Comprehensive-DBMS-Question-Bank

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Qno	Question	Answer
1	DBMS provides the facility of accessing data from a database through a) DDL b) DML c) DBA d) Schema	B
2	Architecture of the database can be viewed as A)Two levels B)Four levels C)Three levels D)One levels	C
3	If a multivalued dependency holds and is not implied by the corresponding functional dependency, it usually arises from one of the following sources. a) A many-to-many relationship set b) A multivalued attribute of an entity set c) A one-to-many relationship set d) Both A many-to-many relationship set and A multivalued attribute of an entity se	D
4	Which of the following is generally used for performing tasks like creating the structure of the relations, deleting relation? a. DML(Data Manipulation Language) b. Query c. Relational Schema d. DDL(Data Definition Language)	D
5	An entity set that does not have sufficient attributes to form a primary key is a A.strong entity set B.weak entity set C.simple entity set D. primary entity set	B

Qno	Question	Answer
6	Dependency preservation is not guaranteed in a)3NF (b) BCNF c) 1NF (d) 2NF	B
7	The problem of being unable to represent some iinformation, can be solved by introducing.A)pointers b) null values. C) 0 values. D) null pointer	B
8	_ can help us detect poor E-R design. a) Database Design Process b) E-R Design Process c) Relational scheme d) Functional dependencies	D
9	Consider the following four relational schemas. For each schema, all non-trivial functional dependencies are listed. The underlined attributes are the respective primary keys. Schema I: Registration (rollno, courses) Field 'courses' is a set-valued attribute containing the set of courses a student has registered for. Non-trivial functional dependency: rollno courses Schema II: Registration (rollno, courseid, email) Non-trivial functional dependencies: rollno, courseid email email rollno Schema III: Registration (rollno, courseid, marks, grade) Non-trivial functional dependencies: rollno, courseid marks, grade marks grade Schema IV: Registration (rollno, courseid, credit) Non-trivial functional dependencies: rollno, courseid credit courseid credit Which one of the relational schemas above is in 3NF but not in BCNF? (A) Schema I (B) Schema II (C) Schema III (D) Schema IV	B
10	In a relational model, relations are termed as: A)Tuples	C

Qno	Question	Answer
	B) Attributes C) Tables D) Rows	
11	There are _ levels of data independence. a. 2 b. 1 c. 4 d. 3	A
12	Database locking concept is used to solve the problem of a) Lost Update b) Uncommitted Dependency c) Inconsistent Data d) All of the above	D
13	In an Entity-Relationship (ER) model, suppose R is a many-to-one relationship from entity set E1 to entity set E2. Assume that E1 and E2 participate totally in R and that the cardinality of E1 is greater than the cardinality of E2. Which one of the following is true about R? (A) Every entity in E1 is associated with exactly one entity in E2. (B) Some entity in E1 is associated with more than one entity in E2. (C) Every entity in E2 is associated with exactly one entity in E1. (D) Every entity in E2 is associated with at most one entity in E1.	A
14	Which of the following creates a temporary relation for the query on which it is defined? A) With B) From C) Where D) Select	A
15	Which of the join operations do not preserve non matched tuples? a) Left outer join b) Right outer join	C

Qno	Question	Answer
	c) Inner join d) Natural join	
16	A ___ consists of a sequence of query and/or update statements. a) Transaction b) Commit c) Rollback d) Flashback	A
17	_____ is a process used to gain ownership of shared resources without creating the possibility for deadlock. It breaks up the modification of shared data into "two phases". a) One phase locking b) Two phase locking c) Three phases locking d) Multiple phase locking	B
18	What is the best way to represent the attributes in a large database? a) Relational-and b) Concatenation c) Dot representation d) All of the mentioned	B
19	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	B
20	Data integrity constraints are used to: a) Control who is allowed access to the data b) Ensure that duplicate records are not entered into the table c) Improve the quality of data entered for a specific property (i.e., table column) d) Prevent users from changing	C
21	The attribute AGE is calculated from DATE_OF_BIRTH. The attribute AGE is a) Single valued	D

Qno	Question	Answer
	b) Multi valued c) Composite d) Derived	
22	Database systems are designed to manage A. Small bodies of informations B. Large bodies of informations C. Plain bodies of knowledge D. Complex bodies of knowledge	B
23	If a multivalued dependency holds and is not implied by the corresponding functional dependency, it usually arises from one of the following sources. a) A many-to-many relationship set b) A multivalued attribute of an entity set c) A one-to-many relationship set d) Both A many-to-many relationship set and A multivalued attribute of an entity set	D
24	The designer can review the schema to ensure it meets all the functional requirements, at the stage A. Conceptual design B. Execution design C. Controlling design D. Initial planning	A
25	In E-R diagram, relationship type is represented by a) Ellipse b) Dashed ellipse c) Rectangle d) Diamond	D
26	Which relationship relates one record of any object to one record of another object? a) One-to-one b) One-to-many c) Many-to-many	A
27	Who is more concerned about the conceptual level of the DBMS a)DBA b)The end user c)The Systems programmer d)Client	A

