CHUKA   **UNIVERSITY**

UNIVERSITY EXAMINATIONS

EXAMINATION FOR THE AWARD OF DEGREE OF BACHELOR OF SCIENCE IN INFORMATION SCIENCE

BSIS 456: DATABASE CONSTRUCTION AND MANAGEMENT

STREAMS: **TIME: 2 HOURS**

DAY/DATE: TUESDAY 21/09/2021   **2.30 P.M. – 4.30 P.M.**

INSTRUCTIONS:
- **This examination paper has FIVE (5) questions**
- **Candidates are required to attempt QUESTION ONE and ANY OTHER TWO questions.**
- **Do not write on the question paper**

Question one (30 marks)

a) Describe two commands applicable in the Structured Query Lanhuage (SQL) (10 marks)

b) "Success of a library database is dependent on security measures put in place". Discuss

(20 marks)

Question two (20 marks)

a) A database schema provides a skeleton structure and the logical view of entire database. Illustrate (10 marks)

b) Explain FIVE objectives of a secure database. (10 marks)

Question three (20 marks)

a) Describe FIVE aggregate functions of Structured Query Language (SQL) (10 marks)

b) Normalization is known to eradicate data redundancy in a database. Demonstrate.

(10 marks)

Question four (20 marks)

a) Describe the role of a database in a library. (10 marks)

b) Distinguish between database schema and data instance. (10 marks)

Question five (20 marks)

a) A library database is prone to numerous security threats. Analyze. (10 marks)

b) Explain the meaning of the following terms as applied in database management.

(10 marks)

   i. Database management system

   ii. Degree

   iii. Composite key

   iv. Cardinality

   v. Cartesian product

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