



# UGANDA MANAGEMENT INSTITUTE

POSTGRADUATE DIPLOMA IN MONITORING AND  
EVALUATION (DME): K'LA; MRA; GULU, MBL: (WKD)  
(DME) DL IV.

**SECOND SEMESTER EXAMS 2015/2016**

**MODULE: STATISTICAL SOFTWARE PACKAGES (E)**

**Date: Thursday 6 October 2016**

**Time: 09.00 AM – 12.00 NOON**

## INSTRUCTIONS

1. Answer **FOUR** Questions.
2. Question **ONE** of Section A is compulsory and carries 40 marks.
3. Answer any other **THREE** Questions from Section **B**. Each question carries **20 marks**.
4. Write clearly and legibly.
5. **Do not** write anything on the question paper.
6. **Do not** take Mobile Phones into the examination room.
7. Follow the instructions of the examination supervisor.
8. Indicate questions answered on the Answer Sheet in the column of Questions.
9. There are 2 data sets (**102016DME\_DATA\_DATA**) to be imported for Section A, and (**Ethnic\_Survey 2015\_2016.xls**) for Section B.

This paper consists of 4 printed pages

~~GOOD LUCK~~

**SECTION A:**

**COMPULSORY**

**40 MARKS**

**QUESTION ONE**

1. A UMI consultant wishes to check the relationship between performance on two prior tests and the final exam score, as the criterion. He decided to collect data from 20 PhD students. Scores for the class are given in excel **102016DME\_DATA\_DATA** on the desktop.

Age	Not coded
Gender	F-Female and M-Male
Religion	1=Catholic 2=Protestant 3=Moslem 4=Seventh day Adventist
Final Exam Scorer	Final (Y)
Test 1 score	Test 1 (X1)
Test 2 score	Test 2 (X2)

Use the data to answer the following questions

- i. Import "**102016DME\_DATA\_DATA**" from desktop to your SPSS **(2 Marks)**
  - ii. Give the appropriate measurement for each variable **(2 Marks)**
  - iii. Recode the variable (1=Female and 2=Male) **(4 Marks)**
  - iv. Recode the variable age into a new variable **Groupedage** (1=15-34, 2= 35-54, 3= 55-74, 4=75-95) **(4 Marks)**
2. i) Determine the linear regression model (standard score and raw score form) i.e.  $Y = a + b X_1 + C X_2$  and explain your results **(2 Marks)**
- ii) Determine  $R$ ,  $R^2$  and whether the multiple  $R^2$  is statistically significant **(4 Marks)**
- iii) Test the hypothesis  $H_0$ : There is no statistically significant correlation between 'Test 1 score' and 'final exam score' **(4 Marks)**
3. i) Test for normality and homogeneity for the following variables; Final Exam Scorer, Test 1 score and interpret your results **(4 Marks)**

4. i) Is there significant difference between mean of final exam score based on the age groups and gender? **(4 Marks)**
- ii) Is there is an association between these Test 1 score and Test 2 score, what is the strength of the association and is it statistically significant. **(4 Marks)**
5. i) Compute for the variable total Relative Score = final exam score / Test 2 score **(2 Marks)**
- ii) Which religion had the highest number of males within the age group of 35-54? **(4 Marks)**

## SECTION B: ANSWER ANY THREE QUESTIONS FROM THIS SECTION

### QUESTION TWO

As an M&E expert you are presented with the data from a recent survey carried out by UMIME Organisation. Here under is a survey that was conducted about community members of Namunyagwe Doho; and the collected data was captured in Excel (**Ethnic\_Survey 2015\_2016.xls**).

As a trained data Analyst, you are expected to import the Excel dataset (**Ethnic\_Survey 2015\_2016.xls**) into SPSS, modify the field values as indicated and run a number of analyses.

- a) Make modifications to the variables in the dataset. **(10 Marks)**

VARIABLE	VALUE	MEASURE
ID no		Assign
Gender	1= Male, 2=Female	Assign
Agegrp0	1=20-39, 2=40-59, 3=60years or above	Assign
Bornexug	0= Born in UG, 1= Born Outside UG	Assign
Econac8	0=Inactive/Not Known, 1=Active	Assign
Econac9	0=Inactive/Not Known, 1=Active	Assign
Econac0	0=Inactive/Not Known, 1=Active	Assign
Weight		Assign
Height		Assign
Ethnicity	1=African, 2 = Asian, 3 = American, 4 = Mixed	Assign

- b) Adapt your SPSS data by providing the following labels to the variables. **IDNO**– Identification Number, **Gender** – Sex, **Height** – Height of respondents in Centimeters, **Agegrp0** – Age of respondents in 2000, **Weight** – Weight of Respondents in kilograms, **Bornexug** – Born Outside Uganda , **Econac8**– Economically active in the 80s, **Econac9**–

Economically active in the 90s, Econac0– Economically active in the 2000s.  
(6 Marks)

- c) Compute a new variable, Body Mass index and name it BMI. (BMI = (Weight (kg) divided by Height(m))<sup>2</sup>)  
(4 Marks)

### QUESTION THREE

- a) Determine the number and percentage of respondents from each gender. Explain your observation  
(10 Marks)
- b) Determine the number and percentage of female respondents of age range 20-39. Explain your observation  
(10 Marks)

### QUESTION FOUR

- a) Determine the number and percentage of respondents from each Age range. Explain your observation  
(5 marks)
- b) Determine the number and percentage of male respondents from Asia and economically active in the 90s. Explain your observations.  
(7 marks)
- c) Generate the mean, max, min, and standard deviation of the computed value of BMI. Explain your observations.  
(8 marks)

### QUESTION FIVE

- a) Give the following objectives; use the appropriate test to show the outcome of the research. Explain your results  
(20 Marks)
- b) To examine whether there are any significant differences in mean among ethnicities that were economically active in 2000s.
- c) To show the relationship between ethnicity and economic activeness of respondents in the 2000s.

### QUESTION SIX

- a) Test for normality of the following variables: Age, Weight and Height. Interpret the results. **(8 Marks)**
- b) Compare means for age and weight between sexes. Interpret the results. **(4 marks)**
- c) Carry out the appropriate test (t-test or Man-Whitney U test) for the following variables: agegrp0 and bornexug; height and econc09. Interpret your results. **(8 Marks)**

**END**