**DATABASE**

**Assignment 5**

**Submission Date: 28th Aug 2020**

1. Explain a Database system?
2. Explain database?
3. Define the benefits of DBMS?
4. Write in brief the three levels of data abstraction.
5. Explain durability in DBMS?
6. What do you mean by atomicity and aggregation?
7. Explain a checkpoint and When does it occur?
8. Define the different phases of transaction?
9. What do you mean by flat file database?
10. Explain "transparent DBMS"?
11. Explain a query?
12. What do you mean by Correlated subquery?
13. How do you communicate with an RDBMS?
14. Explain DDL (Data Definition Language)?
15. Explain VDL (View Definition Language)?
16. Explain SDL (Storage Definition Language)?
17. Explain DML (Data Manipulation Language)?
18. Explain the "integrity rules"?
19. Explain Data Independence?
20. Explain a view? How it is related to data independence?
21. Explain Data Model?
22. Explain E-R model?
23. Explain Object Oriented model?
24. Explain an Entity?
25. Explain an Entity type?
26. Explain an Entity set?
27. Explain Weak Entity set?
28. Explain an attribute?
29. Explain a Relation Schema and a Relation?
30. Explain degree of a Relation?
31. Explain Relationship?
32. Explain Relationship set?
33. Explain normalization?
34. Explain Functional Dependency?
35. Explain Fully Functional dependency?
36. Explain 1 NF (Normal Form)?
37. Explain 2NF?
38. Explain 3NF?
39. Explain BCNF (Boyce-Codd Normal Form)?
40. Explain 4NF?
41. Explain Domain-Key Normal Form?
42. Define partial, alternate, artificial, compound and natural key?
43. Explain indexing and define the different kinds of indexing?
44. Write in brief the four types of indexes.
45. Explain system catalog or catalog relation? How is better known as?
46. Explain meant by query optimization?
47. Explain SQL and state the differences among SQL and other conventional programming Languages.
48. Explain database Trigger?
49. Name four applications for triggers.
50. Define stored-procedures? And Define the Benifits of using them?

**DATABASE**

**Assignment 6**

**Submission Date: 4th Aug 2020**

1. Define cursors give different types of cursors?
2. Define data and information, and how are they related in a database?
3. Explain Enterprise Resource Planning (ERP), and what kind of a database is used in an ERP application?
4. Write an SQL SELECT statement to display all the columns of the STUDENT table but only those rows where the Grade column is greater than or equal to 90.
5. Name and briefly Write in brief the five SQL built-in functions.
6. Write an SQL SELECT statement to count the number of rows in STUDENT table and display the result with the label NumStudents.
7. Explain an SQL subquery?
8. Explain a foreign key, and explain it used for?
9. Define the steps for transforming an entity into a table?
10. Explain a surrogate key, Write in brief the ideal primary key and Write in brief how surrogate keys meet this ideal
11. Explain a cascading update?
12. Explain a SQL view? Briefly Write in brief the use of views.
13. Write in brief how to add a NOT NULL column to a table.
14. You have two tables, EMPLOYEE and COMPUTER that are in a one-to-one relationship. The foreign key is EmpNumber in COMPUTER which references EmpNumber as the primary key of EMPLOYEE. Write in brief what must be done to convert the one-to-one EMPLOYEE-COMPUTER relationship to a one-to-many relationship where one employee can have more than one computer.
15. Write in brief what we mean by an ACID transaction.
16. Write in brief what needs to happen to convert a relation to third normal form.
17. Explain denormalizations and why would someone consider doing so?
18. Compare a hierarchical and network database model?
19. Write in brief the difference among a dynamic and materialized view.
20. Briefly Write in brief the three types of SQL commands.
21. Define the steps to follow when preparing to create a table?
22. Write in brief a join among tables
23. Write in brief and contrast a trigger and a procedure.
24. Briefly Write in brief an outer join.
25. Write in brief a subquery.
26. Write in brief the difference among two and three-tier architectures.
27. Write in brief a data warehouse.
28. Write in brief the differences among a data warehouse and data mart.
29. Write in brief the difference among data and database administration.
30. Define some of the important security features of a DBMS?
31. Write in brief the difference among homogeneous and heterogeneous distributed database.
32. Explain a distributed database?
33. Write a query to print Second highest salary.
34. Define different types of clauses?
35. Explain inner join? Write it’s query
36. Types of joins, slowest and fastest amongst them.