

CHUKA



UNIVERSITY

UNIVERSITY EXAMINATIONS

**EXAMINATION FOR THE AWARD OF POSTGRADUATE DIPLOMA IN  
EDUCATION**

**PGDE 742: STATISTICAL METHODS IN EDUCATION**

**STREAMS: PGDE (PT)**

**TIME: 3 HOURS**

**DAY/DATE: THURSDAY 22/07/2021**

**8.30 A.M. – 10.30 A.M.**

**INSTRUCTIONS:**

- **Do not write on the question paper**
- **Answer any four questions**

1. a) Highlight any four factors that influence the correlation coefficient. (13 marks)
- b) Explain the significance of statistical methods in education system. (7 marks)
2. a) Determine the interquartile range for the data in the table below. (9 marks)

Class	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69
Frequency	2	4	12	9	9	8	3	3

b) For the above data, compute

- (i) Mean (3 marks)
  - (ii) Median (3 marks)
3. a) The following are scores of six (6) students in Mathematics and chemistry CAT

Maths	5	6	5	3	2	3
Chem	4	6	5	2	3	4

- (i) Compute the Spearman Rank order correlation coefficient. (8 marks)
- (ii) Interpret the results obtained. (3 marks)

b) Explain the following types of statistics

- (i) Inferential
- (ii) Descriptive (4 marks)

4. The experimental and control groups generated the following values.

Experimental	Controlled
6	3
7	5
9	9
5	4
4	2
3	1
2	0
8	6
10	7
7	4

The critical value is given as 1.833 at 0.05 significance level. Test the hypothesis that there is no difference between the means of the two groups. (15 marks)

5. a) Distinguish the following terms

- (i) Parameter and statistics
- (ii) Continuous variable and qualitative data (4 marks)

b) Two dice are tossed together. What is the probability that the sum of the two upper faces will be:-

- (i) Eight
- (ii) Less than five
- (iii) Greater than 9
- (iv) At least 6
- (v) At most 3 (11 marks)