(Please write your Exam Roll No.) Exam Roll No. .....

END TERM EXAMINATION

SECOND SEMESTER [BBA/(B&I)(TTM)/MOM] MAY-2010

Paper Code: BBA/ (B&I)/(TTM) 108\ MOM 108 **Subject: DBMS**
Paper ID: 18/19/50108

Time : 3 Hours **Maximum Marks : 75**

Note: Question 1 is compulsory. Attempt one question from each unit.

Q1. Short answer type: **(5x3=15)**

(a) What is data redundancy? Explain.
(b) Discuss various types of keys in relational data model.
(c) Distinguish between logical and physical data independence.
(d) What are the rules for decomposition of relations? Explain.
(e) How does the concept of an object in the object oriented model differ from the concept of an entity in the entity relationship model?

Unit-I

Q2. (a) What are the major functions performed by the DBMS? Explain. **(10)**
(b) Explain the role of database administrator. **(5)**

Q3. (a) Explain the three tiered architecture of relational model. **(10)**
(b) Explain the advantages of DBMS over a file system. **(5)**

Unit-II

Q4. (a) Explain the 12 Codd Rules for relational model. **(10)**
(b) What are database views? How the views are created? Explain. **(5)**

Q5. (a) Design an ER diagram for keeping track of the exploits of your favourite cricket team. You should store the matches played, the scores in each match, the players in each match, and individual player statistics for each match. Convert it to tables. **(10)**
(b) Explain various attribute types. **(5)**

Unit-III

Q6. (a) What is normalization? Explain third normal form with a suitable example. **(10)**
(b) What is schema refinement? Explain. **(5)**

Q7. (a) What is functional dependency? Given Relation R (A, B, C, D, E) satisfies that following functional dependencies: **(10)**

$AB \rightarrow C$
$C \rightarrow A$
$BC \rightarrow D$
$ACD \rightarrow B$
$BE \rightarrow C$

Find out the closure of FD's.

(b) What are various types of anomalies that can occur in a relational database? How they can be removed? Explain with an example. **(5)**

Unit-IV

Q8. (a) Explain various SQL DDL commands with proper example. **(8)**
(b) How integrity constraints are enforced in SQL? Explain. **(7)**

Q9. Write down the following queries in SQL. **(15)**

Suppliers (sno, sname, pincode, city)
Parts (pno, pname, color, weight)
Projects (projno, projname, city)
Shipments (sno, pno, projno)

(a) Get supplier name and city for suppliers who supply to any project with a 'red' colored part.
(b) Get part name, color and project name supplied by supplier with sno 's2'.
(c) Get the total number of suppliers who supplied part with pno 'p1'.

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