

**Uganda Martyrs University**  
**UNIVERSITY EXAMINATIONS**

**FACULTY OF SCIENCE**  
**DEPARTMENT OF COMPUTER SCIENCE & INFORMATION**  
**SYSTEMS**

**END OF SEMESTER FINAL ASSESMENT**

**SEMESTER ONE, 2023/2024**

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<b>COURSE</b>	<b>:</b>	<b>BACHELOR OF SCIENCE IN INFORMATION TECHNOLOGY</b>
<b>CLASS/YEAR</b>	<b>:</b>	<b>THREE</b>
<b>EXAM</b>	<b>:</b>	<b>DATE WAREHOUSING AND BUSINESS INTELLIGENCE</b>
<b>CODE</b>	<b>:</b>	<b>CSC 3101</b>
<b>SEMESTER</b>	<b>:</b>	<b>ONE</b>
<b>DATE</b>	<b>:</b>	<b>18 DEC 2023</b>
<b>TIME</b>	<b>:</b>	<b>9:00-12:00 Noon</b>
<b>DURATION</b>	<b>:</b>	<b>3 HOURS</b>

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**Instructions**

1. Attempt any **FIVE** Questions, each question carries 20 marks.
  2. Time Allowed is 3 Hours Only.
  3. Attempt each question on a fresh page.
  4. Write well and space your work widely.
  5. Write your course and registration number on all your answer sheets.
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6. *All answers should be written on the answer booklet*
  7. *All University Examination rules apply.*

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**Attempt ANY FIVE questions**

**QUESTION ONE**

- (a) Define a Data Warehouse explaining each of the key terms used in that definition.
- (b) Differentiate between Data Warehousing and Business Intelligence.

**QUESTION TWO**

- (a) **Cross-Industry Standard Process for Data Mining—CRISP-DM** serves as a nonproprietary standard methodology for data mining. Among the steps in this methodology is "model Building". Explain this step clearly.
- (b) A variety of methods are available for performing data mining studies, including classification, regression, clustering, and association. Write short notes about Classification and Clustering.

**QUESTION THREE**

- (a) Roll up and drill down are two common concepts in Business Intelligence. With examples, explain those two terms clearly.
- (b) Differentiate between OLAP and OLTP systems.

**QUESTION FOUR**

- (a) Web Mining is divided into Web content mining, Web structure mining and web usage mining. Write short notes about each of the above.
- (b) In an e-commerce context, what are the potential applications of web usage mining?

#### **QUESTION FIVE**

- (a) Explain the term Market Basket Analysis.
- (b) What are the advantages of Market Basket Analysis in the context of a big Supermarket in Masaka City.

#### **QUESTION SIX**

- (a) In a Social media application like Tik Tok or WhatsApp, isolate functionalities in any of those applications that are based on topics you have studied in Data Warehousing and Business Intelligence.
- (b) With examples, explain the following terms: Fact table, Dimension table and Measures.

#### **QUESTION SEVEN**

- (a) Extract Transform and Load (ETL) is an important process in Data Warehousing. Explain the Transform component of ETL.
- (b) Using your own creativity, draw a well labelled diagram to depict/show the ETL process in a real Data Warehousing scenario.

**END**