MAY-AUGUST 2023 TRIMESTER

EXAMINATION FOR DIPLOMA IN BUSINESS MANAGEMENT/ INFORMATION TECHNOLOGY/ PROCUREMENT AND SUPPLY CHAIN MANAGEMENT

DAY/EVENING PROGRAMME
RBM 016: STATISTICS AND DATA ANALYSIS

DATE: AUGUST 2023 TIME: 2 HOURS

GENERAL INSTRUCTIONS:

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

ii. 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 **(COMPULSORY)** and **ANY TWO** in Section B

3. Questions in all sections should be answered in answer booklet(s)

4. Marks allocated to each question are shown at the end of the question.

5. **PLEASE** start the answer to **EACH** question on a **NEW PAGE**

6. For the questions, write the number of the question on the answer booklet(s) in the order you answered them

7. Write your answers in paragraph form unless stated otherwise

8. Keep your phone(s) **SWITCHED OFF** at the front of the examination room

9. Keep ALL bags and caps at the front of the examination room and do not refer to any unauthorized material before or during the course of the examination

10. You are only allowed to leave the examination room 30 minutes to the end of the Examination

QUESTION ONE (COMPULSORY (30 MARKS)

(a) Differentiate between the following terms:

i. Discrete and continuous variables **(2 Marks)**

ii. Population and sample **(2 Marks)**

iii. Systemic sampling and stratified sampling **(2 Marks)**

(b) Highlight **FOUR (4)** importance of statistics to a business organization **(4 Marks)**

(c) The following distribution gives the difference in age between husband and wife in a particular community:

Difference in age	0-5	5-10	10-15	15-20	20-25	25-30	30-35	35-40
Frequency	449	705	507	281	109	52	16	4

Required: Calculate the following:

(i) Mean **(3 Marks)**

(ii) Mode **(4 Marks)**

(iii) Median **(4 Marks)**

(iv) Standard deviation **(6 Marks)**

(v) Coefficient of variation **(3 Marks)**

QUESTION TWO

a) Briefly describe the following sampling techniques:

i. Cluster sampling **(2 Marks)**

ii. Systematic sampling **(2 Marks)**

iii. Convenience sampling **(2 Marks)**

b) Define the following terms:

i. Standard Deviation **(2 Marks)**

ii. Variance **(2 Marks)**

iii. Weighted Mean **(2 Marks)**

In January 2020, a firm employed 100 staff of whom 80 were men. During the year 20 staff left and 15 of these were men. The total recruitment during the years was 15 out of whom 5 were women. During 2021, wastage declined by 3 amongst men compared with 2020 and no women left, 8 more men but 2 fewer women were recruited than in the previous year.

Required: Arrange the above information in concise tabular form showing all relevant totals and sub-totals **(8 Marks).**

QUESTION THREE

a. 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. **(10 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**

b. A survey on the scores for following 8 students as collected is presented in the table below.

Student	**A**	**B**	**C**	**D**	**E**	**F**	**G**	**H**
Score	10	30	20	50	40	50	70	80

c. Plot the following:

i. A line graph **(3 Marks)**

ii. A Bar graph for the scores made by the students **(3 Marks)**

iii. A line graph **(4 Marks)**

QUESTION FOUR

(a) The following set of data shows marks scored by 36 students in Business Statistics

40	46	39	49	45	53	28	42	77
62	75	47	71	46	62	35	49	82
53	83	65	83	47	65	39	58	69
74	48	81	67	74	48	46	72	33

Group the above data in a frequency distribution **(8 Marks)**

HINT: use class interval of **ten**

(b) Calculate the following based on the data by the 36 students in Business Statistics

i. Mean **(2 Marks)**

ii. Mode **(2 Marks)**

iii. Median **(2 Marks)**

(c) Explain **THREE (3)** primary data collection methods **(6 Marks)**