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***B. Tech. Degree V Semester Special Supplementary Examination
August 2015***

CS 1505 DATABASE MANAGEMENT SYSTEMS

(2012 Scheme)

Time: 3 Hours

Maximum Marks: 100

PART A
(Answer *ALL* questions)

$(8 \times 5 = 40)$

- I. (a) Explain different database languages.
(b) Describe the three levels of data abstraction.
(c) Explain spanned and unspanned records.
(d) What is functional dependency?
(e) What is indexing? What are the different kinds of indexing?
(f) Explain select and project operations.
(g) Discuss characteristics of object oriented database model.
(h) What are the advantages of data mining?

PART B

$(4 \times 15 = 60)$

- II. (a) Explain ER diagram for banking enterprises. (10)
(b) What are strong and weak entity sets? (5)
- OR**
- III. Briefly explain different database models. (15)
- IV. Illustrate with necessary diagram internal and external hashing techniques. (15)
- OR**
- V. Explain different database file organization. Compare heap file and sorted file. (15)
- VI. Consider the following relational schema.
Customer (CID, Name, Sex)
Contact (CID, Address, phone, email)
Policy (CID, Policy No., Policy Type)
Write SQL query for the following:
(i) Select all CID and name having polity type = 'Motor'. (5)
(ii) Select female customer name having email with 'gmail.com'. (5)
(iii) Select name, address and phone for all male customers order by name. (5)
- OR**
- VII. Explain UNF, INF, 2NF, 3NF and BCNF. (15)
- VIII. (a) Describe the steps involved in building data warehouse. (10)
(b) Explain binary locking for concurrency control. (5)
- OR**
- IX. (a) Why does DBMS require concurrency control? (5)
(b) Explain lock based and time based concurrency control protocols. (10)