

CBCS Scheme

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16SCS/SIT13

First Semester M.Tech. Degree Examination, Dec.2016/Jan.2017 Advances in Data Base Management System

Time: 3 hrs.

Max. Marks: 80

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

Module-1

- 1 a. Discuss the various reasons that lead to the occurrence of NULL values in a relation. (04 Marks)
- b. What are the categories of constraints on databases? Discuss the main types of constraints. (06 Marks)
- c. List and explain the update operations on relations and constraint violation during their operations. (06 Marks)

OR

- 2 a. What is Object identifiers? Explain the characteristics of OID. (06 Marks)
- b. What are type constructors in OODBMS? How it is used to create complex object structures? (06 Marks)
- c. Discuss the concept of encapsulation and tell how it is used to create abstract data types. (04 Marks)

Module-2

- 3 a. What is ODL? Explain graph notations and object database schema for the part of UNIVERSITY database. (10 Marks)
- b. Explain the steps involved in mapping of EER schema into an ODL schema. (06 Marks)

OR

- 4 a. Discuss the ODL and OQL concepts of ODMG model with example for each. (07 Marks)
- b. Explain the nested relational features of oracle. (05 Marks)
- c. Briefly discuss the difference between conceptual design of ODB and RDB. (04 Marks)

Module-3

- 5 a. What are the motivations behind parallel and distributed databases? (05 Marks)
- b. Describe the three main architectures for parallel DBMS's. (06 Marks)
- c. Discuss Data partitioning and parallelization of sequential operation Evaluation method. (05 Marks)

OR

- 6 a. Explain Fragmentation and Replication in terms of Data storage in distributed databases. (06 Marks)
- b. Explain the replication methods used in updating distributed data. (10 Marks)

Module-4

- 7 a. Explain Multidimensional data model and Database design with example. (10 Marks)
- b. With neat diagram, explain the architecture of Data warehousing. (06 Marks)

OR

- 8 a. Give the definition of an association rule. Describe the difference between support and confidence of a rule. (06 Marks)
b. What is Priori property? Describe an algorithm for finding frequent item sets. (06 Marks)
c. List the components of a decision tree. How are decision tree constructed? (04 Marks)

Module-5

- 9 a. Briefly discuss the concepts and how Querying is done in Temporal databases and spatial databases. (10 Marks)
b. Explain briefly about Deductive databases. (06 Marks)

OR

- 10 a. Discuss the components of a GIS. What are the constraints present in a GIS? (08 Marks)
b. Describe an infrastructure based mobile platform, with a neat diagram. (08 Marks)

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