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CERTIFIED PUBLIC ACCOUNTANT

INTERMEDIATE LEVEL EXAMINATIONS

I1.1: MANAGERIAL FINANCE

DATE: THURSDAY, 02 DECEMBER 2021

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.
7. The question paper should not be taken out of the examination room.

SECTION A

QUESTION ONE

a) Kigali Gaz Limited (KG Ltd) supplies and distributes home cooking gas to home, schools, restaurants, prisons within Kigali city and secondary cities. The management of KG Ltd are reviewing the company's capital investment for the coming years, you have given the following investment proposal concerning six new projects (D, E, F, G, H and I).

Project D would cost FRW 30,000,000 and would earn the following cash inflow

Period	**FRW**
Year 1	8,000,000
Year 2	10,000,000
Year 3	12,000,000
Year 4	6,000,000
Year 5	13,000,000

Project E would involve a current outlay of FRW 45,000,000 on equipment and FRW 21,000,000 on working capital. The profit of the project would be as follows:

	Year 1 (FRW)	**Year 2(FRW)**	**Year 3(FRW)**
Sales	76,000,000	91,000,000	43,000,000
Variable cost	51,000,000	60,000,000	29,000,000
Contribution	25,000,000	31,000,000	14,000,000
Fixed Cost	10,000,000	10,000,000	7,000,000
Profit	15,000,000	21,000,000	7,000,000

Fixed costs include an annual charge of FRW 5,000,000 as depreciation. At the end of the third year, the working capital investment would be recovered, and the equipment would be sold for FRW 5,000,000

Project F would involve an initial outlay of FRW 51,000,000 on equipment and FRW 16,000,000 on working capital. The investment in working capital would be increased to FRW 22,000,000 at the end of the first year. Annual cash profit would be FRW 18,000,000 for five years, at the end of which the investment in working capital would be recovered.

Project G would involve an initial outlay of FRW 19,000,000 now and additional amount of FRW 23,000,000 after one year. Cash inflow thereafter would be as follows:

Period	**FRW**
Year 2	16,000,000
Year 3	14,000,000
Year 4 to 8th years	6,000,000 p.a

Project H is a long-term project involving an immediate outlay of FRW 35,000,000 and annual cash profit of FRW 4,800,000 in perpetuity.

Project I is another long-term project, involving an immediate outlay of FRW 25,000,000 and annual cash profit as follows:

Period	**FRW**
Year 1 to 5^{th} years	6,000,000
Year 6 to 10^{th} years	5,000,000
Year 11 onwards forever	3,000,000

KG Ltd discounts projects cash flows of ten years duration or less at a cost of capital of 12% and all other projects at a cost of 15%.
Ignore taxation

Required:

a) Using the above information on KG Ltd

   (i) Calculate the NPV of each project, and determine which should be undertaken by the company on financial grounds. (14 Marks)

   (ii) Calculate the Internal Rate of Return (IRR) of project D. (4Marks)

b) **The management of Kigali Gaz Limited (KG Ltd)is in the process of listing the company on Rwanda stock exchange and has approached your advice; discuss the probable reasons why KG Ltd management should consider a stock listing.** (4 Marks)

c) A lease versus buy decision has been analysed, the management performed the calculation by taking the saved initial outlay and deducting the tax adjusted lease payments and the lost capital allowance. The management discounted the net cash flows at the post -tax cost borrowing and the result was positive.

   Based on the above scenario, advise management on the advantages of leasing decision.
   (3 Marks)

(Total: 25 Marks)

QUESTION TWO

a) Pride partners Limited is a local company with its head office in Kigali City. The company is evaluating the potential for investment in area which it has not previously been involved. The existing capital structure of Pride Partners Limited is given as follows:

Particulars	**Amount FRW'000''**
Ordinary share capital (FRW 100 par value)	40,000
Reserve	15,000
12% Debentures (FRW 100 par value)	25,000
10% preference share capital (FRW 20 par value)	20,000
Total	**100,000**

The following additional information is available:

(i) Ordinary share of Pride partners Ltd are currently selling at FRW 80 each
(ii) The 12% debentures and 10% preference shares are currently selling at FRW 90 and FRW 30 respectively.
(iii) The most recent ordinary dividend paid by the company is FRW 2. This is expected to grow at the rate of 10% each year in perpetuity.
(iv) The corporate tax is 30%

Required:

a) **Calculate the cost of each individual component of the capital structure of Pride partners Ltd.** (6 Marks)
b) **Compute Pride partners Ltd weighted average cost of capital (WACC).** (3 Marks)
c) **Discuss the dangers to a company of high-level gearing, including in your answer an explanation of the following terms:**
   (i) Business risk. (3 Marks)
   (ii) Financial risk. (3 Marks)

d) Pride partners Limited is unlisted local company owned by four shareholders with its head office in Kigali City. One of the shareholders has asked for independent valuation of the company to be performed. There are number of different ways of putting a value on business, or on shares in unquoted company. It makes sense to use several methods of valuation and to compare the value they produce.

