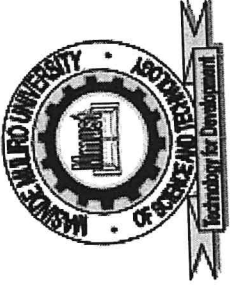


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**MASINDE MULIRO UNIVERSITY OF SCIENCE
AND TECHNOLOGY**

END OF SEMESTER EXAMINATIONS

2021/2022 ACADEMIC YEAR

THIRD YEAR SECOND SEMESTER EXAMINATIONS

FOR THE DEGREE

OF

BACHELOR OF SCIENCE IN INFORMATION TECHNOLOGY

COURSE CODE: BIT 322

COURSE TITLE: DATA WAREHOUSING AND MINING

DATE: 21ST APRIL, 2022 **TIME: 8:00-10:00AM**

INSTRUCTIONS TO CANDIDATES

Answer ALL questions in section A and ANY TWO questions in section B

DURATION: 2Hours

MMUST observes ZERO tolerance to examination cheating

Please Turn Over.

QUESTION ONE: COMPULSORY 30 MARKS

- a) Outline the similarities and the differences between data warehousing and data mining
6 Mks
- b) Justify the need of a Data mining in today's business venture
4 Mks
- c) Briefly explain the key properties of data mining
3 Mks
- d) Why is data integration required in a data warehouse, more so than in an operational application?
3 Mks
- e) Outline the three that are done at the data transformation stage
5 Mks
- f) Comment on the scope of data mining
3 Mks
- g) Compare the usage and value of information in the data warehouse with those in operational systems
4 Mks
- h) Why is it a good practice to load the dimension tables before the fact tables?
2 Mks

QUESTION TWO: 20 MARKS

- a) Define the term OLAP and explain the three basic OLAP analytical operations
8 mks
- b) OLAP is classified based on the underlying storage layouts, explain
6 Mks
- c) Explain using a diagram, a three-tier data warehouse architecture
6 mks

QUESTION THREE: 20 MARKS

- a) A data warehouse is subject-oriented. What would be the major critical business subjects for the following companies?
2 Mks
 - i. An international manufacturing company
2 Mks
 - ii. A local community bank
2 Mks
 - iii. A domestic hotel chain
2 Mks
 - iv. An international airline company
2 Mks
- b) Discuss the various data modelling schemas used in data warehousing with example for each of them
12mks

QUESTION FOUR: 20 MARKS

- a) Discuss FOUR data mining techniques using an illustration
- b) Explain the steps in KDD with suitable block diagram

12 Mks

8 Mks

QUESTION FIVE: 20 MARKS

- a) Explain any FOUR the major issues in data mining
- b) Data mining involves SIX common classes of tasks. Explain

8 Mks

12 Mks

END