

UGANDA MARTYRS UNIVERSITY
UNIVERSITY EXAMINATIONS
FACULTY OF SCIENCE
DEPARTMENT OF COMPUTER SCIENCE
END OF SEMESTER FINAL ASSESSMENT
SEMESTER I, 2019/20
THIRD YEAR EXAMINATION FOR BACHELOR OF SCIENCE INFORMATION
TECHNOLOGY

COURSE NAME: Data Warehousing and Business Intelligence

COURSE CODE: CSC3101

Duration: 3 HR

Date: 10th January, 2020

TIME: 4:00PM-7:00PM

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- *Carefully read through ALL the questions before attempting*
 - **ANSWER FOUR (4) Questions** *(All questions carry equal marks)*
 - *No names should be written anywhere on the examination book.*
 - *Ensure that your **Reg number** is indicated on all pages of the examination answer booklet.*
 - *Ensure your work is **clear and readable**. Untidy work shall be penalized*
 - *Any type of examination Malpractice will lead to automatic disqualification*
 - *Do not write anything on the questions paper.*
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Question One

- a) What do you understand by the term Data Warehouse? [2 Marks]
- b) State any four difference between data ware house and database?[4 marks]
- c) What do you think are the reasons why business organizations should adapt usage of data warehouses than databases? [16 marks]
- d) State three best practices for any one interested in data warehouses would consider in their actual implementation. [3 marks]

Question Two

- a) What do you understand by the term data? Give the different forms of data [8 marks]
- b) Data processing is one of the functions of data warehouses in any business organization in form of OLTP and OLAP
 - i) Write in full OLTP and OLAP. [2 marks]
 - ii) State when each of the terms in bi) above is carried out. [3 marks]
 - iii) State six difference between the ci) above. [6 marks]
- c) Explain three characteristics that data ware houses experience. [6 marks]

Question Three

- a) What is an operational data store as applied in data warehousing? [2 marks]
- b) Write short notes on the following aspects
 - i) Database
 - ii) ETL Tools
 - iii) Meta Data
 - iv) Query Tools and
 - v) Data Marts[@ 3 marks]
- c) Explain four domain business areas where bii) and bv) are commonly applied. [8 marks]

Question Four

- a) What do you understand by the term tier architecture? [2 marks]
- b) Explain the tier architecture of a data warehouse that may deployed in any business organization. [9 marks]
- c) State the meaning of the term data mart. [2 marks]
- d) Illustrate the following concepts with the help of a data cube.
 - i) Dicing
 - ii) Slicing
 - iii) Role up
 - iv) Pivoting[@3 marks]

Question Five

- a) State the distinction between the terms modeling and model? [4 marks]
- b) Explain any three type of multidimensional models based on the Online Analytical Processing approach. [9 marks]
- c) Choose any of the two in b) above and state three of their advantages and differences. [6 marks]

- d) Basing on your own business experience, sketch a conceptual model of a named business and objects including their respective attributes that represents the behaviour of the business objectives. [6 marks]

Question Six

- a) With the help of two example, illustrate the meaning of a data schema. [5 marks]
b) Schemas explain the different data mining processes. Identify and explain four of these processes or tasks. [12 marks]
c) State four different forms of data normalization. [8 marks]

End

Merry x-mass and happy new year