



**KISII UNIVERSITY**  
**UNIVERSITY EXAMINATIONS**

**SPECIAL EXAMINATIONS**  
**FIRST YEAR EXAMINATION FOR THE AWARD OF THE**  
**DEGREE OF BACHELOR OF EDUCATION (ECDE)**  
**SECOND SEMESTER, 2021/2022**  
**(FEBRUARY - JUNE, 2022)**

**EPSC 123: STATISTICAL AND RESEARCH METHODS IN EDUCATION**

**STREAM: Y1 S1**

**TIME: 2 HOURS**

**DAY: FRIDAY, 8:00 – 10:00 A.M.**

**DATE: 22/07/2022**

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**INSTRUCTIONS:**

- 1. Do not write anything on this question paper.***
- 2. Answer Question ONE [Compulsory] and any other THREE Questions.***

**QUESTION ONE**

- Explain five differences between descriptive statistics and inferential statistics (10 marks)
- Using examples, differentiate between Quantitative data and Qualitative data (9 marks)
- Using specific examples, explain any three methods of collecting data (6 marks)

**QUESTION TWO**

- Use the following data; 11, 39, 12, 29, 43,13, 44, 35, 14, 40, 31,15, 16, 14, 39, 44, 17, 18, 14, 52, 19, 10

Find;

- The mean
- The median
- The mode
- The upper quartile

- v. The lower quartile
- vi. The inter-quartile range (6 marks)

b) Using the following data set; 39, 29, 43, 52, 39, 44, 40, 31, 44, 35

Calculate;

- i. The variance
- ii. The standard deviation for the following set of data (9 marks)

### **QUESTION THREE**

a) Using examples, explain the following levels of measurement;

- i. Nominal Scale
- ii. Ordinal Scale
- iii. Interval Scale (9 marks)

b) Explain how scale discussed can be applied in a classroom situation (6 marks)

### **QUESTION FOUR**

a) Using examples, explain the following:

- i. Construct Validity
- ii. Content Validity
- iii. Face Validity (6 marks)

b) Differentiate between null and alternative Hypothesis (6 marks)

c) Highlight the function of a hypothesis in research (3 marks)

### **QUESTION FIVE**

Explain how the following concepts are used in research;

- i. Variable
- ii. Population
- iii. Sample
- iv. Statistic
- v. Parameter (15 marks)