UNIVERSITY OF SWAZILAND

SUPPLEMENTARY EXAMINATION PAPER

PROGRAMME: **BACHELOR OF SCIENCE IN
AGRICULTURAL ECONOMICS AND
AGRIBUSINESS MANAGEMENT**

COURSE CODE: **AEM 302**

TITLE OF PAPER: **INTRODUCTION TO ECONOMETRICS**

TIME ALLOWED: **TWO HOURS**

INSTRUCTION: **ANSWER ALL FOUR (4) QUESTIONS**

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GRANTED BY THE CHIEF INVIGILATOR**

QUESTION #1 [40 Marks]

a) Design an ANCOVA econometric model using any variables of your choice.
   [10 Marks]
b) Define or explain your specified variables in part (a). [10 Marks]
c) Design the hypothesis test. [10 Marks]
d) Formulate the decision rule based on part (c). [10 Marks]

QUESTION #2 [20 Marks]

List and explain the anatomy of econometric modeling.

QUESTION #3 [20 Marks]

Define the following terms:

a) Covariance [5 Marks]
b) Exogenous variable [5 Marks]
c) Standard deviation [5 Marks]
d) Multicollinearity [5 Marks]

QUESTION #4 [20 Marks]

Consider the following model: $y_i = \beta_0 + \beta_1 X_1 + \mu_i$
where $X_1 = 0$ for the first 20 observations
      $= 1$ for the remaining 30 observations
a) How would you interpret β_0 and β_1? [12 Marks]
b) What is the expected value of y_i ?[8 Marks]

END OF PAPER