JARAMOGI OGINGA ODINGA UNIVERSITY OF SCIENCE AND TECHNOLOGY

SCHOOL OF EDUCATION

UNIVERSITY EXAMINATION FOR THE DEGREE OF MASTER OF EDUCATION IN SPECIAL NEEDS EDUCATION

CODE

EDUCATION 1ST YEAR 2ND SEMESTER 2015/2016 ACADEMIC YEAR

KISII CAMPUS- SCHOOL BASED

COURSE CODE: EMA 840

COURSE TITLE: RESEARCH METHODS II

EXAM VENUE: LR 13 **STREAM: (BED)**

DATE: 25/04/2016 **EXAM SESSION: 11.30 -2.30 PM**

TIME: 2 HOURS

Instructions:

1. **Answer Question ONE (COMPULSORY) and ANY other 2 questions**
2. **Candidates are advised not to write on the question paper.**
3. **Candidates must hand in their answer booklets to the invigilator while in the examination room.**

QUESTION ONE (COMPULSORY)

a) a) Select one of the problems you would wish to research on in your area of specialty and write on the following:

i) Statement of the problem
ii) Four objectives of your study
iii) Hypotheses and / or research questions
iv) Four subsections of the literature review
v) Research design

(10 marks)

b) A group of ten candidates scored the following marks in English and Kiswahili tests:

English(X)	12	18	16	11	7	10	13	17	12	9
Kiswahili (Y)	6	5	7	7	4	9	8	13	10	11

Calculate and comment on Karl-pearson's Product moment correlation coefficient.(10 marks) (10mks)

b)The marks of 1000 candidates in an examination were normally distributed with a mean mark of 45% and standard deviation of 10%.

i) Given that the pass mark in the test was 60%, estimate the number of candidates who passed the examination (5 marks)

ii) Calculate the probability that a student picked at random from the group scored between 35% and 65% (5 marks)

QUESTION TWO

A researcher was interested in studying television channel viewing in some locality and age set of viewers. The results were as shown in the table below:

	TV Channel Viewed			
Age set	**KBC**	**KTN**	**NTV**	**Total**
Young	120	112	129	361
Old	67	210	99	376
Total	187	322	228	737

Using Chi-square ($\chi 2$) and $\alpha=0.05$, test whether there is a statistical relationship between TV viewed and Age set of viewers. (15 marks)

QUESTION THREE

The following information relates to the number of unlicensed drivers and number of road accidents in a given country.

No. of unlicensed drivers (X)	**No. of road accidents (Y)**
50	55
30	20
60	59
75	78
40	55
90	70
15	20
19	15
64	60
80	84

a) Represent the data using a scatter diagram and give your interpretation. (3 marks)
b) Find a regression equation that fits the data and interpret the results. (12 marks)

QUESTION FOUR

The distribution of scores for a certain master of education unit for a group of 50 candidates were as follows:

Marks	**No of Candidates**
50-54	2
55-59	5
60-64	7
65-69	8
70-74	11
75-79	9
80-84	4
85-89	2
90-94	2

a) Estimate the:
   i) Mean mark (4 marks)
   ii) Median mark (4 marks)
   iii) Standard deviation (4 marks)
   iv) Modal mark (2 marks)

b) By calculating the coefficient of Skewness or otherwise, describe the nature of distribution of scores in the test. (1 mark)

QUESTION FIVE

The K.C.S.E Mathematics examination score for a given county assessment test in 2013 was 51% with a standard deviation of 14. A county director of education believes that students who were in public boarding primary schools score better in the test. The director obtains a simple random sample of 40 high school students who were in pubic boarding primary schools and finds that their mean score is 54%, conduct a traditional method of hypothesis testing to determine if the director's believes are supported by data at 5% level of significance. (15 marks).