

KABARAK



UNIVERSITY

UNIVERSITY EXAMINATIONS

2009/2010 ACADEMIC YEAR

FOR THE DEGREE OF BACHELOR OF EDUCATION SCIENCE

COURSE CODE: EDUC 214

COURSE TITLE: RESEARCH METHOD AND STATISTIC

STREAM: SESSION V

DAY: MONDAY

TIME: 2.00 – 4.00 P.M.

DATE: 09/08/2010

INSTRUCTIONS:

1. Answer all Questions in Section A- 30 marks
2. Any two questions in Section B – 40 marks

PLEASE TURNOVER

SECTION A – 30 MARKS

QUESTIONS ONE (15 Marks)

- (a) State **Four** reasons for the need for educational research to Teachers (4Mrks)
- (b) Explain **Four** principles of research (4Mrks)
- (c) Outline **Five** roles of literature review (5Mrks)
- (d) Differentiate the following terms
 - (i) Research methodology
 - (ii) Research design (2Mrks)

QUESTIONS TWO (15 Marks)

- (a) Differentiate the following terms as used in educational statistics
 - (i) Descriptive statistics and inferential statistics
 - (ii) Mode and Median
 - (iii) Continuous variable and discrete variable
 - (iv) Positively skewed distribution and negatively skewed distribution (4Mrks)
- (b) The data shows marks scored by form two students mathematics science

66	81	67	82	62	66	71	85	72
71	77	63	74	68	65	76	77	74
64	71	66	71	82	77	71	81	80

Use the table to

- (i) Prepare a grouped frequency distribution table with a class size of 3 (4Mrks)
- (ii) State the modal class (1Mrk)
- (iii) Construct a histogram (3Mrks)
- (c) Outline **Three** main functions of educational statistics (3Mrks)

SECTION B 20 MARKS

QUESTION THREE (20 MARKS)

- (a) Describe the following types of education research (4Mrks)
 - (i) Descriptive
 - (ii) Observation
 - (iii) Historical
 - (iv) Correlation
- (b) Explain with the aid of a diagram the **Six** steps of research cyclic process (6Mrks)

- (c) State the **three** characteristics of each of the following research designs (6Mrks)
- (i) Narrative designs
 - (ii) Experimental designs
- (d) Outline **Four** procedural steps in data organization (4Mrks)

QUESTION FOUR - (20 MARKS)

- (a) Describe the **three** measures of central tendency (3Mrks)
- (b) The table below shows scores from form three test

Class	Frequency
75-79	3
70-74	3
65-69	8
60-64	9
55-59	9
50-54	12
45-49	4
40-44	2
	N=50

Calculate;

- (i) The range (2Mrks)
 - (ii) The variance (5Mrks)
 - (iii) The standard deviation (2Mrks)
 - (iv) The semi-interquartile range (5Mrks)
- (c) Explain the following terms (3Mrks)
- (i) Emperical probability
 - (ii) Estimation
 - (iii) Regression line

QUESTION FIVE - (20 MARKS)

- (a) Explain the following measurement scales using an example for each (8Mrks)
- (i) Nominal
 - (ii) Ordinal
 - (iii) Ratio
 - (iv) Interval

- (b) Draw and Interpret diagrams that have the following characteristics which result from both Inferential and descriptive statistics used in research (6Mrks)
- (i) Normal distribution curve
 - (ii) A symmetric distribution with a negative skew
 - (iii) Asymmetric distribution with a positive skew
- (c) Outline the size steps in hypothesis testing (3Mrks)
- (d) Computer the mean and the median of the following data (4Mrks)
- 5, 2, 8, 7, 6, 10, 9, 17