CERTIFIED PUBLIC ACCOUNTANT

ADVANCED LEVEL 2 EXAMINATIONS

A2.1: STRATEGIC CORPORATE FINANCE

DATE: WEDNESDAY 23, AUGUST 2023

INSTRUCTIONS:

1. **Time Allowed: 3 hours 45 minutes** (15 minutes reading and 3 hours 30 Minutes writing).
2. This examination has two sections: A & B.
3. Section A has one Compulsory Question while section B has three optional questions to choose any **two**.
4. In summary attempt **THREE** questions.
5. Marks allocated to each question are shown at the end of the question.
6. Show all your workings where necessary.
7. The question paper should not be taken out of the examination room.

SECTION A

QUESTION ONE

a) Investment Proposal I

Ganza Company Ltd (GCL) is a fertilizer manufacturing company. It is considering investing FRW 12,000,000 in the purchase of a new machine for manufacture of fertilizers in one its branches located in a remote area in the Western part of the country. The expected life of the machine is 5 years.

The production manager expects that under favorable market conditions 1,000,000 Kgs will be produced and sold each year at selling price of FRW 5 per kg. Variable production costs are expected to be FRW 1.2 per kg while incremental fixed costs are expected to be FRW100,000.

If the machine is purchased, it would have zero scrape value at the end of the 5 years. The company's nominal discount rate is 10% per year for investment appraisal purposes.

In a recent board meeting, various issues were discussed among were investment proposal, downsizing the labor force of company, reducing the salary of the Managing Director and reducing pollution that would result from the investment in the remote area of the country. Some members opposed the idea of investing in the remote area claiming it would cause more health hazards to the residents. Other members reacted to the issue of reducing the employees and the MD's salary as not being fair because the company is there for all the stakeholders not just the shareholders. The meeting suggested some consultations on each of the issues discussed.

Investment Proposal II

In the same meeting, the Finance Manager had proposed an idea of the purchasing shares in Mugera Company Ltd (MCL) which also deals with food processing instead of the first investment proposal. A summary of the financial information gathered about the industry and company in which MCL operates indicated that the risk-free rate is 5% and the market return is 9% while MCL's equity beta was 1.5

Required:

You are hired by the chair of the board as independent consultant to look into the matter and provide them with the solutions to those issues. in your capacity as a consultant,

i) **Evaluate the sensitivity of the project's net present value (NPV) to a change in revenue and variable cost and discuss the use sensitivity analysis in evaluating project risk.** (14 Marks)

ii) **Advise the board whether the investment proposal I is financial acceptable using the Internal Rate of Return (IRR).** (5 Marks)

iii) **Highlight three draw backs of sensitivity analysis as a method of treating risk and uncertainty.** (3 Marks)

iv) **Explain five causes of the agency problem and discuss five ways of solving that problem.** (10 Marks)

v) **Calculate the required rate of return for investment proposal II using Capital Asset Pricing Model.** (2 Marks)

vi) **Explain three assumptions and three limitations of using Capital Asset pricing Model (CAPM)** (6 Marks)

b) Agaciro Limited

Agaciro Limited (AL) is company that distributes construction materials in the East Africa. The company is headquartered in Kigali, Rwanda and has been in operation for more than a decade. AL is considering opening up other branches in Kenya and Tanzania next year.

Below are the extracts of the financial statements of Agaciro Limited.

Statement of Profit and Loss for the year ended 31st December 2022

Particulars	2022	2021
	FRW "Million"	FRW "Million"
Revenue (All credit sales)	9,200	4,600
Cost of sales	6,500	3,300
Gross profit	**2,700**	**1,300**
Less: Expenses	1,380	700
Net Profit	**1,320**	**600**

Statement of financial position as at 31st December 2022

Particulars	2022	2021
	FRW "Million"	FRW "Million"
Non - Current Assets at NBV		
Property, plant and equipment	17,000	5,000
Other assets	4,800	2,600
Total Non – Current Assets	**21,800**	**7,600**
Current Assets		
Inventory	3,500	1,200
Trade receivables	5,600	1,400
Cash and cash equivalents	1,200	4,400
Total Current Assets	**10,300**	**7,000**
Total Assets	**32,100**	**14,600**
Equity and Liabilities		
Equity		
Share Capital	500	500
Reserves	17,200	4,500
Total Equity	**17,700**	**5,000**
Non-Current Liabilities		
Long-term borrowings	**3,000**	**5,000**
Current Liabilities		
Trade payables	3,400	1,550
Short-term borrowings	6,220	600
Bills payable	1,700	2,400
Dividend payable	80	50
Total Current Liabilities	**11,400**	**4,600**
Total Liabilities	**14,400**	**9,600**
Total Equity and liabilities	**32,100**	**14,600**

Additional information:
1. AL is allowed a period of 30 days from its creditors.
2. AL uses 365 days of the year.

