JARAMOGI OGINGA ODINGA UNIVERSITY OF SCIENCE AND TECHNOLOGY

AEC 402: Public Finance and Fiscal Policy

Final Examination

MAIN CAMPUS

Duration: 2 Hours

SECTION A

You must answer Question 1 in this section.

Q1. Rea Vipingo, with a ticker symbol (RV) is a diversified agricultural company listed in the Nairobi Securities Exchange (NSE).

RV has 500,000 shares of common stock outstanding with a market price of Kes 35 per share. The firm also has 2,000 bonds outstanding with a market value of Kes120, 000 per bond. The bonds have a 10% annual coupon rate and mature in 5 years. The firm's beta is 1.2, the T-bill rate is 5%, and the market risk premium is 7%. The tax rate is 34%.

Required:

a) What is the weighted Average Cost of Capital (WACC) for RH? **(8 marks)**

b) The CFO of Ratego Holdings has now asked you to evaluate two projects which the company would like to invest in. The cash flows of these two projects have the same risk as the company's general business. Because the projects are classified, they have been named project X and Y. The following cash flows apply to these two projects:

	Project X (Kes) ('000)	**Project Y(kes) Mils('000)**
Initial Costs	10,000	10,000
Cash flows		
Year 1	6500	3500
Year 2	3000	3500
Year 3	3000	3500
Year 4	1000	3500

i. Calculate each project's NPV, IRR, PI, and Payback. **(10 marks)**

ii. Which project(s) should be accepted if they are; (i) independent or (ii) mutually exclusive? **(4 marks)**

c) Differentiate between a primary market and a secondary market **(2 marks)**

d) Define the following terms as used in finance, giving appropriate examples where possible;

i. Risk and return
ii. Beta and risk free rate
iii. Systematic and unsystematic risk **(6 marks)**

(Total marks 30)

SECTION B

You must answer two (2) questions in this section

Q2. Income Statements and Statements of Financial Position of Elimu Holdings are given below.
Elimu Holdings deals in the supply of educational materials to schools in Kenya and is located in Thika. It has been having problems with managing its working capital. The Managing Director, Chege Wa Kamau has hired you as an analyst to get to the bottom of this problem

Income statement (Profit and loss): 2011

	Kes (Mils)	
Turnover	11.0	(Note: All sales are on credit)
Cost of sales	6.6	
Net profit	4.4	
Interest	1.0	
Profit before tax	3.4	
Taxation	1.0	
Profit after tax	2.4	
Dividends	0.4	
	2.0	

Statement of Financial Position (Balance Sheet): 2011

	Kes (Mils)	Kes (Mils)
Non-current assets		63.1
Current assets		
Inventory	1.5	
Receivables	1.4	
Cash	0.5	
	3.4	
Current liabilities		
Overdraft	2.0	
Trade payables	1.0	
Net current assets		0.4
Capital employed		63.5
Bonds		8.5
		55.0
Ordinary shares		30.0
Reserves		25.0
		55.0

Required:

(a) Define the following terms in relation to the management of working capital

- **I.** The cash flow cycle
- **II.** The cash budget
- **III.** Operating cycle
- **IV.** Cash conversion cycle
- **V.** Factoring **(5 marks)**

(b) Calculate **each** of the following ratios for Elimu Holdings:

(i) Current ratio

(ii) Quick asset (acid test) ratio

(iii) Stock turnover

(iv) Trade Receivables days

(v) Trade Payables days **(10 marks)**

(c) State what steps could be taken to improve the working capital position of Elimu Holdings.

Your answer should exclude the use of external borrowing. **(5 marks)**

(Total marks 20)

Q3. Kirinyaga Electric Company (KEC), a listed company, is in the process of looking for funding due to its current expansion plans. As a newly recruited financial analyst you are required to advice the company on a number of issues:

Required:

- **a)** What are the various debt instruments available in the Kenyan debt market **(2 marks)**
- **b)** what are the merits and demerits of the debt instruments mentioned in (a) above **(2 marks)**
- **c)** Modigliani and Miller (MM) made a tremendous contribution to the understanding of capital structure and WACC. And for this the won a Nobel Prize for economics in 1990. These statements made companies re-evaluate how they view debt and capital structure in general. What are the assumptions that underlie MM? **(6 marks)**

Kirinyaga Electric Company (KEC) uses only debt and common equity to finance its operations. It can borrow unlimited amounts at an interest rate of rd _ 10% as long as it finances at its optimal capital structure, which calls for 45 percent debt and 55 percent common equity.

Its last dividend was Kes 2.00, its expected constant growth rate is 4 percent, and its common stock sells for Kes 20. KEC's tax rate is 40 percent. Two projects are available:

Project A has a rate of return of 13 percent, while Project B's return is 10 percent. These two projects are equally risky and also about as risky as the firm's existing assets.

- **I.** What is its cost (required return) of common equity? **(3 marks)**
- **II.** What is the WACC? **(5 marks)**
- **III.** Which projects should KEC accept and why? **(2 marks)**

(Total Marks 20)

Q4. Corporate bonds have gained prominence in Kenya as means of raising funds especially for listed companies. To this end companies like Safaricom and Kengen have recently gotten into this bandwagon

a)

I) Explain the characteristics of a bond **(3 marks)**

ii) Explain the features of a risk free asset **(3 marks)**

b) Define efficient market hypothesis and explain the three forms of market efficiency. **(6 marks)**

c) Clifford Omondi is a recent retiree who is interested in investing some of his savings in corporate bonds. His financial planner has suggested the following bonds:

Bond A: has a 7 percent annual coupon, matures in 12 years, and has a Kes 100,000 face value.

Bond B: has a 9 percent annual coupon, matures in 12 years, and has a Kes 100,000 face value.

Bond C: has an 11 percent annual coupon, matures in 12 years, and has a Kes 100,000 face value.

Each bond has a yield to maturity of 9 percent.

I. Calculate the price of each of the three bonds. **(6 marks)**

II. Comment on your calculations in (i) above and advise Mr. Omondi on which bond to purchase if he can only buy one **(2 marks)**

(Total marks 20)

Q5. The Kenya Government recently floated a **Sovereign Bond** in the international debt markets. This has been greatly celebrated as now Kenya has a reference rate for pricing debt instruments

Required:

a) Explain briefly what is a Sovereign Bond? **(4 marks)**

b) Differentiate between a Sovereign bond, Corporate Bond and a Treasury Bond **(3 Marks)**

c) There has been great debate on the interest rate regime in Kenya, especially in regards to commercial banks in Kenya. Experts have pointed out that commercial banks have failed to take the cue from the Central Bank of Kenya's Monetary Policy Committee (MPC) as regards to interest signals. Articulate your opinion on this issue **(6 marks)**

d) Differentiate between Moral Hazard (as used in financial markets) and agency theory. **(4 Marks)**

e) Insider trading has been for many years a big problem in financial markets, not only globally but in Kenya as well. Characterise insider trading and articulate the remedies for this phenomenon. **(3 Marks)**

(Total: 20 marks)

END