



MACHAKOS UNIVERSITY

University Examinations for 2024/2025 Academic Year

SCHOOL OF EDUCATION

DEPARTMENT OF EDUCATIONAL COMMUNICATION TECHNOLOGY & ECE

SECOND YEAR FIRST SEMESTER EXAMINATION FOR DEGREE IN BACHELOR OF EDUCATION (ECE)

ECE216: STATISTICS, TESTS AND MEASUREMENT

DATE: 20TH JANUARY, 2025

TIME: 8.30 AM – 10.30 AM

INSTRUCTIONS:

*Answer question **ONE (Compulsory)** and any other **TWO** questions*

QUESTION ONE (COMPULSORY) (30 MARKS)

- a) Illustrate the meaning of the following terms as used in Education: (4 marks)
- i) Test
 - ii) Measure
 - iii) Assess
 - iv) Evaluate

- b) i) Complete the table below; (2 marks)

COMPETENCE LEVEL	FREQUENCY f	CUMULATIVE FREQUENCY
Below Expectation	20	
Approaching Expectation	50	
Meeting Expectation	40	
Exceeding Expectation	10	

- ii) Draw a graph with competence levels on x-axis and frequency on the y-axis. (6 marks)
- iii) In which class of competence does the median fall? (2 marks)
- iv) On the same graph, draw the frequency polygon. (5 marks)
- v) Draw the cumulative frequency curve on a separate page. (5 marks)

- c) Explain how you would develop the criteria for classifying a learner as: *Below Expectation*; *Approaching Expectation*; *Meeting Expectation*; and *Exceeding Expectation*, with reference to a named activity in one of the learning areas;
- i) Mathematical Activity
 - ii) Language Activity
 - iii) Environmental Activity
- (6 Marks)

QUESTION TWO (20 MARKS)

Explain and Illustrate the circumstances under which you would use each of the following methods of assessment for young children at PP2:

- a) Observation. (4 marks)
- b) A Checklist. (4 marks)
- c) An Oral Interview (4 marks)
- d) Task completion test (4 marks)
- e) Written Test (4 marks)

QUESTION THREE (20 MARKS)

- a) Construct a test involving matching items or multiple choice questions and worth 5 marks.
Provide a marking scheme. (10 marks)
- b) Discuss the characteristics of a normal curve. (10 marks)

QUESTION FOUR (20 MARKS)

Explain five aspects a teacher would consider in assessing each of the following:

- a) Learners' construction of models in Mathematics. (10 marks)
- b) Learners' mastery of number concept. (10 marks)

QUESTION FIVE (20 MARKS)

Test scores have the following distribution:

7,3,6,6,8,4,9,3,2,3,6,5,9,4,2,13,15,14,19,20,21,24,26,30,32,35,35,38,41,46,49,59,
46,44,44,49,49,50,55,56,59,60,59,60.

- a) Complete the frequency table below; (6 marks)

CLASS INTERVAL	MID- POINT X	TALLY	FREQUENCY f	FREQUENCY X MID-POINT f x X
0-10	5			
10-20	15			
20-30	25			
30-40	35			
40-50	45			
50-60	55			
TOTALS				

- b) Using a suitable scale, draw the graph of frequency versus class interval. (5 marks)
- c) Calculate the mean for the data in this table. (3 marks)
- d) Calculate the position and value of the median. (2 marks)
- e) Draw the cumulative frequency curve. (4 marks)