



(University of Choice)

MASINDE MULIRO UNIVERSITY OF SCIENCE AND TECHNOLOGY (MMUST)

UNIVERSITY EXAMINATIONS

2023/2024 ACADEMIC YEAR

FIRST YEAR SECOND SEMESTER EXAMINATIONS

**FOR THE DEGREE OF DOCTOR OF PHILOSOPHY
IN
ECONOMICS OF EDUCATION**

COURSE CODE: EPM911

**COURSE TITLE: ADVANCED ECONOMETRICS IN
EDUCATION**

DATE: 18 DECEMBER 2023 TIME: 1400HRS – 1700HRS

INSTRUCTIONS TO CANDIDATES

ANSWER THREE QUESTIONS

**SAVE YOUR PRACTICAL WORK IN A MS WORD EDITOR NAMED
“EPM911_FINAL_EXAM_YOURADMISSIONNUMBER”. THE EXAMINER WILL
TAKE IT AT THE AT THE END OF THE EXAM IN SOFT COPY.**

TIME: 3 HOURS

MMUST observes ZERO tolerance to examination cheating

This Paper Consists of 2 Printed Pages. Please Turn Over.

QUESTION ONE

Design a longitudinal study and propose with reasons, the statistics you might consider in analysing the dataset (20 marks)

QUESTION TWO

Load Dataset 1 “survivalanalysis.dta or survivalanalysis.sav”

Dependent variable: duration (number of periods being unemployed), event (finding a job).

Independent variables: log wage, claim unemployment insurance, and age.

- a) Run a Cox proportional hazard model, copy the output and paste the same into a Ms Word editor (10 marks)
- b) Interpret and report the results (10 marks)

QUESTION THREE

Load Dataset 2 “quantile.dta or quantile.sav.”

Dependent variable: total medical expenditures

Independent variables: has supplemental insurance, total number of chronic conditions, age, female, and white

- a) Estimate an OLS regression, and quantile regressions at the 25th, 50th, and 75th quantile (10 marks)
- b) Transfer the regression output to a standard APA reporting format for tables (5 marks)
- c) Interpret and report the results (5mks)

(5x1mks=5)

QUESTION FOUR

Load Dataset 3 “sur_scores.dta or sur_scores.sav.”

Dependent variable for equation 1: math score.

Dependent variable for equation 2: reading score.

Independent variables for equation 1: female, program, and science score.

Independent variables for equation 2: female and social sciences score.

- a) Estimate a Seemingly Unrelated Regressions (SUR) regression model (10 marks)
- b) Transfer the regression output to a standard APA reporting format for tables (5 marks)
- c) Interpret and report the results (5 marks)