JARAMOGI OGINGA ODINGA UNIVERSITY OF SCIENCE AND TECHNOLOGY

SCHOOL OF EDUCATION

UNIVERSITY EXAMINATION FOR DEGREE OF MASTER OF EDUCATION

DEGREE IN PLANNING AND ECONOMICS OF EDUCATION/EARLY

CHILDHOOD DEVELOPMENT EDUCATION/PSYCHOLOGY

1ST   YEAR 2ND SEMESTER 2016/2017 ACADEMIC YEAR
REGULAR (KISII LC)

COURSE CODE: EMA 840/ PSY 802 / ECE 802

COURSE TITLE: RESEARCH METHODS II

EXAM VENUE: **STREAM: (MED)**

DATE: **EXAM SESSION: DECEMBER 2016**

TIME: 3.00 HOURS

QUESTION ONE (COMPULSORY)

a). Select one of the problems you would wish to research on in your area of speciality 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

(12mks)

b) According to a director of education in a given County, the mathematics mean performance of the county was 50.64 in 2012. A chairman of the heads association in the said county believes that the mean is different today but is not sure whether it has increased or decreased due to proper staffing. The chairman obtains a simple random sample of 12 schools and finds that their mathematics mean performance is 65.014 and a standard deviation of 18.49. Conduct a hypothesis testing using the p-value approach at α= 0.05 level of significance to substantiate the chairman's argument (9 mks).

c) A random sample data was summarized by a researcher as shown below:

Category of School attended	Students' academic performance	
	Had < B+	Had ≥B+
Private school	31	469
Public school	185	1315

a) i) Why would a researcher find it necessary to use chi-square test in doing analysis
(1mk)
    ii) State two mutually exclusive factors that the researcher would analyze   (1mk).

b) Compute the chi-square value using the formula $\chi^2{}_{o=}\sum \frac{(fo-fe)2}{fe}$ at 0.05 level of
    significance   and   comment   (7mks)

QUESTION TWO

You have been requested to give a key note address in an education forum on the theme "*Writing a current thesis in the 21ˢᵗ century*". With reference to **chapters one and three**, explain the main items of your maiden speech   (15mks).

QUESTION THREE

a) Discuss the salient features of the executive summary of a thesis (3mks)

b)Comment on the significance of references and appendices sections of a thesis. (2mks).

A researcher obtained the following summarized raw data from field work:

40	71	25	50	38	63
46	51	54	47	59	40
51	39	55	56	52	40
41	56	55	61	52	14
33	50	49	41	47	23
65	58	44	40	28	30
48	40	59	42	14	66
43	68	73	58	50	20
30	37	44	66	52	37
					38

a) Using the data, prepare a grouped frequency distribution table   (3mks)
b) From the table, compute
   i)   The sample mean   (1mks)
   ii)   The mode   (1mks)
   iii)   The median   (1mks)
   iv)   The variance   (2mks)
   v)   The standard deviation   (2mks)

QUESTION FOUR

a) The mean in an examination was 72 and the standard deviation was 9.Assuming a normal distribution of scores and given that the total number of candidates was 600, compute:

i)   The pass mark, if 10% of the candidates failed

ii)   The number of candidates who scored 63% and above

iii)   The number of candidates who scored 63% and below

iv)   The number of students who scored between 54% and 63%.   (13mks)

b) What is the usefulness of the standard deviation and mean indices in data analysis

(2mks)

QUESTION FIVE

.a) With respect to the multiple   correlation and regression,

b) i) When does a researcher use a multiple correlation and regression analysis (1mks)

 ii) State a typical multiple regression equation and explain the meaning of the indices therein

(3mks).

iii) What is the meaning of R and R^2 (2mks)

c).The following data was prepared by a researcher from field work

No. of tuition administered (X_1)	50	30	60	75	40	90	15	19	64	80
Positive performance index (Y)	55	20	59	78	55	70	20	15	60	84

i)   Apart from Pearson's r, name any other two methods you can employ to analyze your data   (2mks)

ii)   Determine the correlation between X_1 and Y using Pearson's r.   (7mks).