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First Semester M.Tech. Degree Examination, January 2011

Advances in DBMS

Time: 3 hrs.

Max. Marks:100

Note: Answer any FIVE full questions.

- 1
 - a. Define domain, tuples, attributes and relations. (08 Marks)
 - b. Explain the characteristics of a relation. (06 Marks)
 - c. With an example, explain entity integrity referential integrity and foreign key constraints. (06 Marks)
- 2
 - a. Explain the features of object oriented concepts, supported by DBMS. (08 Marks)
 - b. With an example, explain the object structure. Also mention different types of constructors. (06 Marks)
 - c. Bring out some differences between structured and unstructured complex objects. (06 Marks)
- 3
 - a. What is an ODL? Explain graphical notations and object database schema for part of university database. (10 Marks)
 - b. Briefly explain the mapping of ERR schema to an ODB schema. (10 Marks)
- 4
 - a. With an example, explain the generalized model for active database. (08 Marks)
 - b. Give the syntax summary for specifying triggers in oracle system. (06 Marks)
 - c. Explain the categories of spatial queries. Also mention prolog / datalog notation, with an example. (06 Marks)
- 5

Give the architectures for parallel database. Also explain improved parallel hash join. (20 Marks)
- 6
 - a. Explain the distributed concurrency control. Why distributed recovery is needed? Explain 2 – phase commit protocol. (10 Marks)
 - b. Write a brief note on multidimensional data model and database design. (10 Marks)
- 7
 - a. With a neat diagram, explain the architecture of data warehousing. (10 Marks)
 - b. Explain view and its materialization. Mention the issues that arise in view materialization. (10 Marks)
- 8

Write short notes on: (20 Marks)

 - a. Views with aggregation
 - b. KDD process
 - c. Mining for rules
 - d. Geographical information system.