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First Semester M.Tech. Degree Examination, Dec.2018/Jan.2019 Advances in Database Management System

Time: 3 hrs.

Max. Marks: 100

Note: Answer any FIVE full questions, choosing ONE full question from each module.

Module-1

- 1 a. Explain the schema based constraints in the Relational Model. (10 Marks)
b. Discuss the different types of update operation on a relation. Show an example for the violation of integrity constraints in each of the three types of update operations. (10 Marks)

OR

- 2 a. i) Explain OID and its properties. (02 Marks)
ii) What are types constructors? How can it be used to create a complex object structure? (08 Marks)
b. With an example demonstrate how object behaviour can be specified via class operations. (10 Marks)

Module-2

- 3 a. List and explain the built – in interfaces for collection objects as specified by ODMG object model. (12 Marks)
b. Explain Object Query Language (OQL) proposed by ODMG. (08 Marks)

OR

- 4 a. Explain the steps for mapping an EER schema to an ODB schema. (10 Marks)
b. Explain graphical notations and object database schema for part of UNIVERSITY database. (10 Marks)

Module-3

- 5 a. Explain the various architectures for Parallel Database Systems. Give the motivation for data distribution. (10 Marks)
b. Explain with a neat figure Dataflow network of operations for Parallel Join. (10 Marks)

OR

- 6 a. Explain Fragmentation and Replication in distributed databases. (10 Marks)
b. Explain the Two – Phase Commit Protocol with Presumed Abort. (10 Marks)

Module-4

- 7 a. Explain Multidimensional data model and database design with example. (10 Marks)
b. Explain the architecture of Data warehousing, with a neat diagram. (10 Marks)

OR

- 8 a. Explain the algorithm for finding frequent item sets. (10 Marks)
b. What is a Decision Tree? Explain Decision Tree Induction Schema. (10 Marks)

Module-5

- 9 a. What are Temporal Databases? Explain its types with an example. (10 Marks)
b. Explain the generalized model for Active Databases. Give the syntax for specifying triggers in Oracle system. (10 Marks)

OR

- 10 a. Describe infrastructure based mobile platform, with a neat diagram. (10 Marks)
b. Explain characteristics of Data in GIS. (10 Marks)

Important Note : 1. On completing your answers, compulsorily draw diagonal cross lines on the remaining blank pages.
2. Any revealing of identification, appeal to evaluator and /or equations written eg, 42+8 = 50, will be treated as malpractice.