NATIONAL OPEN UNIVERSITY OF NIGERIA
14-16 AHMADU BELLO WAY, VICTORIA ISLAND LAGOS
SEPTEMBER/OCTOBER 2015 EXAMINATION

SCHOOL OF SCIENCE AND TECHNOLOGY

Course Code: **CIT 843**

Course Title: **DATABASE MANAGEMENTSYSTEMS**

Instruction: **Answer Any Four Questions**

Time Allowed: 2 Hours **Course Unit: 2**

1a.	Define database.	3 marks
b.	State the components of a Database System (DBS).	4 ½ marks
c.	Give a brief outline describing the database development process.	10 marks
2a.	Briefly explain what is a data model.	4 ½ marks
b.	What is database design?	4 marks
c.	Enumerate six of the characteristics of a good Data Model.	9 marks
3a.	In the context of E-R model, define the following terms:	
	i) Relationship ii) Connectivity iii) Cardinality	6 marks
b.	Outline the three basic types of connectivity for relations.	9 marks

c. The data model is one part of the conceptual design process. The other is the function model. The data model focuses on what data should be stored in the database while thefunction model deals with how the data is processed. In the context of the relational database, what are the two models used for? 2 ½ marks

4a. List five common features of database management systems. 5 marks

b. Describe the four main parts of a Database Management System (DBMS).

10 marks

c. What is Hierarchical Database Management System? 2 ½ marks

5. Write SQL statements for the following:

i. To insert a tuple for Smith who has $1200 in account A-9372 at the SFU branch.

ii. To increase all account balances by 5 percent.

iii. To make two different rates of interest payment, depending on balance amoun

iv. Delete all loans with loan numbers between 1300 and 1500.

v. Delete all accounts at branches located in Surrey. 17 ½ marks

6a. What do you understand by normalization? 2 marks

b. Explain the following terms 2 marks

i. Functional dependency

ii. First, Second, and Third Normal Forms 6 marks

c. Outline the process for transforming a 1NF table to 2NF. 7 ½ marks