

**20U152**

(Pages: 2)

Name: .....

Reg. No.....

**FIRST SEMESTER B.Voc. DEGREE EXAMINATION, NOVEMBER 2020**

(Regular/Supplementary/Improvement)

**CC18U SDC1 DB03 - DATABASE MANAGEMENT SYSTEM CONCEPTS – MONGO DB**

(Information Technology - Core Course)

(2018 Admission onwards)

Time : Three Hours

Maximum : 80 Marks

**PART A**

Answer *all* questions. Each question carries 1 mark.

1. A relational database developer refers to a record as \_\_\_\_\_.
2. Which command is used to remove all rows from a table?
3. Rollback of transactions is normally used to \_\_\_\_\_.
4. The users who use easy-to-use menu are called \_\_\_\_\_.
5. A table joined with itself is called \_\_\_\_\_.
6. The database schema is written in \_\_\_\_\_.
7. The collection of information stored in the database at a particular moment is called \_\_\_\_\_.
8. \_\_\_\_\_ is the capacity to change the internal schema without having to change the conceptual schema.
9. DML stands for \_\_\_\_\_.
10. The overall logical structure of a database can be expressed graphically by \_\_\_\_\_.

**(10 x 1 = 10 Marks)**

**PART B**

Answer any *eight* questions. Each question carries 2 marks.

11. Define Data Independence.
12. List the different types of database-system users.
13. Define Aggregate Functions. List the aggregate functions supported by SQL.
14. Define normalization. What is need for normalization?
15. What are the ACID properties of transaction?
16. Give the levels of data abstraction?
17. What is meant by lossless-join decomposition?
18. What is cascading Roll back?

19. Write short notes on domain relational calculus.
20. Define DDL.
21. What are the features of MongoDB?
22. Differentiate physical schema and logical schema.

**(8 x 2 = 16 Marks)**

### **PART C**

Answer any *six* questions. Each question carries 4 marks.

23. Define Database Languages.
24. Explain E-R model. Explain different notations used in E-R diagram.
25. Explain the three SQL commands used to modify the database.
26. Explain the EXISTS and UNIQUE Functions in SQL with example.
27. When is the concept of a weak entity used in data modeling? Define the terms owner entity type, weak entity type, identifying relationship type, and partial
28. Explain conflict serializability and view serializability.
29. What is an attribute? Explain different types of attribute with example.
30. Write about the transaction management with SQL using commit, rollback, and save point.
31. Explain deadlock Prevention.

**(6 x 4 = 24 Marks)**

### **PART D**

Answer any *two* questions. Each question carries 15 marks.

32. Briefly discuss about various lock based mechanisms used in concurrency control.
33. Explain relational algebra operations.
34. What is a normal form? Explain about various normal forms with examples.
35. a) Draw an ER diagram for Hospital management system.  
b) Who is DBA? List the role of DBA.

**(2 x 15 = 30 Marks)**

\*\*\*\*\*