JARAMOGI OGINGA ODINGA UNIVERSITY OF SCIENCE AND TECHNOLOGY

SCHOOL OF EDUCATION

UNIVERSITY EXAMINATION FOR THE DEGREE OF BACHELOR OF

1ST YEAR 2ND SEMESTER 2015/2016 ACADEMIC YEAR

MAIN CAMPUS

COURSE CODE: ECT 804

COURSE TITLE: M.ED (CURRICULUM STUDIES, SNE, EDUCATIONAL ADMINISTRATION)

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

DATE: **EXAM SESSION:**

TIME: 2 HOURS

Instructions:

1. **Answer ANY 3 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.**

1. (a) What are the conditions for conducting a one-way between groups ANOVA? (4 mks)

(b) A researcher wanted to find out whether there is a significant difference between the total optimism score on the optimism scale across three age groups. While analyzing the data by conducting an ANOVA test using SPSS, the researcher obtained the output shown in tables below. Use the output tables to answer the questions that follow.

Output from a one-way between groups ANOVA

Oneway

Descriptives

Total Optimism

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
1 18-29	147	21.36	4.551	375	20.62	22.10	7	30
2 30-44	153	22.10	4.147	335	21.44	22.77	10	30
3 45+	135	22.96	4.485	386	22.19	23.72	8	30
Total	435	22.12	4.429	212	21.70	22.53	7	30

Test of Homogeneity of variance

Total Optimism

Levene Statistic	df1	df2	Sig.
746	2	432	.475

ANOVA

Total Optimism

	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	179.089	2	89.535	4.641	.010
Within Groups	833.951	432	19.292		
Total	8513.021	434			

Robust Tests of Equality of Means

Total Optimism

	Statistic	df1	df2	Sig.
Welch	4.380	2	284.508	.013
Brown-Forsythe	4.623	2	423.601	.010

Multiple Comparisons
Dependent Variable: Total Optimism
Tukey HSD

(I)Age.3 groups	(J)age 3 groups	Mean Difference (I-J)	Std. Error	Sig	95% Confidence Interval	
					Lower Bound	Upper Bound
1 18-29	2 30-44	-.744	.507	.308	-1.94	.45
	3 45+	-1.595*	.524	.007	-2.83	-.36
2 30-44	1 18-29	-.744	.507	.308	-.45	1.94
	3 45+	-.851	.519	.230	-2.07	.37
3 45+	1 18-29	1.595*	.524	.007	.36	2.83
	2 30-44	.851	.519	.230	-.37	2.07

* The mean difference is significant at the 0.05 level

(a) What was the total number of individuals that were studied? (1 mk)

(ii) With a reason state whether the assumption of homogeneity of variances was violated or not. (2 mks)

(iii) With a reason, state whether there is a significant difference between the groups. (3 mks)

(c) Describe the procedure for conducting a one-way between groups ANOVA with post-hoc tests. (10 mks)

2. A researcher collected data from four schools in two districts concerning the perception of the students about some aspects of their school. The schools were St. Anne, St. Cecilia, St. Ignatius and St. Paul and the districts were Kisumu and Migori. The questionnaire for data collection is shown below:-

Students' questionnaire

1. **District** .....
2. **School** .....
3. **Gender** .....
4. **Age** .....
5. **Indicate your level of agreement with the statements after the key below**

KEY

1 = Strongly disagree
2 = Disagree
3 = Undecided
4 = Agree
5 = Strongly Agree

(a)	**My school is the best**	**1**	**2**	**3**	**4**	**5**
(b)	**Our head teacher is good**	**1**	**2**	**3**	**4**	**5**
(c)	**Our deputy is good**	**1**	**2**	**3**	**4**	**5**
(d)	**We have the best diet**	**1**	**2**	**3**	**4**	**5**
(e)	**We are a disciplined school**	**1**	**2**	**3**	**4**	**5**

Use the above questionnaire to answer the questions that follow:-

(i) Prepare a code book for the data collected. (9 mks)

(ii) From the questionnaire which data items will give you:-

- Continuous data (2 mks)

- Discrete data (2 mks)
- Ordinal data (2 mks)

(iii)Outline the rules for naming variables. (5 mks)

3. (a) What assumptions are common to all techniques used to explore relationships among variables? (6 mks)
   (b) Describe the procedure for requesting Pearson's r from SPSS . (7 mks)
   (c) Describe the procedure for carrying out standard multiple regression using SPSS. . (7 mks)
4. A researcher conducted a research to explore sex differences in self-esteem scores and obtained the output as shown in the tables below. Use the output tables to answer the questions that follow:-

The output generated from this procedure is shown below

Group Statistics

SEX	N	Mean	Std. Deviation	Std. Error Mean
Total self-esteem MALES	484	34.02	4.91	36
FEMALES	352	33.17	5.71	36

Independent samples t-test

								95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
Total self-esteem	Equal variances assumed	3.505	.062	1.622	434	.105	85	52	18	1.87
	Equal variances not assumed			1.661	422.349	.098	85	51	18	1.85

(a) How many males and females participated in the study?
   (i) Males (1 mk)
   (ii) Females (1 mk)
(b) What is the function of Levene's test for equality of variances? (2 mks)
(c) What was the P value for the t-test? (2 mks)
(d) State whether there was a significant difference between the means for males and females and why you think so? (3 mks)
(e) What are the conditions for conducting independent samples t-test? (4 mks)
(f) Describe the procedure for conducting independent samples t-test. (7 mks)

5. (a) Distinguish between
   (i) Data view and variable view in the data editor window of SPSS. (2 mks)
   (ii) Warm booting and cold booting of a computer (2 mks)
   (iii) Code book and data file (2 mks)

   (b) Identify the types of variables for the following variable names.
   (i) Age (1 mk)
   (ii) Gender (1 mk)

(iii) Percentage marks (1 mk)
(iv) School (1 mk)

(c) How would you copy variable definition attributes to a number of other Variables? (2 mks)

(d) What are the stages involved in creating data file and entering data? (3 mks)
(e) How can one find and correct errors in a data file? (5 mks)