Qno	Question	Answer
28	Underlying the structure of a database is a) Data model b)schema diagram c)Instances d)entity	A
29	A huge collection of the information or data accumulated form several different sources is known as: A)Data Management B)Data Mining C)Data Warehouse D)Both B and C	C
30	What is the best way to represent the attributes in a large database? a) Relational-and b) Concatenation c) Dot representation d) All of the mentioned	C
31	Which of the following can be considered as the maximum size that is supported by FAT? a)8GB b) 4GB c) 4TB d) None of the above	B
32	SELECT * FROM employee WHERE dept_name="Comp Sci"; In the SQL given above there is an error . Identify the error. a) Dept_name b) Employee c) "Comp Sci" d) From	C) "Comp Sci" For any string operations single quoted(') must beused to enclose.
33	In which of the following, a separate schema is created consisting of that attribute and the primary key of the entity set. a) A many-to-many relationship set b) A multivalued attribute of an entity set c) A one-to-many relationship set d) All of the mentioned	B
34	Which normal form is based on the idea of full functional dependency	2nf
35	A Database Management System is a type of _ software. A) It is a type of system software B) It is a kind of application software	A

Qno	Question	Answer
	C) It is a kind of general software D) Both A and C	
36	The collection of tuples stored in a database at a particular moment is called a)schema b)view c)instance d)relation	C
37	Consider the following relational schema: Employee (empId, empName, empDept) Customer (custId,custName, salesRepId, rating) SalesRepId is a foreign key referring to empId of the employee relation. Assume that each employee makes a sale to at least one customer. What does the following query return? SELECT empName FROM employee E WHERE NOT EXISTS (SELECT custId FROM customer C WHERE C. salesRepId = E. empId AND C. rating < > 'GOOD') (A) Names of all the employees with at least one of their customers having a 'GOOD' rating. (B) Names of all the employees with at most one of their customers having a 'GOOD' rating. (C) Names of all the employees with none of their customers having a 'GOOD' rating. (D) Names of all the employees with all their customers having a 'GOOD' rating.	D
38	The file organization that provides very fast access to any arbitrary record of a file is A)Ordered file B)Unordered file C)Hashed file D)B tree	C
39	Which command is used to remove rows from a table ? A) delete	C

Qno	Question	Answer
	B) remove C) truncate D) both A & B	
40	SELECT emp*name* *FROM department* *WHERE dept_name LIKE* ____ *Computer Science';* *In the above-given Query, which of the following can be placed in the Query's blank portion to select the "dept_name" that also contains Computer Science as its ending string?* *A) &* *B) ``* C % D $	C
41	Which of the following is a top-down approach in which the entity's higher level can be divided into two lower sub-entities? A) Aggregation B) Generalization C) Specialization D) All of the above	C
42	WITH max_budget (VALUE) AS (SELECT MAX(budget) FROM department) SELECT budget FROM department, max_budget WHERE department.budget = MAX budget.value; In the query given above which one of the following is a temporary relation? a) Budget b) Department c) Value d) Max_budget	D
43	Which one of the following given statements possibly contains the error? A. select * from emp where empid = 10003; B. select empid from emp where empid = 10006;	D (from is missing, causing the error)

Qno	Question	Answer
	C. select empid from emp; D. select empid where empid = 1009 and Lastname = 'GELLER'	
44	Consider the relations r(A, B) and s(B, C), where s.B is a primary key and r.B is a foreign key referencing s.B. Consider the query Q: r ⋈ (σB<5(s)) Let LOJ denote the natural left outer-join operation. Assume that r and s contain no null values. Which one of the following queries is NOT equivalent to Q? (A) σB<5(r ⋈ s) (B) σB<5(r LOJ s) (C) r LOJ (σB<5(s)) (D) σB<5(r) LOJ s	C
45	Views are useful for _____ unwanted information, and for collecting together information from more than one relation into a single view. A.Hiding B.Deleting C.Highlighting D. All of the above	A
46	In general, a file is basically a collection of all related _____ a.Rows & Columns b.Fields c.Database d.Records	D
47	Relations produced from an E-R model will always be in a) 1NF b) 2NF c) 3NF d) 4NF e) Other	C
48	4NF is designed to cope with a)Transitive dependency b)Join dependency c)Multivalued dependency d)None of these	C
49	What do you mean by one to many relationships?	B

Qno	Question	Answer
	A)One class may have many teachers B)One teacher can have many classes C)Many classes may have many teachers D)Many teachers may have many classes	
50	Which of the following refers to the level of data abstraction that describes exactly how the data actually stored? A:Conceptual Level B:Physical Level C:File Level D:Logical Level	B
51	In SQL the spaces at the end of the string are removed by _____ function. a) Upper b) String c) Trim d) Lower	C
52	Which of the following is the property of transaction that protects data from system failure? a) Atomicity b) Isolation c) Durability d) Consistency	C
53	Which normalization form is based on the transitive dependency? a) 1NF b) 2NF c) 3NF d) BCNF	C
54	Which of the following SQL command is used for removing (or deleting) a relation form the database?	Drop
55	Which of the following is known as minimal super key?	Candidate key
56	Given the following relation instance. x y z 1 4 2 1 5 3 1 6 3 3 2 2	YZ -> X and Y -> Z