Required:

i) **You are requested by the management of AL to prepare a report that assesses the company's working capital management using working capital cycle for the year ended 31st December 2022.** (5 Marks)

ii) **Discuss five factors that influence for formulation of the effective working capital policy for any business** (5 Marks)

(Total: 50 Marks)

SECTION B

QUESTION TWO

(a) Ruyonza Company Ltd

Ruyonza Co Ltd (RCL) is a company which distributes and sells electric equipment. The company based in Rwanda and has existed for over 10 years. RCL's treasury department hedges foreign risks of transactions using forward contracts and money market contracts and reports its results in its home currency.

RCL exported electric products worth EGP 50 million to its Egyptian customer. The customer is expected to pay for products on 31 July 2023. It is currently 31 January 2023. The company is considering establishing a subsidiary in Egypt.

Forward contract

Exchange rates EGP/FRW

Spot	3.5212 – 3.5229
Three months forward	3.5242 – 3.5261
Six months forward	3.5276 – 3.5298

Money Market Contract

Country	Deposit rate	Borrowing rate
Egypt	6.0%	10.2%
Rwanda	7.4%	11.6%

Required:

i) **Evaluate which of the two methods of hedging would provide RCL with the better receipt from the Egyptian customer** (5 Marks)

ii) **Explain three foreign currency risks that RCL would be exposed to and their impact to the company if it was to continue with international trade.** (6 Marks)

(b) Kazi Ltd

Kazi Ltd, a Rwandan Company dealing in mining, wishes to borrow FRW 700 million for a period of six months from Kigali Commercial Bank in three months' time. Once the loan is taken out the bank will fix the interest rate at its prevailing lending rate. The Finance Manager of Kazi Ltd reckons that the lending rate could be 11.5 % per year at its lowest or 13.5% per year at its highest. The Finance Manager would like to hedge against interest rate risk arising from the future loan and the company's bank has offered a 3 – 9, 12.5% - 11.5 % forward agreement. Interest on the loan would be payable at the end of the loan period.

Required:

Evaluate the proposed forward rate agreement offered by the bank as a way of managing the interest rate risk anticipated by Kazi ltd. (4 Marks)

(c) **Discuss the following approaches to managing / hedging transactions exposure:**

i) Leading and Lagging (2 Marks)

ii) Matching (2 Marks)

iii) Forward exchange contracts (2 Marks)

iv) Currency options (2 Marks)

(d) **Briefly explain what is meant by a currency swap as used in international trade** (2 Marks)

(Total: 25 Marks)

QUESTION THREE

a) Mutoni is an investor who is considering investing her money in Kanombe Ltd, an unlevered company. She holds 15% shares in Kabeza Ltd a levered company. Mutoni has been told by a friend that the value of a firm increases with a firm that uses debt in its capital structure compared to the firm that is all financed by equity. She thinks that if a company borrows more funds, it will be declared bankrupt shortly due to failure to pay those debts.

You are approached by Mutoni as an investment consultant to guide on the investment proposals. The extract of financial information for both companies:

Sources of capital	**Kabeza Ltd**	**Kanombe Ltd**
	FRW	**FRW**
Debt (@ 10%)	200,000,000	-
Equity	200,000,000	400,000,000
Earnings before interest and tax	50,000,000	50,000,000

Additional information:

1. Both companies face some business risks
2. Capital employed is FRW 400,000,000
3. Corporate tax is 30%
4. Cost of equity is 12.5%
5. Assume that the net earnings will continue to be constant in the future

Required:

i) **Evaluate the proposed investment by calculating an increase in the earnings of the investor if she switches her holding from Kabeza Ltd to Kanombe Ltd.** (8 Marks)

ii) **Explain to Mutoni about capital structure theory of Modigliani – Miller Approach, elaborating the approach with and without tax.** (6 Marks)

b) The Finance Manager of Blessings Co is concerned that the company may be overtrading and approached you to analyze the financial data of the company so as to verify and then help them to solve the problem.

