MASENO UNIVERSITY

UNIVERSITY EXAMINATIONS 2013/2014

SECOND YEAR FIRST SEMESTER EXAMINATIONS FOR BACHELOR OF SCIENCE IN COMPUTER SCIENCE AND BACHELOR OF SCIENCE IN INFORMATION TECHNOLOGY

(MAIN CAMPUS)

CIT 202: INTRODUCTION TO DATABASE

INSTRUCTIONS:

- Answer ALL questions in section A. They attract a total of 30 marks.
- Answer any TWO questions in section B. Each attracts a total of 20 marks.

SECTION A

Q1 (a)

    Identify and briefly explain any five elements of a file/Database.   **5 marks**

  (b)   State and briefly explain any three file organizations.   **6 marks**

(c) Differentiate giving examples between a data mart and a data warehouse

         5marks.

(d) Discuss the importance of Relational Calculus in database management.**5marks**

(e)   Give the outcomes of the following operations on the table below.

R

REG NUMBER	NAME OF STUDENT	MARKS IN CIT 202
BA/004/2013	TIMOTH O O	80
EDS/004/2013	JOHN	70
BA/006/2013	MARTIN	NULL

  (i)   Restrict (name of student) (R)

  (ii)   Project (marks in cit 202)_ (R)   **4 marks**

  (iii)   Distinguish between the three JOINS as use in relational calculus.**5marks**

SECTION B:ANSWER ANY TWO QUESTIONS IN THIS SECTION(20MARKS EACH)

Q2.

  (a)   Discuss three advantages and two disadvantages of and direct file system

           10 marks

  (b)

    (i)   Normalization is a process. Explain   **2marks**

    (ii)   Explain the importance of the activities undertaken in the three

         normal forms in the normalization process.   **8marks**

Q3   (a)   Discuss the importance of relational databases compared to hierarchical and

        network databases   **10 marks.**

    (b)   What is entity integrity? Discuss the way you can maintain referential

        integrity in a database.   **10 marks**

Q4   Discuss how transaction management and concurrency control help in

        ensuring that a reliable database is maintained   **10marks**

Q5   (a) Discuss the rules that define a relationship.   **10 marks**

    (b)   Identify and explain any five notations used in data modeling.   **10marks**

E N D