

Hall Ticket Number:

--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Code No. : 33011 O2

VASAVI COLLEGE OF ENGINEERING (Autonomous), HYDERABAD
M.C.A. (CBCS) III-Semester Backlog (Old) Examinations, December-2018

Database Management Systems

Time: 3 hours

Max. Marks: 70

Note: Answer ALL questions in Part-A and any FIVE from Part-B

Part-A (10 × 2 = 20 Marks)

1. What are the advantages of DBMS?
2. What is Query processor?
3. What is the difference between database schema and Instance?
4. List various SQL authorization privileges.
5. Define Normalization?
6. Write an example for recursive query.
7. What is the difference between dense index and sparse index?
8. Define Serializability?
9. How to identify Deadlock?
10. What is difference between lock based protocol and time stamp based protocol?

Part-B (5 × 10 = 50 Marks)

11. a) Define Data model? Explain various types of data models and their significance. [4]
b) What is an E-R model? What is generalization, specialization and aggregation? How they are represented in E-R model? [6]
12. a) Explain various fundamental operations in relational algebra with example. [5]
b) Explain the following Operators in SQL with example. [5]
i) NOT IN ii) GROUP BY
13. a) Explain the following [5]
i) Functional dependencies ii) Multi-valued dependencies
b) Explain the Algorithm for decomposition. [5]
14. a) What is transaction? Explain the ACID Properties of transaction. [4]
b) Describe the Insertion and deletion Operations in B+ trees with example. [6]
15. a) Explain the Time Stamp based Concurrency Control protocol? How is it used to ensure serializability? [5]
b) What is log file? Explain the Check point log based recovery scheme for recovering the data base? [5]
16. a) Explain about various database users. [5]
b) Explain various aggregate functions in SQL. [5]
17. Answer any *two* of the following:
a) Describe about Triggers with an example. [5]
b) Explain about Static hashing. [5]
c) Explain about buffer management. [5]