

**MOUNTAINS OF THE MOON UNIVERSITY**

**FACULTY OF SCIENCE, TECHNOLOGY AND INNOVATION**

**BACHELOR OF SCIENCE IN COMPUTER SCIENCE**

**SEMESTER ONE EXAMINATIONS – 2022 / 2023**

DEPARTMENT : COMPUTER SCIENCE

PAPER CODE : BCS

PAPER NAME : BUSINESS INTELLIGENCE AND

DATA WAREHOUSING.

DURATION : 1 Hours: 30 Minutes

YEAR OF STUDY : THREE

DATE OF EXAM : 19th/March/2023

TIME OF EXAM : 11:00 AM – 12:00 PM

EXAMINER : Samuel OCEN.

**INSTRUCTION (S) :**

* Answer any ***all the*** questions.
* Begin each question you are answering on a fresh page.
* Read the additional instructions provided on the answer booklet.

***Attempt all Questions.***

***(Select the most appropriate answer from the choices given.)***

1. A Data warehouse/ Business Intelligence (DW/BI) implementation effort needs to demonstrate strength across all aspects of the project for success. It has been proven that Kimball’s lifecycle model ensures that the project pieces are brought together in the right order and at the right time.
   1. Draw Kimball’s Lifecycle model (05 Marks)
   2. Briefly describe Kimball’s Lifecycle Model. (10 Marks)
2. The dataset on the desktop is of students’ data captured on December 30th, 2020.

Given that students are fed on a controlled diet and that the boys’ weight increases by 1% per month and that of girls increases by 1.2% per month.

1. Process the data in Python notebook for the end of March 2023. (05 Marks)
2. Extract columns of Height and Weight (05 Marks)
3. Convert the columns from Inches to cm and from Pounds to Kgs using the conversion scale of 1:2.54 and 1: 0.45359237 respectively. (02 Marks)
4. Selecting the first 200 males, develop a linear regression prediction algorithm that will predict weight given that the height is 85.75cm. (03 Marks)
5. Graphically represent your results and extract the graph and make a latex report explaining the results you’ve generated. (10 Marks)

**NB: *Answers to Question 2 must be done in a folder on the desktop. Submit the whole files in the folder.***

**END**