COURSE CODE: CIT844
COURSE TITLE: Advanced Database Management System (2 Credits)
TIME ALLOWED: 2 Hours
INSTRUCTION: Answer 4 Questions

1a. What is a Distributed Database?
(7 marks)
1b. List and explain any three (3) security measures used to protect database.   (9 marks)
1c. List and explain three (3) advantages of data distribution
(9 marks)

2a. What is an Open Source?
(7 marks)
2b. Explain three advantages of an Open Source Software.
(9 marks)
2d. Discuss any three network topology
(9 marks)

3a. What is a database catalogue system?
(4 marks)

3b. Write short note on the following:

   (i)   Deadlock
   (ii)   Data recovery
   (iii)   Encryption
            (4 marks each)

3c. Explain three techniques of a good encryption.
(9 marks)

4a. What is a Transaction?
(6 marks)
4b.Explain two (2) purposes of transactions in database environment
(4marks)
4c. Mention and explain three parts of a transaction log
(9 marks)

4c.List and explain three (3) levels of security measures that must be taken in order to protect the database
(6 marks)

5a. What is SQL?
(5 marks)
5b. List any five (5) operators and their description in SQL.
(10 marks)
5c. Discuss five (5) failures that could make the DBMS require recovery
(10 marks)

6a. What is Relational Database?
(8 marks)
6b. Outline three (3) differences between an object and a class in the object-oriented data model?
                        (9 marks)
6d. Explain four (4) advantages of OODBMS.
(8 marks)