GWANDA STATE UNIVERSITY

FACULTY OF ENGINEERING AND ENVIRONMENT

DEPARTMENT OF GEOMATICS AND SURVEYING

INTRODUCTION TO DATABASE MANAGEMENT METHODS

EGS 3205

Carry Examination Paper

August 2021

This examination paper consists of 3 pages

Time Allowed: **3 hours**

Total Marks:100

Examiner's Name: Mr. T. Mathe

<u>INSTRUCTIONS</u>

Each question has 20 marks
Answer ALL **questions in chronological order**

QUESTION 1   **20**

a) What is a schema of a relational data model?   [5]

b) **Lis**t and **describe** the relational data model schemas   [15]

QUESTION 2   **20**

Discuss on hierarchical database systems approach vs DBMS approach of database design. In your description indicate which approach is preferred in database design and give reasons for your answer.

QUESTION 3   **20**

a) What is the goal of relational schema design?   [5]

b) Give a detailed description of the Boyce-Codd Normal Form (BCNF). Give examples where necessary   [10]

c) How is the BCNF different to 3rd Normal Form?   [5]

QUESTION 4   **20**

a) List the major activities involved in database design   [10]

b) From (a), **choose two (2)** activities and in detail the processes involved   [8]

QUESTION 5   **20**

Describe **in detail** the conceptual modelling of the database.

END OF EXAMINATION