composite
- d) Derived**

62. Not applicable condition can be represented in relation entry as

- a) NA
- b) 0
- c) NULL**
- d) Blank Space

63. Which of the following can be a multivalued attribute?

- a) **Phone_number**
- b) Name
- c) Date_of_birth
- d) All of the mentioned

64. Which of the following is a single valued attribute

- a) **Register_number**
- b) Address
- c) SUBJECT_TAKEN
- d) Reference

65. In a relation between the entities the type and condition of the relation should be specified.

That is called as _____ attribute.

- a) **Descriptive**
- b) Derived
- c) Recursive
- d) Relative

66. In an E-R diagram a ellipse represents _____?

- a) Weak entity
- b) Relationship
- c) **Attribute**
- d) Entity class

67. In an E-R diagram a relationship is represented by _____?

- a) Ellipse
- b) Rectangle
- c) Rectangle with rounded corners
- d) **Diamond**

68. An attribute which consists of a group of attributes is called _____?

- a) Composite attributes
- b) **Multi-valued attributes**
- c) Composite identifiers
- d) Identifiers

69. Identifiers that consists of two or more attributes are called _____?

- a) **Composite identifiers**
- b) Multi-valued attributes
- c) Composite attributes
- d) Identifiers

70. Which is not included in the definition of an entity?

- a). Person
- b). Object
- c). Concept
- d). Action**

71. Which is not an example of a strong entity type?

- a). Course
- b). Department
- c). Student_Id**
- d). Student

72. An entity type whose existence depends on another entity type is called _____ entity?

- a). Strong
- b). Weak**
- c). Dependent
- d). Variant

73. A person name, birthday and social security number are all examples of _____?

- a). Entities
- b). Attributes**
- c). Relationships
- D). Descriptors

74. The most common type of relationship encountered in data modeling is _____ relationship?

- a) Unary
- b). Binary**
- c) Ternary
- d) Associative

76 Which is not a basic construct of an E-R model?

- a). Relationships
- b). Entity types
- c) Identifiers**
- d). Attributes

77. A field is to a record as:

- a). Data are to files
- b). A column is to a row**
- c). Files are to tables
- d). Attributes are to columns

78. A database containing all students in a class would store Roll No of a student in:

- a). Record
- b). Field**
- c). Cell
- d). File

79. A set of related files created and managed by a (DBMS) is called?

- a). Field
- b). Record
- c). Database**
- d). None

80. Which of the following is an example of a database?

- a). Phone book
- b). Library catalog
- c). Student records
- d). All**

81. A _____ relationship exists when 3 entities are associated.

- a) Unary
- b) Binary
- c) Ternary**
- d) Weak

82). _____ is a special type of integrity constraint that relates two relations and maintains consistency across the relations.

- a). Domain constraints
- b). Referential integrity constraints**
- c). Entity integrity constraints
- d). Domain integrity constraints

83. Every relation must have _____?

- a). Primary key**
- b). Candidate key
- c). Secondary key
- d). Mutually exclusiveness

84. The attribute on the left hand side of the arrow In a functional dependency is _____?

- a) Candidate key
- b). Determinant**
- c). Foreign key
- d). Primary key

85. The goal of normalization is to ____?

- a). **Get stable data structure**
- b). Increase number of relation
- c). Increase redundancy
- d). None of these

86. A relation is in 2NF if it is in 1NF and all its non key attributes are ____?

- a). Dependent on part of the primary key
- b). **Dependent on the entire primary key**
- c). Independent of the primary key
- d). Independent of any other relation

87. In 2NF which forms of dependency is removed?

- a). Functional
- b). Partial
- c). **Associative**
- d). Transitive

88. A functional dependency between two or more non key attributes is called ____?

- a). Partial functional dependency
- b). Partial non-key dependency
- c). **Transitive dependency**
- d). None of these

89. A relation is in third normal form if it is in second normal form and ____?

- a). Dependent on part of the key
- b). Dependent on all of the key
- c). Independent of the key
- d). **Has no transitive dependency**

90. The normalization process generally?

- a). Reduces the number of relations
- b). **Increases the number of relations**
- c). Reduces the number of functional dependencies
- d). Increases the number of functional dependencies

91. A relation is automatically in ____?

- a). **First Normal Form**
- b). Second normal form
- c). Third normal form
- d). Boyce-Codd normal form

92. Which of the following is not Armstrong's Axiom?

- a) Reflexivity rule
- b) Transitivity rule
- c) Pseudotransitivity rule**
- d) Augmentation rule

93. There are two functional dependencies with the same set of attributes on the left side of the arrow:

$A \rightarrow BC$

$A \rightarrow B$

This can be combined as

- a) $A \rightarrow BC$**
- b) $A \rightarrow B$
- c) $B \rightarrow C$
- d) None of the mentioned

94. Suppose relation $R(A,B,C,D,E)$ has the following functional dependencies:

$A \rightarrow B$

$B \rightarrow C$

$BC \rightarrow A$

$A \rightarrow D$

$E \rightarrow A$

$D \rightarrow E$

Which of the following is not a key?

- a) A
- b) E
- c) B, C**
- d) D

95 In the _____ normal form, a composite attribute is converted to individual attributes.

- a) First**
- b) Second
- c) Third
- d) Fourth

96. Which is a bottom-up approach to database design that design by examining the relationship between attributes:

- a) Functional dependency
- b) Database modeling
- c) Normalization**
- d) Decomposition

97. Identify the characteristics of transactions

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

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

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

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

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

100. 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

-----BEST OF LUCK-----