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Question Paper Code: 34025

B.E. / B.Tech. DEGREE EXAMINATION, NOV 2017

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. What is Weak Entity? Give an example.
3. Describe a circumstance in which you would choose to use embedded SQL rather than using SQL alone.
4. Define Query Optimization.
5. Define the term ACID properties.
6. Justify the need for Concurrency control.
7. What is the need for dynamic hashing?
8. Differentiate static hashing and dynamic hashing.
9. Define data marts.
10. What is meant by Association rule?

PART - B (5 x 16 = 80 Marks)

11. (a) 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)

Or

- (b) Describe the architecture of Database system with a neat sketch. (16)
12. (a) What are the basic steps in query processing? Illustrate your answer with a suitable diagram. (16)

Or

- (b) Briefly explain the optimization techniques that apply heuristic rules to modify the internal representation of a query with suitable example. (16)
13. (a) During its execution, a transaction passes through several states, until it finally commits or aborts. List all possible sequences of states through which a transaction may pass. Explain why each state transition may occur. (16)

Or

- (b) With a neat sketch discuss various types of serializability. (16)
14. (a) Describe the concepts upon which RAID is built. Define and compare different RAID levels. (16)

Or

- (b) Write detailed notes on mobile and web databases. (16)
15. (a) Explain about distributed database concepts. (16)

Or

- (b) Explain in detail the steps involved in the process of knowledge discovery from databases. (16)
