

BB4301: Business Information Analysis

Assessment Test 1

KU ID Number:.....

1.(a) For each of the following data sets state whether it is **nominal**, **ordinal**, **interval** or **ratio**. In each case **give reasons for your answers**.

- number of days spent at the University this week by each student;
- student mobile phone numbers;
- favourite social media application of each student;
- each student's position in their family. That is, if a student is the eldest child then that is 1st, second eldest is 2nd and so on.

8 marks

(b) i. For which of the data sets listed in question 1 is it valid to calculate the mean? Give reasons for your answer.

ii. For which of the data sets listed in question 1 is it valid to calculate the mode? Give reasons for your answer.

6 marks

(c) If two data sets have equal means, does this imply that the data is the same in each set?

Fully explain your answer and provide an illustrative example. **4 marks**

2. In figure 1 is a frequency distribution of the test marks of students on a Business School module.

Figure 1

Student Mark	Number of Students
20	2
35	4
45	10
60	20
65	10
80	4

You are required to further summarize this data. You need to produce

- (a) the relative frequency distribution. **1 mark**
- (b) the cumulative frequency distribution. **1 mark**
- (c) the mode and mean of the data. This should include a clear description of how you calculated the mean. **4 marks**
- (d) the median of the data including a clear description of how it was calculated.

2 marks

(e) the variance of the data including a clear description of how it was calculated.

6 marks

3. Using your answers to question 2 answer the following questions.

(a) What do the values of the mean and median tell you about the data? **3 marks**

(b) If the students who achieved a mark of 35 have their papers remarked and now receive a mark of 40, how will this affect the mean and variance values? You are not required to provide the new values, but should explain how these changes to the data will impact on the mean and variance.

5 marks