

LAIKIPIA



EPSC 712

UNIVERSITY

UNIVERSITY EXAMINATIONS

SECOND SEMESTER 2023/2024 ACADEMIC YEAR

**EXAMINATION FOR POST GRADUATE DIPLOMA IN
EDUCATION**

EPSC 712: STATISTICS AND RESEARCH METHODS

STREAM: R

TIME: 2 HRS

DAY: FRIDAY (2.30-4.30PM)

DATE: 12/4/24

THIS QUESTION PAPER CONSISTS OF THREE (3) PAGES

PLEASE DO NOT OPEN UNTIL THE INVIGILATOR SAYS SO.



INSTRUCTIONS: Answer question **ONE** and any other **TWO** questions in **SECTION B**

SECTION A(COMPULSORY)

QUESTION ONE (30 MARKS)

- a) Define the following terms
- i) Research Design (1mark)
- ii) Sampling (1mark)
- b) Distinguish between the following terms
- i) Population and sample (2marks)
- ii) Descriptive and inferential statistics (2marks)
- c) The following scores were obtained by 40 students in a mathematics test
- | | | | | | | | |
|----|----|----|----|----|----|----|----|
| 43 | 39 | 59 | 56 | 58 | 63 | 71 | 40 |
| 72 | 66 | 47 | 38 | 51 | 50 | 61 | 64 |
| 32 | 78 | 29 | 32 | 45 | 80 | 70 | 57 |
| 52 | 46 | 45 | 39 | 58 | 72 | 41 | 55 |
| 56 | 53 | 66 | 63 | 61 | 46 | 82 | 64 |

Calculate the following:

- i) Mean (2 marks)
- ii) Median (2 marks)
- iii) Mode (2 marks)
- iv) Standard deviation (3 marks)
- d) Explain four techniques of probability sampling. (8marks)
- e) Identify seven items in the structure of the chapter on introduction in a research proposal. (7marks)

QUESTION TWO (20 MARKS)

- a) Explain four reasons why research is important (8 marks)
- b) i) Distinguish between validity and reliability (4 marks)
- ii) Explain four ways of obtaining reliability (8 marks)

QUESTION THREE (20 MARKS)

- a) Discuss four types of research (8 marks)
- b) Explain three reasons why literature review is important (6 marks)
- c) Discuss three methods of data collection used in research (6 marks)

QUESTION FOUR (20 MARKS)

- a) Distinguish between independent and dependent variables. (4 marks)
- b) Identify three ways of identifying a research problem. (6 marks)
- c) Highlight five reasons why basic knowledge in statistics is important. (10 marks)

