



**FINAL EXAMINATION**  
**NOVEMBER 2022**

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<b>COURSE TITLE</b>	<b>MULTIDIMENSIONAL DATA ANALYSIS AND DATA VISUALISATION</b>
<b>COURSE CODE</b>	<b>RBAN3343</b>
<b>DATE/DAY</b>	<b>11 FEBRUARY 2023 / SATURDAY</b>
<b>TIME/DURATION</b>	<b>01:00 PM - 03:00 PM / 02 Hour(s) 00 Minute(s)</b>

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**INSTRUCTIONS TO CANDIDATES :**

1. Please read the instruction under each section carefully.
2. Candidates are reminded not to bring into examination hall/room any form of written materials or electronic gadget except for stationery that is permitted by the Invigilator.
3. Students who are caught breaching the Examination Rules and Regulation will be charged with an academic dishonesty and if found guilty of the offence, the maximum penalty is expulsion from the University.

(This Question Paper consists of 3 Printed Pages including front page)

**\*\*\*DO NOT OPEN THE QUESTION PAPER UNTIL YOU ARE TOLD TO DO SO\*\*\***

This question paper consists of **FOUR (4)** questions. Answer **ALL** questions.

[100 MARKS]

**Question 1**

(25 Marks)

Below is a table of student data.

	Name	Age	Grade	Course	Entry Year
Student 1	Salman	20	A	Science	1997
Student 2	Milah	19	B	Maths	1995
Student 3	Devi	22	A-	Science	1998
Student 4	Thomas	21	B+	Language	1996

- a) Describe the **THREE (3)** data models. Assess each column of the table above to the corresponding data model. (9 marks)
- b) Data visualisation can be seen used all around us whether we notice it or not. Why do we create data visualisations? (8 marks)
- c) Describe why data can be an important part in decision-making process? (8 marks)

**Question 2**

(25 Marks)

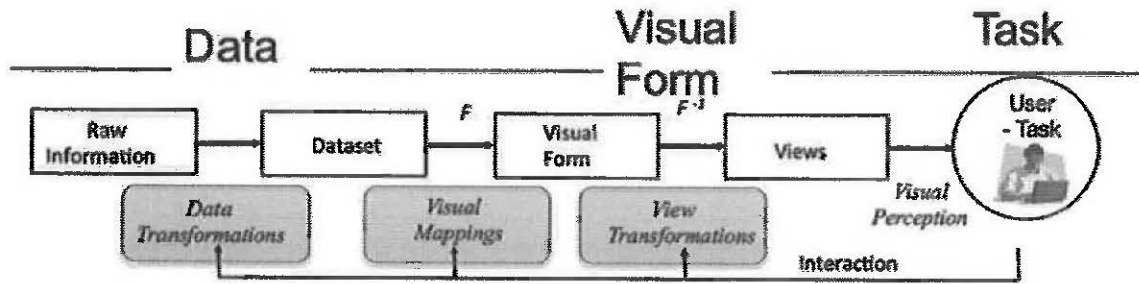
Imagine being a lecturer for a 3D modelling course that has 20 students enrolled into the class. By the end of the semester you will need to look back at what has been done and analyse what can be improved for the upcoming intake.

- a) To identify the level of understanding of your students, what type of data can be useful to help with your data analysis? (12 marks)
- b) After data collection and visualisation is done, data evaluation will need to be carried out. What is the difference between the 2 data evaluation approaches; Qualitative vs. Quantitative? (13 marks)

**Question 3**

**(25 Marks)**

Below is a graph showcasing the different stages of data visualisation.



- What is raw information and where can it be obtained? (6 marks)
- Briefly describe each of the data visualisation stages. (12 marks)
- In your opinion, why is the "interaction" part of the visualisation stage important? (7 marks)

**Question 4**

**(25 marks)**

There are different approaches and techniques to data visualisation. The chosen data visualisation technique must be suitable with the data set that has been acquired. Choosing the wrong techniques may lead to the data visualisation becoming ineffective.

- List down the difference between pie charts and bar charts. (7 marks)
- What are the advantages of Multidimensional Data? (9 marks)
- The ability to look at information based on different dimensions is critical to business success. Why? (9 marks)

\*\*\* END OF QUESTION PAPER \*\*\*