1129

B.E. (Computer Science and Engineering)
Seventh Semester
CS-702: Advanced Database Systems

Time allowed: 3 Hours   Max. Marks: 50

NOTE: *Attempt five questions in all, including Question No. I which is compulsory and selecting two questions from each Unit.*

x-x-x

I.   Answer the following in brief:-

a) Optimistic Concurrency Control technique.

b) Compare OODBMS and ORDBMS.

c) Difference between 3NF and BCNF with example

d) DoD Security levels

e) What is POSTGRES? Explain it.   (5x2)

UNIT – I

II. a) What are long duration transactions? What are the adverse effects of following concurrency protocols on long duration transactions? i) 2-phase locking ii) Graph based protocol.

b) What is the difference between persistent and transient objects? How persistence is handled in typical 00 database systems?   (2x5)

III. a) What are the main software modules of DDBMS? Discuss the main functions of each of these modules in context to client-server architecture.

b) What is the difference between data centric and document centric XML documents?   (2x5)

IV. Discuss the semi join method for executing an equijoin of two files located at different sites. Under what conditions is an equijoin strategy efficient?   (10)

UNIT – II

V.   a) Give a comparison of application development, recovery and performance features of Oracle, DB2 and MySQL.

b) What do you mean by TP monitors? Explain architecture of TP Monitors in detail.   (2x5)

VI.   a) What is the difference between data centric and document centric XML documents?

      b) How is concurrency managed in distributed database management system?   (2x5)

VII.   a) What is the difference between persistent and transient objects? How persistence is handled in typical 00 database systems?

      b) What is fragment of a relation? What are the main types of fragments? Why are fragments a useful concept in distributed database design?   (2x5)

x-x-x