



NATIONAL OPEN UNIVERSITY OF NIGERIA
14/16 AHMADU BELLO WAY, VICTORIA ISLAND, LAGOS
SCHOOL OF SCIENCE AND TECHNOLOGY
MARCH/APRIL 2014 EXAMINATION

COURSE CODE: CIT 843

COURSE TITLE: DATABASE MANAGEMENT SYSTEMS

TIME ALLOWED: 2 ½ HOURS

INSTRUCTION: ANSWER ANY FOUR QUESTIONS

- 1a. Explain what is meant by database design. 4 marks
- b. List five steps of the database design. 7 ½ marks
- c. Outline two components of data model. 6 marks

2. Consider the following “Orders” table:

OrderId	OrderDate	Price	Customername
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 SQL statement to:

- 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 orders table.

3 Let us assume that the following staff table (STAFF) has the following records:

Name	Room	Department	Designation
Ajayi	101	CIT	Professor
Chidi	201	ECO	Lecturer I
Musa	202	ECO	Professor
Bello	301	CIT	Senior Lecturer
Ajayi	220	ACC	Senior Lecturer

Use appropriate selection operators and tabulate the result to:

- a. Select only those Staff in the CIT department 4 marks
- b. Select only those Staff with last name Ajayi who are professors 4 ½ marks
- c. Select only those Staff who are either Professors or in the Economics department 4 ½ marks
- d. Select only those Employees who are not in the CIT department or Lecturer I 4 ½ marks

- 4a. 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

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. Explain the following Database recovery terms:

i. Before Image

ii. After image

iii. Rollback

iv. Roll forward

v. Checkpoints