



**KIBABII UNIVERSITY**  
**UNIVERSITY EXAMINATIONS**  
**2021/2022 ACADEMIC YEAR**  
**..... YEAR .....I..... SEMESTER I**  
**MAIN EXAMINATION**

**FOR THE POST GRADUATE DIPLOMA IN EDUCATION**

**COURSE CODE: PSY 713**

**COURSE TITLE: EDUCATION MEASUREMENT AND  
EVALUATION**

**DATE: 26/02/2022**

**TIME: 2 - 4 PM**

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**INSTRUCTIONS: Answer Question One and Any other TWO (2) Questions**

**TIME: 2 Hours**

1). The following were the scores obtained by 50 Form II students in a mathematics test.

49 63 59 44 49 51 62 37 30 49 45 52 50 42 54 32 57

41 42 56 44 46 63 44 40 50 46 53 48 37 46 53 68 36

40 56 37 66 43 40 43 51 59 42 52 46 57 35 43 62

- Make a grouped frequency distribution using class size  $(i) = 5$  and start with 30 – 34 as the lowest class interval including cumulative frequencies (8mks)
- Plot a histogram and frequency polygon for this data. (6mks)
- Draw an ogive for the distribution. (3mks)
- For the group data in (a) above determine the mean (3mk)

(Total Marks Twenty 20)

2.a) Suppose the following were scores of a small class in two tests, test A and test B. test A is taken as variable X and while test B is taken as variable Y

Student	Test A ( X)	Test B (Y)
Muchoki	5	4
Wanjala	6	6
Otieno	5	5
Langat	3	2
Juma	2	3
Osoro	3	4

- Plot a scatter diagram 4mks
  - Compute the Pearson product-moment correlation coefficient  $r_{xy}$  A and B for the class . Interpret the value of  $r_{xy}$ . (6mks)
- b) Discuss five factors that affect reliability of a test giving examples (10mks)

(Total Marks Twenty 20)

3) (a) Discuss any four types of validities (8mks)

(b) State and explain any four evaluation techniques used in school apart from written exams (8mks)

(c) Show how you can obtain the difficulty index and discrimination index of a test item (4mks)

(Total Marks Twenty 20)

(4) Briefly discuss the following in light of educational measurement and evaluation using examples.

- Inferential statistics and descriptive statistics. (3 marks)
- Difficulty and discrimination index (3 marks)
- Continuous variable and discrete variable (4 marks)
- Evaluation and measurement (4 marks)
- Reliability and validity (4mks)

f) Test and content validity (2mks)

**(Total Marks Twenty 20)**

(5) In a mock examination, the overall mean score was 50 and the standard deviation 10. Assuming that the scores were normally distributed and the classes which did the mock had 150 pupils altogether:

- (a) Calculate the number of pupils who scored marks between 40 and 70? (4mks)
- (b) Calculate the number of pupils who scored between 55 and 60? (3mks)
- (c) Calculate the pass mark if 95 % of the candidates were to be selected (5mks)
- (d) Explain any four methods of establishing reliability of a test (8mks)

**(Total Marks Twenty 20)**