

**CERTIFIED PUBLIC ACCOUNTANT
INTERMEDIATE LEVEL EXAMINATIONS**

I1.1: MANAGERIAL FINANCE

THURSDAY: 3 DECEMBER 2020

INSTRUCTIONS:

1. **Time Allowed: 3 hours 15 minutes** (15 minutes reading and 3 hours writing).
2. This examination has **two** sections; **A & B**.
3. Section A has **three** Compulsory Questions while B has three questions of which **two** Should be attempted.
4. In summary attempt **Five** questions.
5. Marks allocated to each question are shown at the end of the question.
6. Show all your workings where necessary.

SECTION A

QUESTION ONE

Imena Co. Ltd is a public limited company listed on the Rwanda Stock Exchange (RSE) located in Muhanga District. The company is specialised in the production of beverages brewed locally. Imena Co. Ltd intends to pursue its expansion strategy recently approved by its Board of Directors due to the challenges presented by the current global economic contractions due to the COVID-19 pandemic.

From that, Imena Co. Ltd has issued 1 million ordinary shares on the stock market. The market value of each ordinary share is Rwf 75 and its equity beta is 0.9. The company is also financed by 7% bonds with a nominal value of Rwf 100 per bond, which will be redeemed in 7 years' time at nominal value. The bonds have a total nominal value of Rwf 14 million. Interest on the bonds has just been paid and the current market value of each bond is Rwf 170.14.

Imena Co. Ltd plans to invest in a pandemic-proof project which is different from its current business operations and has been advised by its investment advisor to invest in an existing company in the same business area as the intended project, Isano Co. Ltd. The equity beta of Isano Co. Ltd is 1.2 and the company has an equity market value of Rwf 54 million. The market value of the debt of Isano Co. Ltd is Rwf 12 million.

Consider the following additional information presented by the company's investment advisor:

Particulars	Company	Remarks
Risk-free rate of return	Imena Co. Ltd	4% per year
Average return on the stock market	Imena Co. Ltd	11% per year
Corporate tax rate	Both companies	30% per year

Required:

- a) Calculate the current weighted average cost of capital of Imena Co. Ltd. (6 Marks)
- b) Calculate a cost of equity which could be used in appraising Isano Co. Ltd. (5 Marks)
- c) Differentiate between systematic and unsystematic risk in relation to portfolio theory. (4 Marks)
- d) The Board of Directors of Imena Co. Ltd is considering alternative sources of capital since board members are sceptical of raising funds through equity financing.

Required:

As an investment advisor, prepare a report to the board of directors of Imena Co. Ltd discussing two other possible long-term sources of funds available for the company.

(10 marks)

(Total: 25 marks)

QUESTION TWO

Muramira Ltd is a Rwandan private company in the dairy products business and distributes dairy products to various dairies and milk selling shops across the country and abroad. For the past ten years, the company has been trading and has over 150 outlets throughout East Africa. Due to the recent business environment reforms that have resulted in impressive improvements in World Bank Doing Business report ranking for Rwanda, Techno Milk plc, a UK-based multinational dairy company has expressed interest in acquiring 51% stakes in Muramira Ltd.

Extracts from the most recent financial statements of Muramira Ltd are provided below:

Statements of Financial Position as at 31st December 2019

Particulars	December 2019 (RWF'000,000')
Non-Current Assets	
Goodwill	600
Land and Buildings	350
Plant and Machinery	550
Investments	500
Current Assets	
Trade Receivables	500
Inventories	400
Cash and Cash Equivalents	200
Current Liabilities	
Trade and Other Payables	600
Bank Loans and Overdrafts	120
Total Assets (Net)	2,380
Share Capital (nominal Rwf 2 per shares)	1,000
Long Term Debt	1,000
Retained Earnings	380
Total Equity & Long Term Liabilities	2,380

The previous 5 years dividends are Rwf 50 million each year and remain unchanged and no interim dividend has been paid. The goodwill consists of a value determined by the directors of Muramira Ltd based on their assessment of the company's brand and reputation.

