



# MACHAKOS UNIVERSITY

University Examinations for 2020/2021 Academic Year

SCHOOL OF BUSINESS AND ECONOMICS

DEPARTMENT OF ACCOUNTING BANKING AND FINANCE

SECOND YEAR SECOND TERM EXAMINATION FOR

DIPLOMA IN COMMUNITY DEVELOPMENT

STATISTICS

DATE: 10/6/2021

TIME: 11.30-2.30 PM

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## INSTRUCTIONS:

Answer any three questions

### QUESTION ONE

Highlight the advantages and disadvantages of arithmetic mean. (20 marks)

### QUESTION TWO

From the following data of 90 students marks calculate the arithmetic mean

| Marks  | No of students |
|--------|----------------|
| 0-20   | 5              |
| 20-40  | 7              |
| 40-60  | 13             |
| 60-80  | 8              |
| 80-100 | 7              |

(20 marks)

### QUESTION THREE

Find the median marks for the following distribution: (20 marks)

| Classes   | 0-10 | 10-20 | 20-30 | 30-40 | 40-50 |
|-----------|------|-------|-------|-------|-------|
| Frequency | 2    | 12    | 22    | 8     | 6     |

#### QUESTION FOUR

The sales of a company (in million shillings) for each year are shown in the table below.

|           |      |      |      |      |      |
|-----------|------|------|------|------|------|
| x (year)  | 2005 | 2006 | 2007 | 2008 | 2009 |
| y (sales) | 12   | 19   | 29   | 37   | 45   |

- Find the least square regression line  $y = a x + b$ .
- Use the least squares regression line as a model to estimate the sales of the company in 2012.

(20 marks)