

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 Language (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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