



**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 844**

**COURSE TITLE: Advanced Database Management System**

**TIME ALLOWED: 2Hours**

**INSTRUCTION: Answer 4 Questions**

1. (a) What is a Database? (6 marks)  
  
(b) List and explain three (3) advantages of database approach (9 marks)  
  
(c) List and explain five (5) security measures used to protect database (10 marks)
2. (a) Write short note on the following:
  - (i) Data Integrity
  - (ii) Data Security
  - (iii) Data Validation( 5 marks each)  
  
(b) List five failures that could make the DBMS require recovery (10 marks)
3. (a) Define the following:
  - (i) Domain
  - (ii) Attribute
  - (iii) N-tuple
  - (iv) Relation Schema
  - (v) Relation State(3 marks each)  
  
(b) List five (5) techniques of a good encryption (10 marks)
4. (a) What is an Open Source? (7 marks)  
  
(b) List and explain three (3) advantages of an Open Source Software (12 marks)  
  
(c) Distinguish between Centralized and Distributed database System (6 marks)
5. (a) What is Relational Database? (7 marks)  
  
(b) List and explain three (3) characteristics of Relations (12 marks)  
  
(c) Mention three (3) basic update operations on relations (6 marks)

6. (a) What is SQL? (5 marks)
- (b) List any five (5) operators and their description in SQL (10 marks)
- (c) Outline five advantages of OODBMS