



**NATIONAL OPEN UNIVERSITY OF NIGERIA
14-16 AHMADU BELLO WAY, VICTORIA ISLAND, LAGOS
SCHOOL OF SCIENCE AND TECHNOLOGY
JANUARY/FEBRUARY 2013 EXAMINATION**

CIT 844 - Advanced Database Management System (2 Credits)

Total mark is 70 and each question carries 17¹/₂ marks

Answer 4 Questions in 2¹/₂ Hours.

1a. What is a Relational Database? (5 marks)

1b Give the full meaning of the following acronyms:

- (i) CLD
- (ii) OQL.
- (ii) CIS
- (iv) OMG
- (v) LA
- (vi) RDBMS
- (vii) ACID
- (viii) ODMG (1 marks each)

1c. List and explain three (3) levels of security measures that must be taken in order to protect the database (4.5 marks)

2a. What is SQL? (3 marks)

2b. List any five (5) operators and their description in SQL. (5 marks)

2c. List five failures that could make the DBMS require recovery (5 marks)

2d. Mention any three network topology (4.5 marks)

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

3b. Write short note on the following:

- (i) Dead lock
- (ii) Data recovery
- (iii) Encryption (3 marks each)

3c. List three techniques of a good encryption. (4.5 marks)

4a. What is a Transaction? (3 marks)

4b. Explain two (2) purposes of transactions in database environment (4 marks)

4c. Mention and explain three parts of a transaction log (6 marks)

4d. Mention three (3) responsibilities of the Scheduler for implementing a particular strategy for concurrency control. (4.5 marks)

5a. What is a Distributed Database? (3 marks)

5b. List and explain any three (3) security measures used to protect database. (4.5 marks)

5c. List three (3) advantages and (2) disadvantages of data distribution . (10 marks)

6a What is the difference between an object and a class in the object-oriented data model? (5 marks)

6b. List and explain three advantages of distributed database. (4.5 marks)

6c. What are the advantages and disadvantages of OODBMS? . (8 marks)

7a. What is data warehouse? (3 marks)

7b. Mention and explain three characteristics of Data Warehouse (6 marks)

7c. List three advantages of Open Source software. (4.5 marks)

7d. Mention two different goals of XML and HTML (4 marks)

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