



KISII UNIVERSITY

UNIVERSITY EXAMINATIONS

FIRST YEAR EXAMINATION FOR THE AWARD OF CERTIFICATE IN INFORMATION TECHNOLOGY FIRST SEMESTER, 2023/2024

(AUGUST-DECEMBER, 2023)
CIT 0102: MATHEMATICS 1

STREAM: Y1 S1

TIME: 2 HOURS

DAY: WEDNESDAY 9.00 – 11.00 AM

DATE: 29.11.2023

INSTRUCTIONS

1. Do not write anything on this question paper.

Answer Question ONE [Compulsory] and any other TWO Questions

Question one

- (a) Differentiate between data and information (4 mks)
- (b) Outline the nature of statistical data (5 mks)
- (c) (i) describe what a statistical question is and give an example of the same (5 mks)
- (ii) why do we say that statistics deals with aggregates? (6 mks)
- (d) Although statistics is important, it has its share of issues which we just have to overlook. Explain these issues. (10 mks)

Question two

- (a) Write short notes on the following:
 - (i) Time series (5 mks)
 - (ii) Moving averages (5 mks)
- (b) The table below represents company sales, calculate 3 and 6 monthly moving averages, for the data (10 mks)

Months	Sales
January	1200
February	1280
March	1310
April	1270
May	1190
June	1290
July	1410
August	1360
September	1430
October	1280
November	1410
December	1390

Question three

- (i) Briefly discuss the importance of probability and sampling in management. (6 mks)
- (ii) What do you understand by statistical distribution, and how is it important to management? (6 mks)
- (iii) Describe the various types of statistical distribution. (8 mks)

Question four

- (i) What is forecasting, and why do we need it in business? (8 mks)
- (ii) Briefly discuss the various forecasting techniques in business management. (12 mks)

Question five

- (a) Differentiate between regression and correlation. (8 mks)
- (b) Highlight practical areas in management where we use regression and correlation analysis. (12 mks)