# LOYOLA COLLEGE (AUTONOMOUS), CHENNAI – 600 034

**B.Sc.** DEGREE EXAMINATION – **STATISTICS**

FIFTH SEMESTER – APRIL 2010

**ST 5403 - DATABASE MANAGEMENT SYSTEMS**

Date & Time: 29/04/2010 / 9:00 - 12:00   Dept. No.                          Max. : 100 Marks

**SECTION A:**                  Answer ALL the questions                  (10 x 2 = 20 Marks)

1. What are the Data Manipulation Language Operators?

2. What are the components of Structured Query Language?

3. What is the purpose of system catalog?

4 Give an example to illustrate the purpose of the NVL function.

5 Explain Private and Public SYNONYM.

6 What is a subquery?

7 What is the purpose of DISTINCT clause.

8 Explain the Data Definition Language

9 How do you create a  base  table with  the  same
   structure of some other existing base table.

10 What are the special operators used in SQL?

**SECTION B:**                  Answer Any FIVE  questions                  (5 x 8 = 40 Marks)

11. Debug the following SQL statement
```
    SQL> CREATE TABLES employees
   (emp_id         NUMBER(4)     NOT NULL,
    emp_name       VARCHR2(25)  NOTNULL,
    designation    VARCHAR2(20),
    salary         NUMBER(11, 2,
    manager_id     NUMBER(4),
    CONSTRAINT emp_id_pk
        PRIMARY (emp_id)),
    CONSTRAINT emp_manager_id_fk
         FOREIGNKEY (manager_id)
            REFERENCE employees (emp_id);
```

12 a)What is the purpose of a sequence and Create a repetitive sequence
   based on the emp_id with an increment by 10 from the employees
   table.

   b) How do you select the average quantity_ordered and the total
   price  of the orders from the order table?

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13 a)Explain how a SQL can be treated as an Application Programming
   Interface

   b)Explain the WHERE , ORDER BY Clause in an SQL Statement.

14 Illustrate the functionalities of the operators BETWEEN, NOT
   BETWEEN, IN, LIKE,SUBSTR()

15 What are the features of the RDBMS system

16 Discuss the functionalities of a Database Administrator

17 Write short note on the Data Control Language

18 Discuss the features of Structured Query Language.


**SECTION C:**                 Answer Any TWO questions          (2 x 20 = 40 Marks)

19 Explain different stages of the ETL process of a data warehouse.

20 Write down the syntax of creating the OLTP structure of a Sales Order
Business Process by stating the related base tables and defining the
integrity constraints

21 a)Create a table called Customers with the following attributes
```
  customer_id       number (4)        primary key
  name              varchar2(25)      not null
  city              varchar2(20)
  sex               char(1)
  age               number(2)
  status            char(1)
  due               number(4)
  sales_rep_id      number(4)      references emp_id
                                      in emp table
```
  b) In the customer table explain the functions of the 'primary
  key','foreign key' and 'references'

  c)Create a view called regular_customers by selecting the attributes
  customer_id,name,city from the table customers.


22 a)Explain the functionality of an ALTER command?
   Create a table called Orders with the following attributes

```
   order_id          number(4)       primary key
   cust_id           number(4)       references customer_id
                                     in customers table
   date_ordered      date            not null
```

   b)Use Alter command to add the following attributes to the Orders
   table date_shipped DATE,sales_rep_id NUMBER(2)

   c)Modify the data format of sales_rep_id NUMBER(6)

   d)Create a foreign key constraint on sales_rep_id that referencing
   the emp_id of the employees table.

   e)Disable the foreign key constraint

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