Financial information of the company

Particulars	**2022**	**2021**
	FRW"000"	**FRW"000"**
Credit sales	58,200	45,750
Cost of sales	54,600	42,620
Operating profit	3,600	3,130
Less: interest	300	250
Profit before taxation	**3,300**	**2,880**

Particulars	**2022** **FRW"000"**	**2021** **FRW"000"**
Non - current assets	15,620	14,750
Current assets		
Inventory	5,400	3,400
Trade receivables	5,200	3,200
Total Current Asset	**10,600**	**6,600**
Total Assets	**26,220**	**21,350**
Capital and Reserves		
Share Capital	7,000	7,000
Reserves	7,540	6,450
	14,540	**13,450**
Current liabilities		
Trade payables	5,850	3,400
Overdraft	4,530	2,500
Total Current liabilities	**9,680**	**5,900**
Non-current liabilities		
10% Debenture	2,000	2,000
Total Equity and liabilities	**26,220**	**21,350**

Assume 365 days of the year

Required:

i) Use the above financial information to discuss, with supporting calculations, whether or not Blessings Co is overtrading. (7 Marks)

ii) Explain to the Finance Manager two causes and two remedies of overtrading for the company. (4 Marks)

(Total: 25 Marks)

QUESTION FOUR

a) Abeza Ltd (AL) is considering takeover of Baho Ltd (BL) and Cyuma Ltd (CL). The financial data for the three companies is provided in the table below:

Particulars	Abeza Ltd.	Baho Ltd.	Cyuma Ltd.
Equity share capital each FRW 10 ("Million")	600	240	120
Earnings (FRW "Million")	120	24	24
Market price of each share (FRW)	90	44	54

Required:

i) **Calculate the Price Earnings Ratio of each the three companies in the data provided above** (6 Marks)

ii) **Compute the Earnings per share of AL after the acquisition of BL and CL separately assuming the takeover takes place by exchange of equity shares and the exchange ratio is based on the prevailing market price. With Justification would you recommend AL to takeover either one or both companies?** (7 Marks)

iii) **Briefly explain three arguments for and three arguments against mergers and acquisitions** (6 Marks)

b) Iriba Company Ltd (ICL) is a firm that specializes in the production of freshly imported farm products from Denmark. ICL has been in operation for 15 years in Western province of Rwanda. The industry in which ICL operates is characterized by high levels of innovation and competition from old and new entrants in that some disappeared very quickly from the seen. ICL is considering venturing in the production of new products so as to survive in the market however the CEO wants to first know their performance along with best in the industry. You have been hired as an analyst for ICL to analyze some of the key financial performance indicators with a benchmark to industry. You are provided you with the following data for ICL and their industry.

Financial Ratios	2022	2021	2020	2022 Industry Average
Quick Ratio	1.026	1.031	1.028	1.032
Current Ratio	1.32	1.20	1.17	1.26
Days' sales in receivables	115	97	95	130.32
Debt to Equity	0.78	0.86	0.91	0.89
Profit Margin	0.085	0.072	0.061	0.075
Total Asset Turnover	0.54	0.65	0.70	0.40
Equity Multiplier	1.75	1.85	1.90	1.88
Interest Coverage Ratio	0.9	4.38	4.45	4.65
Inventory Turnover	62.65	42.42	32.25	53.25
Long-term debt to Total Assets Ratio	0.44	0.40	0.35	0.35

Required:

Assess the financial performance of the company with regard to its ratios with the industry for the given years above. The selected performance indicators are solvency and leverage, asset management and liquidity. (6 Marks)

(Total: 25 Marks)

Present value interest factor of FRW1 per period at i% for n periods, PVIF(i,n)

Period	1%	2%	3%	4%	5%	6%	7%	8%	9%	10%
1	0.990	0.980	0.971	0.962	0.952	0.943	0.935	0.926	0.917	0.909
2	0.980	0.961	0.943	0.925	0.907	0.890	0.873	0.857	0.842	0.826
3	0.971	0.942	0.915	0.889	0.864	0.840	0.816	0.794	0.772	0.751
4	0.961	0.924	0.888	0.855	0.823	0.792	0.763	0.735	0.708	0.683
5	0.951	0.906	0.863	0.822	0.784	0.747	0.713	0.681	0.650	0.621
6	0.942	0.888	0.837	0.790	0.746	0.705	0.666	0.630	0.596	0.564
7	0.933	0.871	0.813	0.760	0.711	0.665	0.623	0.583	0.547	0.513
8	0.923	0.853	0.789	0.731	0.677	0.627	0.582	0.540	0.502	0.467
9	0.914	0.837	0.766	0.703	0.645	0.592	0.544	0.500	0.460	0.424
10	0.905	0.820	0.744	0.676	0.614	0.558	0.508	0.463	0.422	0.386
11	0.896	0.804	0.722	0.650	0.585	0.527	0.475	0.429	0.388	0.350
12	0.887	0.788	0.701	0.625	0.557	0.497	0.444	0.397	0.356	0.319
13	0.879	0.773	0.681	0.601	0.530	0.469	0.415	0.368	0.326	0.290
14	0.870	0.758	0.661	0.577	0.505	0.442	0.388	0.340	0.299	0.263
15	0.861	0.743	0.642	0.555	0.481	0.417	0.362	0.315	0.275	0.239

Present value interest factor of FRW1 per period at i% for n periods, PVIF(i,n)

