Nepal College of Information Technology

**Unit Test**

Spring 2012

Program : BE IT Time : 2 hrs

Semester : (IV) FM : 70

Subject : Database Systems PM : 35

* *Candidates are requested to give their answer as far as practicable in their own words.*
* *The figure in the margin indicates the full marks*
* ***Attempt ALL question***

1. Explain the major function of DBMS and DBA. (10)

2. Distinguish between physical and logical Data Independence. (7)

3. Discriminate between the DBMS and File management system. (8)

4. Why relational databases are required describes with its aspects. (8)

5. There are three tables named suppliers, parts and suppliers with the attributes of suppliers\_number, suppliers\_name, Status, City from table suppliers and parts\_number, Part\_number, Color, weight, City from table parts and supplier\_number, part\_number, quantity. Hence, using relation algebra write query the following:

a) Get all supplier\_number and part\_number in which the weight should be less than 17.

b) Get the supplier name who supply and one part tuple.

c) Get the supplier names who supply all the parts. (6×3=18)

Note: Assume necessary primary and foreign key and other if required.

6. Write short notes on (6×3=18)

a) Primary key

b) Join, projection and selection operation

c) Data definition and data manipulation language

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