



# **MAASAI MARA UNIVERSITY**

**REGULAR UNIVERSITY EXAMINATIONS  
2017/2018 ACADEMIC YEAR  
FIRST YEAR SECOND SEMESTER**

**SCHOOL OF SCIENCE AND SCHOOL OF ARTS  
BACHELOR OF SCIENCE/BACHELOR OF ARTS**

**COURSE CODE: MAT1200/IRD 104  
COURSE TITLE: QUANTITATIVE SKILLS II**

**DATE: 26<sup>TH</sup> APRIL 2018**

**TIME: 1100 - 1300 HRS**

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**INSTRUCTIONS TO CANDIDATES**

- *Answer ALL questions in Section A and ANY Other TWO questions from Section B*
- *DO NOT MAKE ANY WRITING ON THIS QUESTION PAPER*

*This paper consists of FOUR printed pages. Please turn over.*

**SECTION A (30 MARKS)**

**QUESTION ONE (30 MARKS)**

- a. i. State two characteristics of index numbers **(2 Marks)**  
ii. Name any five uses of index numbers. **(5 Marks)**  
iii. Calculate index numbers from the following data by simple aggregate method taking prices of 2010 as base.

Commodity	Price per Unit in KShs.	
	2010	2014
A	80	95
B	50	60
C	90	100
D	30	45

- b. i. Company A makes a profit of £ 500 on a refrigerator of cost price £ 5000, Company B makes a profit of £ 600 on a refrigerator of cost price £ 8000. Find which company is making a better percentage profit. **(3 Marks)**
- ii. Einstein scores 90% or 36 marks in the mathematics test. Find the maximum marks of this test. **(2 Marks)**
- iii. Jane buys 2 Kgs of oil sold at \$ 52 per kg plus 4% sales tax. Find the amount paid by Jane. **(2 Marks)**
- iv. A dealer buys two cars for £ 30000 each. He sells one at 19% profit and the other at a loss of 16%. Find the overall profit made by the dealer. **(3 Marks)**
- c. i. State two characteristics of a stock exchange. **(2 Marks)**  
ii. Name two functions of stock exchange. **(2 Marks)**  
iii. State two types of investors who provide the financial capital of a company. **(2 Marks)**  
iv. Name one difference bonds and stocks. **(1 Mark)**

v. Suppose you have the option of keeping your money in a savings account that pays interest at the rate of 6% per year, compounding it every year. You plan to keep this money for the next 10 years and then withdraw it. You would like to have \$ 1000 after 10 years. how much money should you deposit right now? **(3 Marks)**

**SECTION B (40 MARKS)**

**QUESTION TWO (20 MARKS)**

a. From the following data construct an index for 2008 taking 2007 as the base by the average of price relative using: -

- i. Arithmetic mean **(4 Marks)**
- ii. Geometric mean **(5 Marks)**

<b>Commodity</b>	<b>Price in 2007</b>	<b>Price in 2008</b>
P	50	70
Q	40	60
R	80	100
S	20	30

- b. Find the amount payable by a borrower who has taken a loan of £ 10000 at 12% per year compound interest after a period of four years. **(3 Marks)**
- c. A country had an army of 1000000 people. After the war its strength was reduced at 10% per year compounded annually. Find the strength of the army after 3 years. **(3 Marks)**
- d. The ARA Corporation bonds have a coupon of 14%, pay interest semi – annually and they will mature in 7 years. your required rate of return for such an investment is 10% annually. How much should you pay for a \$ 1000 ARA Corporation bond? **(5 Marks)**

**QUESTION THREE (20 MARKS)**

- a. Samson receives a 4% commission on the merchandise he sells in a department store.
  - i. How much commission would Samson receive if the merchandise he sold totaled £ 150? **(2 Marks)**

- ii. How much would Samson have to sell to earn a commission of £ 102?  
**(2 Marks)**
- b. A restaurant in Springfield will donate 16% of the day's total sales to the elementary school.
- i. If the sales total £ 8200, how much will the school receive?  
**(2 Marks)**
- ii. If the school received £ 2600, what were the total sales for that day?  
**(2 Marks)**
- c. The current annual dividend of General Electric is \$ 0.20 while its stock is selling at 30.90. the required rate of return for the stockholders is 10%. Find the expected rate of growth company. **(4 Marks)**
- d. You believe that there is a 30% probability that the dividend by IBM next year is going to be \$ 4.50 and a 70% probability that the dividend will increase to \$ 5.00. you also feel that IBM will grow at the rate of 8% for the long term. Your required rate of return for IBM stock is 12%. How much should you pay for a share of IBM? **(4 Marks)**
- e. Name any four core objectives of modern tax system. **(4Marks)**

#### **QUESTION FOUR (20 MARKS)**

- a. Distinguish between gross domestic product and gross national product.  
**(2 Marks)**
- b. Give four examples of the basic types of records that are kept at most businesses. **(4 Marks)**
- c. Name several types of budget depending on their purpose and how they fit together in a cascade. **(4 Marks)**
- d. State three categories of a budget in terms of managerial or control issues. **(3 Marks)**
- e. Name four maxims or characteristics of a good taxation. **(4 Marks)**
- f. Oleum Ltd. Sells a bottle of wine for £6000 prior to the introduction of VAT in 2012. As from 1<sup>st</sup> December 2012, calculate the selling price if a tax of 16% was imposed by the government. **(3 Marks)**

**\*\*\*\*END\*\*\*\***