Period	11%	12%	13%	14%	15%	16%	17%	18%	19%	20%
1	0.901	0.893	0.885	0.877	0.870	0.862	0.855	0.847	0.840	0.833
2	0.812	0.797	0.783	0.769	0.756	0.743	0.731	0.718	0.706	0.694
3	0.731	0.712	0.693	0.675	0.658	0.641	0.624	0.609	0.593	0.579
4	0.659	0.636	0.613	0.592	0.572	0.552	0.534	0.516	0.499	0.482
5	0.593	0.567	0.543	0.519	0.497	0.476	0.456	0.437	0.419	0.402
6	0.535	0.507	0.480	0.456	0.432	0.410	0.390	0.370	0.352	0.335
7	0.482	0.452	0.425	0.400	0.376	0.354	0.333	0.314	0.296	0.279
8	0.434	0.404	0.376	0.351	0.327	0.305	0.285	0.266	0.249	0.233
9	0.391	0.361	0.333	0.308	0.284	0.263	0.243	0.225	0.209	0.194
10	0.352	0.322	0.295	0.270	0.247	0.227	0.208	0.191	0.176	0.162
11	0.317	0.287	0.261	0.237	0.215	0.195	0.178	0.162	0.148	0.135
12	0.286	0.257	0.231	0.208	0.187	0.168	0.152	0.137	0.124	0.112
13	0.258	0.229	0.204	0.182	0.163	0.145	0.130	0.116	0.104	0.093
14	0.232	0.205	0.181	0.160	0.141	0.125	0.111	0.099	0.088	0.078
15	0.209	0.183	0.160	0.140	0.123	0.108	0.095	0.084	0.074	0.065

Present value interest factor of an (ordinary) annuity of FRW1 per period at i% for n periods, PVIFA(i,n).

Period	1%	2%	3%	4%	5%	6%	7%	8%	9%	10%
1	0.990	0.980	0.971	0.962	0.952	0.943	0.935	0.926	0.917	0.909
2	1.970	1.942	1.913	1.886	1.859	1.833	1.808	1.783	1.759	1.736
3	2.941	2.884	2.829	2.775	2.723	2.673	2.624	2.577	2.531	2.487
4	3.902	3.808	3.717	3.630	3.546	3.465	3.387	3.312	3.240	3.170
5	4.853	4.713	4.580	4.452	4.329	4.212	4.100	3.993	3.890	3.791
6	5.795	5.601	5.417	5.242	5.076	4.917	4.767	4.623	4.486	4.355
7	6.728	6.472	6.230	6.002	5.786	5.582	5.389	5.206	5.033	4.868
8	7.652	7.325	7.020	6.733	6.463	6.210	5.971	5.747	5.535	5.335
9	8.566	8.162	7.786	7.435	7.108	6.802	6.515	6.247	5.995	5.759
10	9.471	8.983	8.530	8.111	7.722	7.360	7.024	6.710	6.418	6.145
11	10.368	9.787	9.253	8.760	8.306	7.887	7.499	7.139	6.805	6.495
12	11.255	10.575	9.954	9.385	8.863	8.384	7.943	7.536	7.161	6.814
13	12.134	11.348	10.635	9.986	9.394	8.853	8.358	7.904	7.487	7.103
14	13.004	12.106	11.296	10.563	9.899	9.295	8.745	8.244	7.786	7.367
15	13.865	12.849	11.938	11.118	10.380	9.712	9.108	8.559	8.061	7.606

Present value interest factor of an (ordinary) annuity of FRW1 per period at i% for n periods, PVIFA(i,n).

Period	11%	12%	13%	14%	15%	16%	17%	18%	19%	20%
1	0.901	0.893	0.885	0.877	0.870	0.862	0.855	0.847	0.840	0.833
2	1.713	1.690	1.668	1.647	1.626	1.605	1.585	1.566	1.547	1.528
3	2.444	2.402	2.361	2.322	2.283	2.246	2.210	2.174	2.140	2.106
4	3.102	3.037	2.974	2.914	2.855	2.798	2.743	2.690	2.639	2.589
5	3.696	3.605	3.517	3.433	3.352	3.274	3.199	3.127	3.058	2.991
6	4.231	4.111	3.998	3.889	3.784	3.685	3.589	3.498	3.410	3.326
7	4.712	4.564	4.423	4.288	4.160	4.039	3.922	3.812	3.706	3.605
8	5.146	4.968	4.799	4.639	4.487	4.344	4.207	4.078	3.954	3.837
9	5.537	5.328	5.132	4.946	4.772	4.607	4.451	4.303	4.163	4.031
10	5.889	5.650	5.426	5.216	5.019	4.833	4.659	4.494	4.339	4.192

End of question Paper

BLANK PAGE