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**JOMO KENYATTA UNIVERSITY**

**OF**

**AGRICULTURE AND TECHNOLOGY**

**UNIVERSITY EXAMINATIONS 2014/2015**

**FIRST YEAR SECOND SEMESTER EXAMINATION FOR THE DEGREE OF MASTER OF SCIENCE IN FINANCE**

**HDFI 3107: FINANCIAL AND ECONOMETRIC ANALYSIS**

**DATE: APRIL 2015 TIME: 3 HOURS**

**INSTRUCTIONS: ANSWER ANY FOUR QUESTIONS IN THIS PAPER**

**QUESTION ONE: (15 MARKS)**

The following information relate to data on weekly family consumption expenditure

and weekly family income.

|  |  |
| --- | --- |
| ConsumptionExpenditure (Y) | Family Income(X) |
| 70 | 80 |
| 65 | 100 |
| 90 | 120 |
| 95 | 140 |
| 110 | 160 |
| 115 | 180 |
| 120 | 200 |
| 140 | 220 |
| 155 | 240 |
| 150 | 260 |

Use the information to:

1. Computer the squared co-efficient of correlation (r2). [12 marks]
2. Give the estimated regression line. [3 marks]

**QUESTION TWO: (15 MARKS)**

The following table gives data on Gold Prices, the consumer Price Index

(CPI) and the New York Stock Exchange (NYSE) index for the period

2000 to 2004. The NYSE Index include most of the stocks listed on the NYSE.

|  |  |  |  |
| --- | --- | --- | --- |
| Year | Price of Gold at New York in $ | Consumer Price Index | NYSE Index |
| 2000 | 147.98 | 60.6 | 53.69 |
| 2001 | 193.44 | 65.2 | 53.70 |
| 2002 | 307.62 | 72.6 | 58.32 |
| 2003 | 612.51 | 82.4 | 68.10 |
| 2004 | 459.61 | 90.9 | 74.02 |
| 2005 | 376.01 | 96.5 | 68.93 |
| 2006 | 423.83 | 99.6 | 92.63 |
| 2007 | 360.29 | 103.9 | 92.46 |
| 2008 | 317.30 | 107.6 | 108.90 |
| 2009 | 367.87 | 109.6 | 136.00 |
| 2010 | 446.50 | 113.6 | 161.70 |
| 2011 | 436.93 | 118.3 | 149.91 |
| 2012 | 381.28 | 124.0 | 180.02 |
| 2013 | 384.08 | 130.7 | 183.46 |
| 2014 | 362.04 | 136.2 | 206.33 |

An investment is supposed to be a hedge against inflation if its price of

rate of return at least keeping pace with inflation. Given the models below,

if the hypothesis is correct, what is the value of 

Gold Pricet  +  ……….. (1)

NYSE Indext  +  ……….. (2)

**QUESTION THREE: (15 MARKS)**

1. Using suitable equations explain the term Partial Regression Coefficient. [3 marks]
2. Discuss the Properties of OLS estimators of the multiple regression

models Parallel to those of the two-variable model. [12 marks]

**QUESTION FOUR: (15 MARKS)**

1. Distinguish between R2 and Adjusted R2. [5 marks]
2. Discuss the FIVE basic assumptions of the Classical Linear Regression

Model on the way in which the observations are generated. [5 marks]

1. Explain Klien’s rule of thumb in relations to Auxiliary Regression

and Multicollinearity. [5 marks]

**QUESTION FIVE: (15 MARKS)**

1. Explain the JARQUE-BERA (JB) Test of Normality. [6 marks]
2. Discuss the concept “The simultaneous Equation Bias; Inconsistency of

OLS Estimators”. [9 marks]