



Riara School of Business
Nurturing business innovators
JANUARY APRIL 2023 TRIMESTER
EXAMINATION FOR DEGREE IN BACHELOR OF BUSINESS ADMINISTRATION
DAY PROGRAMME
RFN 202: STATISTICS FOR DECISION MAKING AND ANALYSIS

DATE: 4TH APRIL 2023
HOURS

TIME: 2

GENERAL INSTRUCTIONS:

Students are NOT permitted to write on the examination paper during reading time.

This is a closed book examination. Text book/Reference books/notes are not permitted.

SPECIAL INSTRUCTIONS

1. Write your REGISTRATION NO. Clearly on the answer booklet(s).
2. Answer Question One and ANY other TWO questions.
3. Questions in all sections should be answered in answer booklet(s)
4. PLEASE start the answer to EACH question on a NEW PAGE.
5. For the questions, write the number of the question on the answer booklet(s) in the order you answered.
6. Write on both sides of each leaf and indicate number of each question at the top of each page.
7. Write the answers in a paragraph form unless stated otherwise.
8. Marks allocated to each question are shown at the end of the question.
9. All rough work must be done on the answer booklet and crossed through!
10. Use supplementary pages only when you have exhausted those in this book

11. Fasten the supplementary pages to the inside back cover of this booklet

QUESTION ONE: COMPULSORY (30 MARKS)

- a) Explain FOUR (4) uses of statistics in business decision making and analysis. **[8 Marks]**
- b) According to Gutfeel Research, above 60% of small and medium-sized Enterprises are family owned. A survey asked the chief executive (CEOs) of family-owned businesses how they became the CEO. Responses were that the CEO either inherited the business, built the business or was hired by the family-owned business. A sample of 30 CEOs of family-owned businesses provided the following data on how each became the CEO.

Built	Built	Built	Inherited	Inherited
Built	Inherited	Built	Inherited	Built
Built	Built	Built	Hired	Hired
Hired	Inherited	Inherited	inherited	Built
Built	Built	Built	Hired	Built
Inherited	Hired	Inherited	Built	Hired

- i. Are these data qualitative or quantitative? Explain **[2 Marks]**
- ii. Construct a frequency distribution and a relative frequency distribution (In percentage). **[5 Marks]**
- iii. Construct a bar graph. **[5 Marks]**
- iv. What percentage of CEOs of family-owned businesses became the CEO because they inherited or hired the business? **[3 Marks]**
- v. What would you say is the primary reason a person became the CEO of a family-owned business? **[2 Marks]**
- vi. Using graphical analysis method compute the median of the data given below on marks scored by candidates on a test. **[5 Marks]**

Score	Frequency
0-9	5

10-19	10
20-29	15
30-39	8
40-49	7

QUESTION TWO

- a) Distinguish between nominal and ordinal scale of measurements and give an example for each case. [8 Marks]
- b) Consider the raw data below on IQ scores for 50 students in a local private primary school
- | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|-----|-----|
| 112 | 100 | 127 | 120 | 134 | 118 | 105 | 110 | 109 | 112 | 110 | 118 | 117 |
| 116 | 118 | 122 | 114 | 114 | 105 | 109 | 107 | 112 | 114 | 115 | 118 | 117 |
| 118 | 122 | 106 | 110 | 116 | 108 | 110 | 121 | 113 | 120 | 119 | 111 | 104 |
| 120 | 111 | 113 | 120 | 117 | 105 | 110 | 118 | 112 | 114 | 114. | | |

Required:

- i. Construct a frequency distribution of the data above [6 Marks]
- ii. Calculate the mean, Mode and Median of the above data [6 Marks]

QUESTION THREE

- a) An intelligent test is carried out in Riara University on 12 students randomly chosen from BA degree and they obtain a mean score of 110 points with a standard deviation of 5 points. A random sample of 12 students from BSC degree scored a mean of 117 points with a standard deviation of 7 points. Does this suggest a significant difference in students' intelligence between the two degrees? [5 Marks]
- b) Twenty-five KDF inductees were given a blood test to determine their blood type, the data collected was as follows. Construct a percentage frequency distribution table for the data below. [5 Marks]

A	B	B	AB	O
O	O	B	AB	B
B	B	O	A	O
A	O	O	O	AB
AB	A	O	B	A

- c) A survey on the importance of student-Lecturer consultation was conducted on a single course and the following data was collected

Student	A	B	C	D	E	F	G	H
No of Hours Consulted	1	2	3	4	6	7	8	8
Score	10	30	20	50	40	50	70	80

- i. Plot a scatter diagram and deduce the nature of the relationship [5 Marks]
- ii. Determine if there is a relationship between number of times a student consults and performance in the subject. [5 Marks]

QUESTION FOUR

- a) Distinguish any Three (3) probability sampling techniques [6 Marks]
- b) Distinguish the following terms in statistical analysis.
 - i. Correlation analysis and regression analysis [2 Marks]
 - ii. Coefficient of correlation and coefficient of determination [2 Marks]
- c) In the year 2022, a simple random sample of 96 small companies revealed the following profits and losses distribution:

Profit and Losses (sh. '000)	Number of Companies
-50 and up to 0	10
0 and up to 10	12
10 and up to 20	21
20 and up to 40	26
40 and up to 80	19
80 and up to 150	8

- i. Calculate the mean and standard deviation of the company profits and losses [10 Marks]

