



**NATIONAL OPEN UNIVERSITY OF NIGERIA  
SCHOOL OF SCIENCE & TECHNOLOGY**

**Course Code:** CIT 427  
3hrs

**Time Allowed:**

**Course Title:** Database Systems and Management  
**Unit:** 3

**Course Credit**

**Instruction:** Answer any **five (5)** questions.

**QUESTIONS**

1a. Based on your knowledge of database management systems, explain the concept

object based logical models.

(6 marks)

1b. Give at least 3 examples of the object based logical models.

(6 marks)

1c. How are attributes represented in Entity-Relationship diagrams?

(2 marks)

**[Total = 14  
marks]**

2a. Write short notes on the following:

i. Paper data storage

(2 marks)

ii. Foreign keys

(2 marks)

iii. Parameter entities

(4 marks)

2b. Give any 2 disadvantages of Web Services

(6 marks)

**[Total = 14  
marks]**

3a. State at least 4 rules guiding the execution of domain constraints.

(8 marks)

3b. Write down the main component of the following:

iv. Foreign key

(2 marks)

v. Primary key

(2 marks)

vi. Unique key

(2 marks)

**[Total = 14  
marks]**

4a. Give a concise description of 'Offline Storage' within the context of database management.

(8 marks)

4b. Write down the full meaning of XML.

(2

marks)

4c. What is the significance of the data query language?

(4 marks)

**[Total = 14  
marks]**

5a. Based on your knowledge of database management systems, explain the concept object based logical models.

(2 marks)

5b. Database Management Systems consist of 4 major components. List and describe these components.

(12 marks)

5c. What is the significance of the XML

(4

marks)

**[Total = 14  
marks]**

- 6a. Based on the W3C recommendation, the Extensible Markup Language sets out the number of goals. State any 4 of these goals.  
(8 marks)
- 6b. Specify the 6 types of markup that can occur in an XML.  
(6 marks)

**[Total = 14  
marks]**

- 7a. Write down the symbol for accomplishing the following tasks in XML:
- i. Producing a single quote character
  - ii. Producing the right angle bracket
  - iii. Producing a double quote
  - iv. Producing a left angle bracket
- (1 mark each,  
Total=4 marks)
- 7b. Give a concise description of the Magneto-optical disc storage.  
(6 marks)
- 7c. State the main difference between Line-sequential files and Sequential files.  
(4 marks)

**[Total = 14  
marks]**