VASAVI COLLEGE OF ENGINEERING *(Autonomous)*, HYDERABAD
M.C.A. II Year I-Semester (Supplementary) Examinations, May-2016

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. List any four differences between File Processing System and Database Management System.
2. Define and list Mapping Cardinalities.
3. Differentiate between Super key and Primary Key.
4. What are the Aggregate functions?
5. Differentiate between Dynamic SQL and Embedded SQL.
6. What is Transitive dependency?
7. Differentiate between Dense and Sparse Indices.
8. Define Atomicity of a transaction.
9. State Thomas Write rule.
10. What are the different types of storage?

Part-B (5 X 10=50 Marks)

11. a) Explain about Database Architecture with diagram.   [5]
    b) What are E-R design issues? Explain them with examples.   [5]

12. a) Explain about SQL queries given below with an example
        i) Deletion   ii) Insertion   [5]
    b) Discuss about Set operations with an example.   [5]

13. a) Discuss about Procedures.   [4]
    b) Explain about Normalization.   [6]

14. a) Explain about Bitmap Indices with an example.   [5]
    b) Discuss about Serializability.   [5]

15. a) What is Multiple Granularity? Explain it in detail.   [5]
    b) Explain about different types of Buffer management.   [5]

16. a) Explain about Database users and Administrator.   [5]
    b) Discuss about Set-intersection and Natural-Join operations.   [5]

17. Write short notes on any **two** of the following:
    a) Lossless Decomposition   [5]
    b) Concurrent Execution.   [5]
    c) Deadlock prevention   [5]

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