Code No: 07A4EC14 **R07** **Set No. 1**

II B.TECH II SEM–REGULAR/SUPPLEMENTARY EXAMINATIONS MAY - 2010

DATABASE MANAGEMENT SYSTEMS

Common to Information Technology, Computer Science And Engineering

Time: 3 hours **Max Marks: 80**

Answer any FIVE Questions

All Questions carry equal marks

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1. (a) What is redundancy?
   (b) What are the different problems encountered by redundancy? Explain them [4+12]

2. (a) Define DBMS? List Database system Applications.
   (b) Explain Database Administrator's responsibilities. [8+8]

3. (a) What is a weak entity set? Differentiate between weak entity set and strong entity set.
   (b) Define Aggregation. What is the problem associated with aggregation? Discuss the remedies. [8+8]

4. (a) Consider the following Schema:
   Suppliers ($\underline{sid : integer}$, sname: string, address: string)
   Parts ($\underline{pid : integer}$, pname: string, color: string)
   Catalog ($\underline{sid : integer, pid : integer}$, cost: real)
   The key fields are underlined. The catalog relation lists the price changes for parts by supplies. Write the following queries in SQL.
      i. Find the pnames of parts for which there is some supplier.
      ii. Find the snames of suppliers who supply every part.
      iii. Find the pnames of parts supplied by raghu supplier and no one else.
      iv. Find the sids of suppliers who supply only red parts.

   (b) Consider the following Schema:
   Suppliers ($\underline{sid : integer}$, sname: string, address: string)
   Parts ($\underline{pid : integer}$, pname: string, color: string)
   Catalog ($\underline{sid : integer, pid : integer}$, cost: real)
   The key fields are underlined. The catalog relation lists the price changes for parts by supplies. Write the following queries in SQL.
      i. Find sids of suppliers who supply a red part and a green part.
      ii. Find sids of suppliers who supply a red part or a green part.
      iii. For every suppliers that only supplies green parts, print the name of the supplier. [8+8]

5. Explain B+ Trees? [16]

6. Since every conflict-serializable schedule is view serializable, why do we emphasize conflict serializability rather than view serializability? [16]

7. Consider the following Schema:
   Suppliers ($\underline{sid : integer}$, sname: string, address: string)
   Parts ($\underline{pid : integer}$, pname: string, color: string)
   Catalog ($\underline{sid : integer, pid : integer}$, cost: real)
   The key fields are underlined. The catalog relation lists the price changes for parts by supplies. Write the following Queries in Tuple relational calculus and Domain relational calculus.

   (a) Find the sids of suppliees who supply every red part

   (b) Find the sids of suppliees who supply every red part or supply every green part.

   (c) Find the names of suppliees who supply some red part.

   (d) Find parts of sids such that the supplies with the first sid changes more. [16]

8. Explain advanced recovery Techniques? [16]

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