NATIONAL OPEN UNIVERSITY OF NIGERIA
14/16, Ahmadu Bello Way, Victoria Island, Lagos

SCHOOL OF SCIENCE AND TECHNOLOGY
October, 2013 Examination

Course Code: CIT 843 **Course Unit: 2**

Course Title: DATABASE MANAGEMENT SYSTEMS

Instruction: **Answer Any Four Questions**

Time Allowed: **2 ½ Hours**

1. Explain the following terms in relation to data objects:
   i. Primary Key
   ii. Candidate Key
   iii. Composite Key
   iv. Artificial Key
   v. Foreign Key 17 ½ marks

2a. Describe the three levels of data abstraction. 9 marks

b. Explain what is meant by data independence and outline the two types. 6 marks

c. What is a view? 2 ½ marks

3a. Outline twoproperties of each of the components of a client-server database system architecture. 12 marks

b. **List three** advantages of client/server 5 ½ marks

4a. Explain what is meant by the term database architecture. 5 ½ marks

b. Explain the following database terms
   i. One-tier Database Architecture
   ii. Two-tier Database Architecture
   iii. Three-tier Database Architecture 12 marks

5a. List the basic steps to follow in designing a database application. 10 marks

b. State how to ensure database security at design level. 7 ½ marks

6. Consider the following “Orders” table:

OrderId	OrderDate	Price	Customer name
11	2008/11/12	1000	Henry Bank
21	2008/10/23	1600	NiyiAlade
31	2008/09/02	700	Henry Bank
41	2008/09/03	300	Henry Bank
51	2008/08/30	2000	James Adeola
61	2008/10/04	100	NiyiAlade

Write the SQL statement that:
   i) Find the average value of the Price column.
   ii) Find the customers that have order Price value higher than the average Price value.

iii) Count the number of orders from "Customer NiyiAlade"
iv) Find the number of records in the order table.
v) Count the number of unique customers in the "Orders" table.
vi) Find the first value of the "Price" column. **3 marks each except (i) with 2 ½ marks**