Additional Information:

- Trade receivables include a debt of Rwf 25 million (which needs to be written off since the customer has gone into liquidation). The industry norm is to provide 20% against the gross of receivables for bad debts.
- Techno Milk plc's independent valuation indicated that at the end of the year the market value of Land and Buildings amounted to Rwf 2.1 billion, and Plant and Machinery was Rwf 0.2 billion.
- Assume no taxation implications.
- The notes to the accounts reveal that the market values of investments are as follows: Listed Shares Rwf 50 million; (Book value Rwf 350 million); and Government bonds Rwf 180 million; (Book value Rwf 50 million).
- The remaining investment was a premium site in the much sought after International Financial Services Centre.
- The market value of this investment has increased four-fold on its book value.
- Muramira Ltd has a pending legal case brought against it by one of its clients and has provided for this. It has understated the liability by Rwf 160 million against the amount provided for in the accounts.
- For the purposes of valuation, it was agreed to use average P/E ratio and dividend yield of the two companies quoted below but Muramira Ltd's P/E to be reduced by 30% as it is a private company.

Company	P/E Ratio	Dividend Yield
Muramira Ltd	6.4	1.12%
Techno Milk plc	7.8	1.85%

A review of the previous year's Statement of Comprehensive Income reveals the following:

Particulars	2019	2018	2017	2016	2015
Operating Profit	490	441	400	340	270
Profit Before Tax	350	290	250	190	150
Profit After Tax	290	190	140	80	40

All amounts are in Rwf ‘million’.

Industry profits are expected to grow at a compound annual rate of 5% according to independent research. The directors of Muramira Ltd expect profits to increase by 20% per annum over the next five years.

Required:

- a) Prepare a summary report to the directors of Muramira Ltd indicating Value per share based on the following methods:

- i. Net Assets Basis. (4 Marks)
- ii. Earnings Basis (assume no growth). (4 Marks)
- iii. Earnings Basis (assume growth). (4 Marks)
- iv. Dividend Yield. (4 Marks)

- b) Discuss the discounted cash flow method as a technique used in valuing companies

(4 Marks)

(Total: 20 marks)

QUESTION THREE

Gumamurugo Ltd is considering investing in one of the two portfolios of financial investments presented within Rwanda.

The company’s objective is to reduce risk associated with undiversified business operations because of the severe financial losses incurred during the COVID-19 pandemic. Gumamurugo Ltd.’s business operations were heavily affected by the pandemic and as a result, the company’s management is exploring possible investment opportunities for diversification purposes. The company’s management believes that the return on any individual investment is not correlated with the return on any other investment.

The return on market portfolio is estimated to be 15% and risk-free rate is 5%. The amount invested, the expected return, the standard deviation, and betas for each portfolio are given as follows:

Portfolio 1:

Investment	Amount Invested	Expected Return	Total Risk	Equity Beta
Company A	Rwf 60M	24%	11%	1.3
Company B	Rwf 40M	26%	9%	1.4

Portfolio 2:

Investment	Amount Invested	Expected Return	Total Risk	Equity Beta
Company C	Rwf 50M	25%	12%	1.2
Company D	Rwf 50M	26%	13%	1.4

Required:

- a) Calculate the expected return and standard deviation of each portfolio. (6 Marks)
- b) Estimate the required rate of return on the two portfolios using the Capital Asset Pricing Model, and advise the management which portfolio should be selected. (5 Marks)
- c) Discuss Two advantages and Two disadvantages of utilising Portfolio Theory to assist with portfolio selection. (4 Marks)

(Total: 15 marks)

SECTION B

QUESTION FOUR

Nzabagerageza is an ambitious young executive who has recently been appointed to the position of financial director of Nyagatare Investments plc, a small company listed on the Rwanda Stock Exchange (RSE). Nzabagerageza regards his appointment as temporary, enabling experience before moving to a larger organisation. His intention is to leave Nyagatare Investments plc in three years' time, with its share price standing high. As a consequence, he is particularly concerned that the reported profits of Nyagatare Investments plc should be as high as possible in his third and final year with the company.

Nyagatare Investments plc has recently raised Rwf 350,000,000 from a rights issue, and the directors are considering three ways of using these funds. Three projects (A, B, and C) are being considered, each involving the immediate purchase of equipment costing Rwf 350,000,000. One project only can be undertaken, and the equipment will have a useful life equal to that of the project, with no scrap value. Nzabagerageza favours project C because it is expected to show the highest accounting profit in the third year. However, he does not wish to reveal his real reasons for favouring project C, and so, in his report to the chairman, he recommends project C because it shows the highest internal rate of return. The following summary is taken from his report:

Project	Net cash flows (RWF'M') Years									Internal rate of return (%)
	0	1	2	3	4	5	6	7	8	
A	-350	100	110	104	112	138	160	180	-	27.5
B	-350	40	100	210	260	160	-	-	-	26.4
C	-350	200	150	240	40	-	-	-	-	33.0

The chairman of the company is accustomed to projects being appraised in terms of payback and accounting rate of return, and he is consequently suspicious of the use of internal rate of return as a method of project selection. Accordingly, the chairman has asked for an independent report of the choice of project. The company's cost of capital is 20% and a policy of straight line depreciation is used to write off the cost of equipment in the financial statements.

