T.E. computer sem V ~~Oct-13~~
Syb:- ADBMS. 21/11/12

01-11-2013-DTP-P-8-KG-13

Con. 6757 - 13. **LJ-11260**

(3 Hours) **[Total Marks : 100**

N.B. : (1) Question No. **1** is **compulsory.**
(2) Solve any **four** from Question Nos. **2** to **7.**
(3) **Figures** to the **right** indicate **full** marks.
(4) Assume any suitable **data** wherever **required.**

1. (a) Explain different types of transparencies in distributed databases. **10**
Consider the following schema :–
Emp (eno, ename, title)
Proj (pno, pname, budget, Loc)
Pay (title, salary)
Assignment (eno, pno, responsibility, duration)
(i) Give 2 examples of horizontal and vertical fragmentation each.
(ii) Give the derived horizontal fragmentation on emp & pay relation. Write the resultant fragments.
(b) Explain heuristic approach of query processing with relevant examples. **10**

2. (a) Explain Hash join and External Sorting algorithm in detail. **12**
(b) Explain conceptual design phase of database life cycle. **8**

3. (a) In SQL3 how the type inheritance and table inheritance implemented?Explain with suitable examples. **10**
(b) Explain left, right, outer, inner, equi join, pattern matching with example. **10**

4. (a) Draw and explain architectures for parallel databases. **10**
(b) Explain mapping of Generalization, Specialization, Union/category with relevant examples. **10**

5. (a) Consider the following DTD :–
<!DOCTYPE Parts [
<!ELEMENT part (name, subpartinfo*)>
<!ELEMENT Subpartinfo (part, quantity)>
<!ELEMENT name (# PCDATA)>
<!ELEMENT quantity (# PCDATA)>
] >
(i) Give a small example of data corresponding to the above DTD. **5**
(ii) Show how to map this DTD to a relational schema. You can assume that part names are unique. **5**
(b) Discuss deadlock handling techniques in distributed database. **10**

[TURN OVER

6. (a) Explain cost functions for SELECT operation. **10**

   (b) Compare RDBMS, OODBMS and ORDBMS. **10**

7. Write a short notes on (any **four**) :- **20**

   (a) Nested Relations.

   (b) XQuery

   (c) EXIST and NOT EXIST.

   (d) Client - Server architecture.

   (e) Bloom Join Techniques.
