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Question Paper Code: 31085

B.E. / B.Tech. DEGREE EXAMINATION, OCTOBER 2014.

Third Semester

Information Technology

01UIT305 - DATABASE SYSTEMS

(Regulation 2013)

Duration: Three hours

Maximum: 100 Marks

Answer ALL Questions.

PART A - (10 x 2 = 20 Marks)

1. What are the functions of Database Administrator?
2. List out the demerits of Database Management system.
3. What is meant by Tuple relational calculus?
4. Differentiate char and varchar in SQL.
5. What are the pitfalls of Database design?
6. Write down the desirable properties of Decomposition.
7. Define Transactions.
8. What is the objective of Serializability?
9. What is Striping and Mirroring?
10. What are the steps of Query processing?

PART - B (5 x 16 = 80 Marks)

11. (a) Explain Database system architecture in detail. (16)

Or

(b) Briefly explain about the Extended E-R features. (16)

12. (a) What are the Fundamental operations performed in Relational algebra? Explain with an example. (16)

Or

(b) Discuss Embedded SQL in detail. (16)

13. (a) (i) Explain Inference rules for functional dependencies. (8)

(ii) Discuss Boyce codd normal form with an example. (8)

Or

(b) Explain Join dependencies and Fifth normal form. (16)

14. (a) (i) Mention and explain ACID properties. (8)

(ii) What are the general techniques for handling Deadlock? Explain. (8)

Or

(b) Describe Locking protocols. (16)

15. (a) Briefly explain about Organization of records in files. (16)

Or

(b) Describe about Database Tuning. (16)