



# MOI UNIVERSITY

OFFICE OF THE DEPUTY VICE CHANCELLOR  
(ACADEMICS, RESEARCH & EXTENSION)

## UNIVERSITY EXAMINATIONS

### 2017/2018 ACADEMIC YEAR

#### FIRST YEAR FIRST SEMESTER EXAMINATION

#### FOR THE DEGREE OF

## BACHELOR OF ARTS WITH EDUCATION

**COURSE CODE:** PSY 110

**COURSE TITLE:** QUANTITATIVE TECHNIQUES IN EDUCATION

**DATE:** 9<sup>TH</sup> FEBRUARY, 2018 **TIME:** 11.40 A.M. - 2.40 P.M.

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### INSTRUCTION TO CANDIDATES

- SEE INSIDE.

THIS PAPER CONSISTS OF (4) PRINTED PAGES

PLEASE TURN OVER

**MOI UNIVERSITY**  
**SCHOOL OF EDUCATION**  
**DEPARTMENT OF EDUCATION PSYCHOLOGY**  
**2017/2018 ACADEMIC YEAR FIRST YEAR FIRST SEMESTER**  
**EXAMINATION**  
**PSY 110 QUANTITATIVE TECHNIQUES IN EDUCATION**  
**VENUE -MAIN(2500) NRB (25)**

**TIME:3 HOURS**

**INSTRUCTIONS TO THE CANDIDATES**

i. Answer any FOUR questions ALL questions carry equal marks

ii. Strictly adhere to the instructions on the booklet

- 1 (a) Define the term number ✓ 2 (2marks)
- 4/2 (b) Describe FIVE sets in which numbers can be classified ✓ 5 (7 ½ marks)
- d (c) State the addition properties of Real numbers 2 (4marks)
- (d) State the multiplication properties of Real numbers 2 (4marks)
- 2 (a) Explain why a teacher needs to have some basic knowledge of statistics. ✓ 4 (4 marks)
- (b) Distinguish between descriptive and inferential statistics. 1 (2 marks)
- (c) Discuss the four scales of measurement and their characteristics. 8 (8 marks)
- (d) Explain any three methods of data collection 3 (3 ½ marks)
- 3 In a survey of University students ,64 had taken mathematics course,94 had taken Computer science,58 had taken physics ,28 had taken mathematics and physics, 26 had taken mathematics and computer science,22 had taken computer science and Physics and 14 had taken all the three courses.
- (a) Represent the information using a ven diagram (5 ½ marks)
- (b) Find the number of students who were surveyed (6marks)
- (c) How many students took one course only (6marks)

4 (a) Giving examples explain the following terms as used in probability theory:

(i) Probability space (3 marks)

(ii) Mutually exclusive events (3 ½ marks)

(iii) Independent events (3 marks)

(b) The table below shows the year of study and the favourite sport of 1000 students of Moi University.

Year of Study	Football	Tennis	Volleyball
1 <sup>st</sup>	130	80	90
2 <sup>nd</sup>	160	100	120
3 <sup>rd</sup>	110	120	90

If a student is randomly selected from this sample, determine the probability that:

(i) The student favourite sport is tennis (2 marks)

(ii) The student is in the first year of study (2 marks)

(iii) The student's favourite sport is volleyball given that the selected student is in the second year of study. (2 marks)

(iv) The student's favourite sport is football given that the selected student is in the first year of study. (2 marks)

5(a) Define the term quantitative methods (2 ½ marks)

(b) Explain five uses of the knowledge of Quantitative Methods in Education to a teacher (15marks)

- 6 (a) State and explain **four** functions of testing and evaluation in Education.
- (b) Compare and contrast the objective and subjective type of test items
- (c) State and explain the characteristics of a good test.

(7)