Qno	Question	Answer
	Which of the following functional dependencies are satisfied by the instance?	
57	Consider the following relational schema: Suppliers(sid:integer, sname:string, city:string, street:string) Parts(pid:integer, pname:string, color:string) Catalog(sid:integer, pid:integer, cost:real) Consider the following relational query on the above database: SELECT S.sname FROM Suppliers S WHERE S.sid NOT IN (SELECT C.sid FROM Catalog C WHERE C.pid NOT IN (SELECT P.pid FROM Parts P WHERE P.color<> 'blue')) Assume that relations corresponding to the above schema are not empty. Which one of the following is the correct interpretation of the above query	Find the names of all suppliers who have supplied a non-blue part
58	An entity in A is associated with at most one entity in B. An entity in B, however, can be associated with any number (zero or more) of entities in A.	Many-to-one
59	Which commands are used to control access over objects in relational database?	GRANT & REVOKE
60	Consider the ORACLE relationships below:One (x, y) = {<2, 5>, <1, 6>, <1, 6>, <1, 6>, <4, 8>, <4, 8>} Two (x, y) = {<2, 55>, <1, 1>, <4, 4>, <1, 6>, <4, 8>, <4, 8>, <9, 9>, <1, 6>}. Consider the following SQL queries, SQ1 and SQ2, respectively: SQ1 : SELECT *FROM One)* *EXCEPT* *(SELECT* FROM Two); SQ2 : SELECT *FROM One)* *EXCEPT ALL* *(SELECT* FROM Two); What is the cardinality of the result generated on the execution of each SQL query on the instances above?	1 and 2

Qno	Question	Answer
61	Which of the following is TRUE?	Every relation in BCNF is also in 3NF
62	Typically, a database administrator is responsible for	Schema definition, modification, Granting of authorization for data access
63	Which of the following queries will retrieve students whose name has p as the second letter?	SELECT rollNo FROM student where name LIKE `_p%`
64	Consider a relation R(A,B,C,D,E) and a set of all FDs that hold on R as given below {A -> BC,CD -> E,B->D,E->A}	R is in 3NF not in BCN
65	Consider the following 2 sets of functional dependencies F = {A->C,AC->D,E->AD,E->H} G = {A->CD,E->AH}	F and G are equivalent
66	To be conflict serializable, all transaction should follow	Two phase locking
67	Which of the following is NOT a type of database model? a) Relational Model b) Network Model c) Hierarchical model d) Object Oriented model	Object oriented model
68	Which of the following database model represents data as a collection of key value pairs?	NoSQL model
69	Which SQL function is used to calculate the total number of records in a table?	COUNT
70	Consider the statements given below S1: Data abstraction is the DBMS characteristic that allows program-data independence S2: Data models allow representation of a database at different levels of detail	S1: True, S2:True
71	Let E1 and E2 be two entities in an ER diagram with simple single-valued attributes. R1 and R2 are two relationships between E1 and E2. Where R1 is one to many and R2 is many to many. R1 and R2 do not have any attributes of their own. What is the minimum number of tables required to represent this situation in the relational model?	The minimum number of tables required is 3: one table for each entity (E1, E2) and one table for the many-to-many relationship (R2).

Qno	Question	Answer
72	Consider the join of a relation R with relation S. If R has m tuples and S has n tuples then the maximum size of join is	The maximum size of the join of relation R with relation S is mn tuples.
73	An index record appears for every search key value in the file	Dense index
74	If a relation is in BCNF then it is in	3NF
75	Which of the following is a DDL command? a) Select b) Create c) Insert d) Delete	Create
76	The number of attributes in a relation is called its	Degree
77	Consider a database implemented using B+ tree for file indexing and installed on a disk drive with block size of 4KB. The size of search key is 12 bytes and the size of tree/disk pointer is 8 bytes. Assume the database has one million records. Also assume that no node of the B+ tree and no records are present initially in main memory. Consider that each record fits into one disk block. THe minimum number of disk accesses required to retrieve any record in the database is	3
78	Conisder the relation R(A,B,C,D,E) and the set F = {AB->CE,E->AB,C->D} What is the highest normal form of this relation?	BCNF
79	What is the lostupdate problem known as	W-W Conflict

80	Consider the following transactions with data items P and Q initialized to zero
	
	 T1: read(P);
	 read(Q);
	 if P = 0 then Q:=Q+1
	 write(Q);
	 T2:read(Q)
	 read(P);
	 if Q = 0 then P:=P+1
	 write(P)
	
	 Any non serial interleaving of T1 and T2 for concurrent execution leads to
	
	 a) A serializable schedule b) A schedule that is not conflict serializable c) A conflict serializable schedule d) A schedule for which precedence graph cannot be drawn
		B) A schedule that is not conflict serializable