CHUKA   **UNIVERSITY**

UNIVERSITY EXAMINATIONS

RESIT/SPECIAL EXAMINATION

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

BSIS 456: DATABASE CONSTRUCTION AND MANAGEMENT

STREAMS: BSIS   **TIME: 2 HOURS**

DAY/DATE: TUESDAY 02/11/2021   **11.30 A.M – 1.30 P.M.**

INSTRUCTIONS:

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

Question one (30 marks)

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

    (b) Explain FIVE functions of a database system in an academic library.   (10 marks)

    (c) Describe FIVE best practices to adhere to when creating a relational model.   (10 marks)

Question two (20 marks)

2.   (a) Illustrate the role of database administrator in an information centre.   (10 marks)

     (b) Explain FIVE feature of a secure public library database system.   (10 marks)

Question three (20 marks)

3. (a) Analyze FIVE elements of a library database system.   (10 marks)

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

Question four (20 marks)

4. (a) Explain FIVE measures to control access in a library electronic database system. (10 marks)

   (b) Describe FIVE merits of a database system in an information centre.　　　　(10 marks)

Question five (20 marks)

5. (a) Explain FIVE merits of an entity relationship model.　　　　　　　　(10 marks)

   (b) Explain the meaning of the following terms.　　　　　　　　　　　(10 marks)

   　　　(i) Database management system

   　　　(ii) Field

   　　　(iii) Record

   　　　(iv) Data element

   　　　(v) Schema