(University of Choice)

MASINDE MULIRO UNIVERSITY OF SCIENCE AND TECHNOLOGY (MMUST)

MAIN CAMPUS

UNIVERSITY MAIN EXAMINATIONS

2022/2023 ACADEMIC YEAR

FIRST year SECOND semester examination

FOR THE DEGREE
OF
BACHELOR OF COMMERCE

COURSE CODE: BHM 209

COURSE TITLE: BUSINESS MATHEMATICS & STATISTICS

DATE: THURSDAY, 20TH APRIL 2023   TIME: 3:00 – 5:00PM

INSTRUCTIONS TO CANDIDATES

Answer question ONE and any other TWO questions

TIME: 2 HOURS

Question One

a) The managers of an import agency are investigating the length of time that customers take to pay their invoices, the normal terms for which are 30 days net. They have checked the payment record of 100 customers chosen at random and have compiled the following table:

Payment in days	Number of customers
5 to less than 9 days	4
10 to less than 14 days	10
15 to less than 19 days	17
20 to less than 24 days	20
25 to less than 29 days	22
30 to less than 34 days	16
35 to less than 39 days	8
40 to less than 44 days	3

Required:

i)	Calculate the arithmetic mean.	(3 marks)
ii)	Calculate the standard deviation	(6 marks)
iii)	Calculate the first coefficient of skewness	(6 marks)
iv)	Calculate the second coefficient of skewness	(6 marks)
v)	Construct the histogram and show the mode	(5 marks)

Briefly describe the following types of curves
  i) Leptokurtic   (2 marks)
  ii) Mesokurtic   **(2 marks)**

Question Two

a) Three managers' are asked to rank a group of employees in order of potential for eventually becoming head of sections. The ranking are as follows;

Employee	: A	B	C	D	E	F	G	H	I	J
Manager I:	10	2	1	4	3	6	5	8	7	9
Manager II:	9	4	2	3	1	5	6	8	7	10
Manager III	6	3	4	5	2	7	4	7	8	9

Required: Compute the coefficient of rank correlation and comment on the value **(15 marks)**

b) Highlight five functions of averages   **(5 marks)**

Question Three

a) The data on price and quantity purchased relating to a commodity for 5 months is given below:

Month	January	February	March	April	May
Prices (Ksh)	10	10	11	12	12
Quantity (Kg)	5	6	4	3	3