Reg. No. : | | | | | | | | | | |

Question Paper Code: 41245

B.E. / B.Tech. DEGREE EXAMINATION, NOV 2016

Fourth Semester

Computer Science and Engineering

01UCS405 – DATABASE MANAGEMENT SYSTEMS

(Regulation 2013)

Duration: Three hours Maximum: 100 Marks

Answer ALL Questions.

PART A - (10 x 2 = 20 Marks)

1. What are the different types of data models?
2. Mention the various types of data models.
3. Describe a circumstance in which you would choose to use embedded SQL rather than using SQL alone.
4. Differentiate static and dynamic SQL.
5. Define query optimization.
6. What are the ACID properties? Explain them.
7. Differentiate static hashing and dynamic hashing?
8. What is indexing and hashing?
9. Define data marts.
10. List out the steps in data mining.

PART - B (5 x 16 = 80 Marks)

11. (a) What is entity relationship model? List the various symbols in ER model. Explain with a real time example with the different functional dependencies. (16)

Or

(b) What is the purpose of normalizing the data? Describe the various forms of normalization and types of anomalies that may occur on a relation that has redundant data. (16)

12. (a) (i) What is DML? Explain the various DML queries with examples. (8)

(ii) Explain embedded SQL with a brief example and necessary syntax. (8)

Or

(b) Explain in detail about query optimization. (16)

13. (a) With diagrams explain serializability in detail. (16)

Or

(b) Illustrate the concepts of deadlock prevention techniques. (16)

14. (a) Explain the various levels in RAID with advantages and disadvantages. (16)

Or

(b) Mention the purpose of indexing. How this can be done by B+ tree? Explain. (16)

15. (a) Explain in detail about cryptography in relation with database security. (16)

Or

(b) Explain about distributed database concepts. (16)

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