JARAMOGI OGINGA ODINGA UNIVERSITY OF SCENCE AND TECHNOLOGY

SCHOOL OF INFORMATICS AND INNOVATIVE SYSTEMS

DIPLOMA IN LINUX ENGINEERING

COURSE CODE: ICT2114

COURSE TITLE- INTRODUCTION TO MYSQL DATABASE SYSTEM

EXAMINATIONS 2012/2013

TIME   2HRS

INSTRUCTIONS:

This paper contains five (5) questions. Question ONE is Compulsory and any other TWO questions

Question One 30marks

i.) Define the following terms   12marks
   - a. SQL
   - b. Data Integrity
   - c. Data Manipulation Language
   - d. Data definition Language
   - e. Indexes
   - f. Sub-query.

ii.) Explain four features of a well-normalized database   4marks

iii.) Give **six** programs installed with SQL –Server   6marks

iv.) Explain four features of a well-normalized database   4marks

v.) State and briefly describe any four various versions of SQL   4marks

Question Two 20marks

i.) Give and explain **five** features of SQL Server   10marks

ii.) Draw and explain the SQL Server database architecture   10marks

Question Three 20marks

i.) Differentiate between the **SQL INNER JOIN, LEFT JOIN and RIGHT JOIN 4marks**

ii.) State **four** ways of enforcing data integrity   4marks

iii.) Define the following terms as used in relation to SQL –Server   4marks
   - a. Primary Key
   - b. Secondary Key
   - c. Device Independence
   - d. ODBC

iv.) Constraints are used to implement business rules. Explain the functions of the following constraints in the database   4marks
   - a. UNIQUE constraint
   - b. CHECK constraint

v.) Give and explain <u>**four**</u> data types used in MS-SQL Server   4marks

Question Four 20marks

(i.) What is a stored procedure?   (2 marks)

(ii.) State three reasons of using stored procedures over giving users direct access o the underlying data.   (3 marks)

(iii.) Define the following terms   5marks
   - a. Server roles
   - b. Database roles

(iv.) Outline seven server roles   (7 marks)

(v.) List three kinds of database roles   (3 marks)

Question FIVE 20marks

Give the SQL statements for carrying out the following:

(i.)   Creating database called "Diverse"   (2marks)
(ii.)   Create a table called people with the following fields and data types   4marks

              LastName   varchar

              SecondName   varchar

              Address   varchar

              Age   int

(iii.)   Create an index called "People Index" on the Lastname field on people table. Sort the
       lastname field in descending order.   (2 marks)
(iv.)   Add a column named "City" on the People table.   (3 marks)
(v.)   Give examples of **two** aggregate functions and three scalar functions in SQL. (5 marks).
(vi.)   Explain what the following keywords do.
           a.   TRUNCATE TABLE
           b.   DROP INDEX   (4 marks)