

**UGANDA MARTYRS UNIVERSITY  
FACULTY OF BUSINESS ADMINISTRATION AND  
MANAGEMENT  
SEMESTER ONE 2018/19 FINAL EXAMINATION**

**BAM 2 Nkozi & Lubaga Day**

**CSC 2103: Information Systems & Databases**

**DATE: Thursday, 6<sup>th</sup> December 2018**

**DURATION: Three (3) Hours**

**TIME ALLOWED: 02:00pm – 05:00pm**

**Instructions to Candidates:**

Read the following before answering the examination questions.

1. Do not write anything on this question paper
2. Write neatly and show all workings clearly
3. Start every question on a new page
4. Clearly state the question number and sections attempted
5. **Section A is compulsory.** Attempt any **two (2) questions** from Section B

### **SECTION A (COMPULSORY) 60 Marks**

a) Explain the following terms in line with database security with examples.

i) Authorization

ii) Authentication

iii) Data Encryption

iv) Access level

v) Data backup and recovery

**(@ 2 marks)**

b) Explain the different types of back up.

**(6 marks)**

c) With examples explain why organization are no longer embracing the file based system.

**(9 marks)**

d) With examples explain the following.

i) Alternate key

ii) Primary key

iii) Attribute

iv) Tuple

v) Super Key

**(2 marks@)**

e) Use the table below to answer the questions

Employees

FName	Emp. No	DOB	NSSF No	LName
Sarah	S004	11/3/2000	N001	Namatovu
Ronnie Caro	S005	13/6/1999	N004	Okello
David	S003	17/7/1997	N0006	Okiru
Harriet	S004	20/9/1995	N009	Akello

i) What is the cardinality and degree of the table?

**(2 marks)**

ii) Write an SQL statement for creating the above table.

**(5 marks)**

iii) Explain the properties that have been violated in the table.

**(4 marks)**

iv) List down the data types for the attributes in the above table.

**(4 marks)**



- v) Write an SQL statement to change Harriet's Emp No to S005 (3 marks)
- vi) Write the SQL statement for deleting the above table. (2 marks)

**SECTION B (40 marks) - Answer any two questions**

**Questions Two**

- a) Explain the terms below as applied to databases
- i) Domain
  - ii) Views
  - iii) Computerized Information system
  - iv) File based system
  - v) Traditional filing system (@ 2 marks)
- b) Companies have improved due to the use of database management systems. Give the advantages associated with database management systems. (10 marks)

**Question Three**

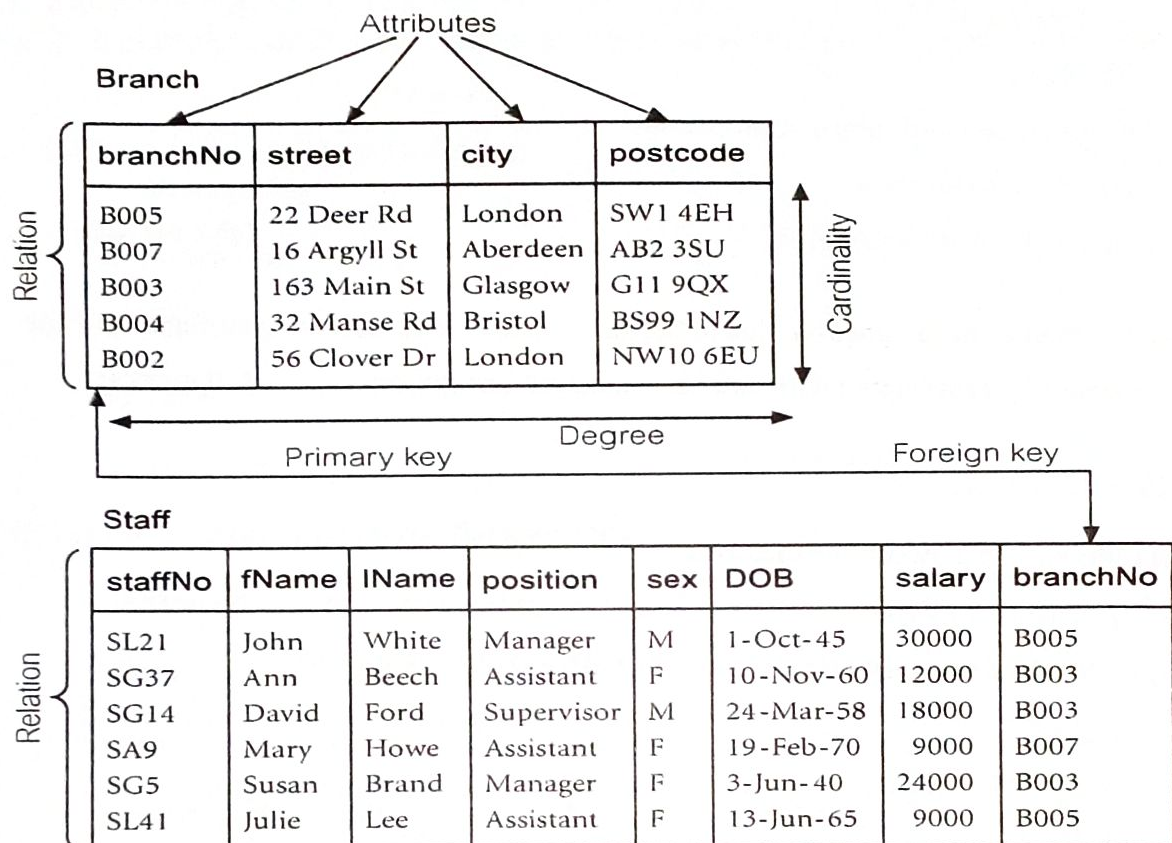
- a) Differentiate between the following
- i) Data Definition Language and Data Manipulation Language (2 marks)
- b) With examples explain the purpose the following SQL statements.
- i) Insert
  - ii) Update
  - iii) Delete
  - iv) Select
  - v) Alter
  - vi) Drop (@ 3marks).

#### Question Four

- a) Explain 10 features that banks in Uganda would consider when purchasing a DBMS (10 marks)
- a) Explain 10 reasons why companies are failing to use database management systems in Uganda today. (10 marks)

#### Question Five

Use the tables below to answer the questions.



- (a) Write the SQL statements that leads to formation the above relations and describe the relationship that exists between the two relations. (8marks)
- (b) Write an SQL statement that will extract only staff who are managers (3 marks)
- (c) Write a statement that will change John's branchNo to B007. (3marks)
- (d) Write the SQL statement that will return only staff that are male and group them by fName from the staff relations. (3 marks)
- (e) Write a statement to remove the column Lname from the staff table. (3 marks)