



KENYATTA UNIVERSITY
UNIVERSITY EXAMINATIONS 2017/2018
FIRST SEMESTER EXAMINATION FOR THE DEGREE OF MASTER OF SCIENCE IN
PROJECT MONITORING
BMS 869: DATA ANALYSIS IN MONITORING AND EVALUATION

DATE: Wednesday, 29th November, 2017

TIME: 5.30 p.m. - 8.30 p.m.

INSTRUCTIONS: Answer question **ONE** and any other **THREE** questions.

QUESTION ONE

- a) Ann intends to use the quantitative data she has gathered from the field to test the research hypotheses formulated for her master's project. On consulting with a colleague, Ann has established that the test of normality is one of the fundamental diagnostic tests that should precede testing of the research hypotheses. As a consultant in data measurement and analysis assist Ann to understand;
- i) Rationale for conducting the test of normality (2 marks)
 - ii) Any four properties of a normal distribution (4 marks)
 - iii) Any two methods that she may use to perform the test for normality (8 marks)
- b) A post-graduate student in Kenyatta University obtained the results displayed in Tables 4.1, 4.2 and 4.3 after conducting regression analysis on data obtained for the purpose of his dissertation.

Table 4.1: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	0.505 ^a	0.255	0.219	1.87063	2.199

a. Predictor: (Constant), Phone price, Siblings, Spouse Age, Age

b. Dependent Variable: Income

Table 4.2: ANOVA

Model	Sum of Square	df	Mean Square	F	Sig.
1 Regression	9.935	4	2.484	7.098	0.011 ^a
Residual	2.904	83	3.499		
Total	3.898	87			

a. Predictor: (Constant), Phone price, Siblings, Spouse Age, Age

b. Dependent Variable: Income

Table 4.3: Coefficients Results

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
	B	Std. Error	Beta			Tolerance	VIF
1 (Constant)	-274774.08	145757.413		-1.885	0.063	0.863	1.1
Age	-9376.547	3527.986	0.271	-2.658	0.009	0.951	
Spouse Age	300.587	3653.121	0.008	0.082	0.048	0.884	
Siblings	-2508.799	8249.370	-0.031	-0.304	0.762	0.991	
Phone Price	4.971	1.057	0.448	4.701	0.001		

a. Dependent Variable: Income

- i) Comment on the model summary (Table 4.1) (2 marks)
- ii) Discuss the results of in Table 4.2 (4 marks)
- iii) Interpret the results of table 4.3 (5 marks)
- iv) Develop the alternative and null hypotheses for this study (3 marks)
- v) Explain the significance of the standard error of estimate in Table 4.1 (4 marks)
- vi) Using the unstandardized coefficients in Table 4.3, formulate and interpret the regression equation (4 marks)
- vii) What is the significance of Durbin-Watson and collinearity statistics in Tables 4.1 and 4.3 respectively (4 marks)

QUESTION TWO

Explain the following levels of measurement and examine how they influence the choice of analysis of descriptive and inferential statistics

- i) Nominal (5 marks)
- ii) Ordinal (5 marks)
- iii) Interval (5 marks)
- iv) Ratio (5 marks)

QUESTION THREE

Monitoring and evaluation is an embedded concept and constitutive part of every project or program design.

- i) Examine the significance of the knowledge of monitoring and evaluation to management (10 marks)
- ii) Highlight the challenges that may be encountered in monitoring and evaluation and for each recommend a possible remedy (10 marks)

QUESTION FOUR

Write short notes on each of the following

- i) Discriminant analysis (5 marks)
- ii) Multiple response analysis (5 marks)
- iii) Non parametric test (5 marks)
- iv) Standard error (5 marks)

QUESTION FIVE

- a) Explain the differences between the following
 - i) One-sample and two-sample t test (4 marks)
 - ii) Correlation and regression analysis (4 marks)
- b) In the information age, data is no longer scarce. The key to data based decision making is to sift through the overwhelming volume of data available to organizations and businesses and correctly interpret its implications. Discuss the process of data analysis and identify the pitfalls that one should avoid when performing statistical data analysis (12 marks)