

**KABARAK**



**UNIVERSITY**

**UNIVERSITY EXAMINATIONS  
2008/2009 ACADEMIC YEAR  
FOR THE DEGREE OF BACHELOR OF EDUCATION  
SCIENCE**

**COURSE CODE: EDU 214**

**COURSE TITLE: RESEARCH METHODS AND  
STATISTICS**

**STREAM: SESSION IV**

**DAY: THURSDAY**

**TIME: 2.00 – 4.00 P.M.**

**DATE: 26/11/2009**

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**INSTRUCTIONS:**

- Answer all questions in Section A.
- Any Two questions in Section B.

**PLEASE TURN OVER**

## **SECTION A: 30 MARKS**

### **QUESTION ONE: (15 MARKS)**

- (a) What do you understand by the term Education research? (2mks)
- (b) Explain the importance of carrying out Education research. (4mks)
- (c) State the meaning and the purpose of literature review as used in education research. (5mks)
- (d) Differentiate the following research tools. (2mks)
  - i. Observation.
  - ii. Interviews
- (e) State two advantages and two disadvantages of electronic data storage. (2mks)

### **QUESTION TWO (15 MARKS)**

- (a) Distinguish between descriptive and inferential statistics. (2mks)
- (b) (i) Describe the three measures of central tendency. (3mks)
  - (ii) Obtain the mean for the following scores.  
2, 2, 5, 6, 8, 8, 10 (3mks)
- (c) Explain the following. (3mks)
  - (i) Empirical probability.
  - (ii) Linear regression
  - (iii) Analysis of variance
- (d) Give reason why it is not advisable to use small samples under 30 observations in estimating population characteristics. (2mks)
- (e) Define Non-parametric test giving one example. (2mks)

## **SECTION B:**

### **QUESTION THREE (20 MARKS)**

- (a) Explain how the following areas can be a source of Education research problem. (4mks)
- (i) Content
  - (ii) Philosophy
  - (iii) Psychology
- (b) State and describe any FOUR types of education research. (8mks)
- (c) Discuss the following types of research design. (8mks)
- (i) Survey design
  - (ii) Correlation design
  - (iii) Experimental and Quazi-experimental design
  - (iv) Action research design

### **QUESTION FOUR (20 MARKS)**

- (a) Distinguish between the following terms. (3mks)
- (i) Range
  - (ii) Variance
  - (iii) Standard deviation
- (b) The table below shows marks obtained by 100 students in a chemistry examination.

Marks	60 - 62	63 - 65	66 - 68	69 - 71	72 - 74
No. of students	8	10	45	30	7

- Calculate (i) The mean mark (4mks)
- (ii) Median (5mks)
- (iii) The standard deviation (4mks)
- (c) Calculate the range and the variance of the following scores. (4 mks)
- 9, 8, 6, 7, 13, 9, 5, 11.

**QUESTION FIVE (20 MARKS)**

- (a) Define the term measurement. (2mks)
- (b) Describe the FOUR scales of measurement giving one example in each case. (12mks)
- (c) Define hypothesis testing and outline the six steps used in hypothesis testing. (6mks)