



# MERU UNIVERSITY OF SCIENCE AND TECHNOLOGY

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## UNIVERSITY EXAMINATIONS 2023/2024

FIRST YEAR FIRST SEMESTER EXAMINATION FOR CERTIFICATE IN BUSINESS  
ADMINISTRATION

### SMB 1100: BASIC BUSINESS MATHEMATICS

DATE: APRIL 2023

TIME: 1½HOUR

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**INSTRUCTIONS: Answer Question ONE and any other TWO questions.**

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#### QUESTION ONE (30 MARKS)

- a) Define the following types of averages
- Arithmetic mean (2marks)
  - Media (2marks)
  - Mode (2marks)
  - Geometric mean (2marks)
  - Harmonic mean (2marks)
- b) Highlight qualities of a good average (6marks)
- c) Monthly sales of A.B stores for the period of six months were as follows;

37,000
48,000
84,000
73,000
35,000
53,000

- Find average monthly sales (4marks)
- d) State advantages of median (5marks)
- e) Highlight properties of Arithmetic mean (5marks)

## QUESTION TWO (20MARKS)

- a) Calculate the median from the following frequency distribution (10marks)

Grade	50-59	60-69	70-79	80-89	90-99	100-109	110-119
Frequency	7	81	192	312	218	82	18

- b) Calculate mode from the following data (10marks)

<u>Marks</u>	<u>No of students</u>
0-10	2
10-20	7
20-30	11
30-40	6
40-50	4

## QUESTION THREE (20MARKS)

- a) Highlight advantages of mean deviation (5marks)
- b) Calculate the standard deviation from the following distribution (15marks)

X	12	13	14	15	16	17	18	20
f	4	11	32	21	15	8	5	4

## QUESTION FOUR (20MARKS)

- a) Define the following methods of measuring dispersion
- i. Range (2marks)
  - ii. Quartile deviation (2marks)
  - iii. Mean deviation (2marks)
  - iv. Standard deviation (2marks)
  - v. Loren curve (2marks)

- b) The following are the prices of shares of ABC company Ltd.

Day,	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
Prices (shs)	200	210	208	160	200	250

### Required;

- Find the range and co-efficient or range (10marks)



**QUESTION FIVE (20MARKS)**

a) Calculate Geometric mean from the following data (10marks)

Marks	0-10	10-20	20-30	30-40	40-50
f	3	7	8	15	15

b) Calculate the Harmonic Mean of the following data (10marks)

X:	3	4	5	6	7	8	9	10	11
F:	2	5	9	14	15	8	6	3	1

