



**UNIVERSITY OF SWAZILAND**

**FINAL 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**

**INSTRUCTIONS: 1. ANSWER ALL FOUR (4) QUESTIONS  
2. USE THE FORMULAS ON PAGE 3 TO  
ANSWER THE QUESTION # 1**

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GRANTED BY THE CHIEF INVIGILATOR**

**QUESTION #1 [40 Marks]**

Given are five observations collected in a regression study on two variables:

$X_i$	2	4	5	7	8
$Y_i$	2	3	3	6	4

- a) Develop the estimated regression equation using the least squares method for these data. [10 Marks]
- b) Interpret the estimated coefficients. [5 Marks]
- c) Use the estimated equation to predict the value of  $y$  when  $x = 4$ . [5 Marks]
- d) Calculate the coefficient of determination. [15 Marks]
- e) Interpret the value in part (e). [5 Marks]

**QUESTION #2 [20 Marks]**

List and explain the classical or traditional econometric methodology.

**QUESTION #3 [20 Marks]**

Define the following terms:

- a) Dummy variable [5 Marks]
- b) Residuals [5 Marks]
- c) Probability regression [5 Marks]
- d) Variation [5 Marks]

**Question #4 [20 Marks]**

Discuss at least five classical linear regression model (CLRM) assumptions.