Required:

- a) Calculate the payback period for each project. (3 Marks)
- b) Calculate the accounting rate of return for each project. (3 Marks)
- c) Prepare a report to the chairman with supporting calculations indicating which project should be preferred by the ordinary shareholders of Nyagatare Investments plc. (14 Marks)

Note: Ignore taxation.

(Total: 20 marks)

QUESTION FIVE

Shema Ltd is a Rubavu-based company dealing in the production of banana wine. Its Managing Director, Mrs. Mukunde, is a University of Rwanda graduate who grew up in Gisenyi and has enormous experience in managing start-ups such as Shema Ltd. However, Mrs. Mukunde has little experience in corporate finance and relies on her technical team for advice on key decisions involving finance. Shema Ltd has published its financial statements for the year ended 2019 and is expected to pay dividends to its shareholders following the recent Annual General Assembly that took place at Serena Hotel in Rubavu.

Required:

You are Shema Ltd.'s investment analyst and Mrs. Mukunde has asked you to prepare a report detailing the following:

- a) Discuss Four forms of dividends. (8Marks)
- b) Explain the concept of Dividend-Irrelevance Theory (MM Theory) in company valuation and outline its Five assumptions. (7Marks)
- c) Discuss factors that Shema Ltd is likely consider in paying dividends. (5Marks)

(Total: 20 Marks)

QUESTION SIX

- a) Rwamuganza, Manzi, and Keza are three shareholders that own a small company, RMK Ltd, which buys mobile phones from Asia and sells them in Rwanda. The following is an extract from Keza's email to her two colleagues, Rwamuganza and Manzi:

‘Fellow shareholders,

I recently attended a business conference organised by the Institute of Certified Public Accountants of Rwanda (ICPAR) and one of the concepts discussed during the conference was working capital management. I listened to experts invited by ICPAR discussing the importance of efficiently monitoring the current assets and liabilities of a company and various other concepts. I would like to, therefore suggest that we invite an expert on the market to explain to us this vital concept as I believe that the benefits will be enormous for our company.’

You are a business expert who has won a tender recently published by RMK Ltd and have been requested to submit your final report.

Required:

Prepare an extract of your report to RMK Ltd discussing the following strategies of working capital management using liquidity and risk as comparative factors:

- i. Matching strategy. (3 Marks)**
- ii. Conservative strategy. (3 Marks)**
- iii. Aggressive strategy. (3 Marks)**

b) Gitifu Ltd, a local small enterprise, has been facing working capital management issues for the past three years. Its Director of Finance recently organised a workshop for all finance department personnel to discuss ways to improve the working capital management issues faced by the company. Gitifu Ltd has annual credit sales of Rwf 260,750,000 and has a credit settlement policy of 40 days but customers have been taking longer to pay on average. An assessment of the company’s historic accounts reveals approximately 1% bad debt rate for its credit sales.

Gitifu Ltd currently has trade receivables amounting to Rwf 40,458,000 and the company’s cost of short-term finance is 5% per year.

One of the ideas shared by staff during the workshop is using a factoring company to manage trade receivables. The idea was presented and approved, following which Mbyo Ltd, a reputable debt management company, was invited to tender to manage trade receivables of Gitifu Ltd on a with-recourse basis. In preliminary interaction, Mbyo Ltd told the management of Gitifu Ltd that using its expertise, average trade receivables days will be reduced to 35 days, bad debts cut by 70%, and administration costs reduced by Rwf 500,000 per year. A clause in the factoring agreement stipulates

that Gitifu Ltd would advance 80% of the value of invoices raised at an interest rate of 7% per year. Mbyo Ltd.'s annual fee for the services rendered would be 0.75% of credit sales of Gitifu Ltd.

Required:

- i. Advise whether Mbyo Ltd.'s offer is financially acceptable to Gitifu Ltd. (7 Marks)
- ii. Discuss Two advantages and Two disadvantages of Factoring as a debt and creditor management policy (4 Marks)

(Total: 20 marks)

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