



"Investing in Africa's Future"

COLLEGE OF BUSINESS PEACE LEADERSHIP AND GOVERNANCE

DATA MINING AND WAREHOUSING: CIS 406

END OF FIRST SEMESTER EXAMINATIONS

MAY 2018

SABBATTICAL SCHOLAR: Dr Farai Choga

DURATION: 3 HOURS

INSTRUCTIONS

Answer **ALL** the questions in **Section A** and any **Three** questions from **Section B** and each question has **20** marks. Total possible mark is **100**.

Start **each** question on a new page on your answer sheet.

The marks allocated to **each** question are shown at the end of the section.

SECTION A (40 marks)

Answer *all* questions in this Section

Question 1 (20 Marks)

- a) Define a data warehouse (5marks)
- b) Illustrate how data warehouse is a decision support tool (15 marks)

Question 2 (20 Marks)

- a) Define the process of data mining (5 marks)
- b) Explain three differences between online analytical processing (OLAP) and data mining. (15 marks)

SECTION B (60 Marks)

Answer any three questions

Question 1 (20 Marks)

Inmon (1996) presented four (4) major features of a data warehouse. Explain the features. (20 marks)

Question 2 (20 Marks)

Operational database systems are different from data warehouses. Using examples where possible, explain any four (4) differences. (20 marks)

Question 3 (20 Marks)

Discuss any four (4) reasons why organizations should have a separate data warehouse. (20 marks)

Question 4 (20 Marks)

Explain the differences between the following terms:

- a) Data mart and enterprise data warehouse (5 marks)
- b) Star schema and snowflake schema (5 marks)
- c) Roll-up and drill-down (10 marks)

Question 5 (20 Marks)

A spiral design model is recommended for data warehouse design. Discuss this statement.
(20 marks)

Question 6 (20 Marks)

Define the following data mining processes:

- a) Association (5 marks)
- b) Classification (5 marks)
- c) Clustering (5 marks)
- d) Characterisation (5 marks)

Question 7 (20 Marks)

Explain any four (4) major issues in data mining. (20 marks)