

Department of Technical Education and Training			000222
NVQ Level 05 Written Examination —December 2012 (Semester I)			
National Diploma in Information & Communication Technology			
Database Systems I	5S1NVQ 001	Three Hours	
Instructions: Answer four (04) questions.			

1. Briefly explain the following:
 - i. DDL and DML (08 Marks)
 - ii. Entity, attributes and relationship (09 Marks)
 - iii. Primary key and Foreign key (08 Marks)

2.
 - i. Write down the characteristics of DBMS. (10 Marks)
 - ii. Explain three schema architecture in brief. (15 Marks)

3. Consider the following database tables.
 Emplist(EmpNo, FName, LName, Address, City, BSalary)

 Write SQL statements for the following:
 - i. Create the above "Emplist" table. (10 Marks)
 - ii. Display all EmpNo, Lname and BSalary where the BSalary is greater than 30,000/= (08 Marks)
 - iii. Remove all employers in Kandy city. (07 Marks)

4. Consider the following information of an organization. The organization wishes to maintain the status about the working hours made by his employees. An employee can work in more than one department; the pct_time field shows the percentage of time that a given employee works in a given department.

 EmpID, EmpName, Age, Salary, DeptID, Pct_time, Budget, ManagerID

 Normalize this to 3NF. (25 Marks)

5. Consider the following information:

- A department employs many employees, but each employee is employed by one department.
- Some employees are not assigned to any department.
- A division operates many departments, but each department is operated by one division.
- An employee may be assigned to many projects, and a project may have many employees assigned to it.
- A project must have at least one employee assigned to it.
- One of the employees manages each department, and each department is managed by only one employee.
- One of the employees runs each division, and each division is run by one employee.

Draw ER Diagram for this system.

(25 M)

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