Required:

List five valid reasons when the independent valuation is to be required for unquoted company? (5 Marks)

(Total: 20 Marks)

QUESTION THREE

KAMAZI Ltd and BWIZA Ltd are local companies that are involved in manufacturing and sell of electronic appliances. The two companies are identical in every aspect except for their capital structure, however; KAMANZI Ltd is a geared company while BWIZA Ltd is ungeared company. Their market values are in equilibrium as follows;

Particulars	**Geared FRW'000'**	**Ungeared FRW '000'**
Annual profit before interest and tax	6,000	6,000
Less interest (24,000*8%)	1,920	0
PBT	4,080	6,000
Less Tax 30%	1,224	1,800
Profit after tax	2,856	4,200
Market value of equity	23,400	39,600
Market value of debt	25,080	0
Total market value of the company	48,480	39,600

The total value of Geared Company is higher than the total value of ungeared company which is consistent with Modigliani and Miller Model.

All profit after tax are paid as dividends and there is no dividend growth. The beta value of Ungeared Company has been calculated as 1.0 and the debt capital of Geared Company can be regarded as risk free.

Calculate:

a) **i) The cost of equity of Geared company.** (2 Marks)
ii) The market Return. (3 Marks)
iii) The beta value of Geared Company. (3 Marks)

b) NYAKABANDA Ltd is all – equity financed company which wishes to do a project in a new area of business. Its existing equity beta is 1.2. The average equity beta for the new business area is 2.0 with the average debt to equity ratio of 25%. The risk-free rate of return is 5% and market risk premium is 4%.

Ignoring taxation, Use capital Asset Pricing Model to:

(i) **Calculate the risk-adjusted cost of equity for the new project?** (3 Marks)
(ii) **Discuss the attractions for a company to convertible debts compared to bank loans of a similar maturity as a source of finance.** (4 Marks)

(Total: 15 Marks)

SECTION B

QUESTION FOUR

a) Prime Ltd is a public limited company listed on Rwanda stock exchange, the company is specialised in production of clothes for both local and regional market. The following is the summarized Balance sheet for Prime Ltd as at 30 November 2016.

Particulars	**FRW '000'**
Fixed Assets	
Land and Building	60,000
Fixture and Fittings	8,000
Current Assets	
Stock	35,000
Prepaid expenses	5,000
Debtors	30,000
Cash in hand	10,000
	148,000
Financed by:	
Capital	
Ordinary share of FRW 10 each	60,000
Retained earnings	10,000
Long term Liability	
Long-term debt	18,000
Current liabilities	
Creditors	40,000
Accruals	20,000
	148,000

Additional information

1. In the past Prime Ltd's earing per share (EPS) averaged FRW 6 and dividend pay out rate was 50% or FRW 3 per share. For the year end 30 November 2016, the EPS declined to FRW 2.5. Because it was felt that this decline was temporary, the annual dividend of FRW 3 per share was maintained for the financial year ended 30 November 2016. As well as for the first six months of the financial year ending 30 November 2017.
2. Recent projection however has caused management to revise downwards the expected EPS. For the financial year ending 30 November 2017, the forecast EPS has been reduced to RWF 2 per share and the financial year ending 2018, adjusted to FRW 2.20 per share.
3. Prime Ltd's ordinary shares are currently selling in the market at FRW 15 per share, the management of Prime ltd is considering whether or not to retain the cash dividend of FRW 3 per share for the next two financial years.

Required:

(i) Based on computations, assess whether it will be feasible to maintain dividends at FRW 3 per share for the next two financial years. (4 Marks)

(ii) Determine whether Prime limited should replace the cash dividend with a bonus issue of one share for every four ordinary shares (4 Marks)

(iii)Explain the course of action that management of Prime ltd should take in the light of the declining the projections in dividend pay outs. (4 Marks)

b) Private sector Federation has asked you, to prepare a series of briefing documents suitable for small and medium sized businesses. You have been asked to develop the first briefing note as outlined in the following requirement.

Required:

Prepare a briefing note that:

(i) Presents the key differences between management accounting and financial accounting. (4 Marks)

(ii) Shows how wealth maximization is considered to be superior to profit maximization?

(4 Marks)

(Total: 20 Marks)

QUESTION FIVE

a) Better Future Group Limited (BFG Ltd) is a leading manufacturer of quality household products in Rwanda. The company has just borrowed FRW 80,000,000 from a bank payable at an interest rate of 1.25% compounded monthly. The loan is to be amortized using the reducing balance method and repaid in 12 equal monthly instalments payable at the end of each month. These payments are to be sufficient to repay the principal amount together with interest.

Required:

Prepare a loan amortization schedule. (4 Marks)

b) At the beginning of the year 2016, BFG Ltd deposited FRW 1,000,000 in an investment account which earned a compounding interest at 15% per annum. At the beginning of each subsequent year, BFG Ltd deposited a further FRW 500,000 in the same account.

Required:

i) Calculate the amount of money in the investment account by the end of 2020. (5 Marks)

ii) Calculate the percentage of interest earned over the invested period. (1 Mark)

c) Write a report to the BFG Ltd shareholders explaining the various methods of financing available to finance additional current assets and the advantage, disadvantage as well as associated risk involved in each method. The report should include the following headings:

i) Bank Loan (5 Marks)

ii) Over draft (5 Marks)

(Total: 20 Marks)

QUESTION SIX

Working Capital Management is a comprehensive primer on keeping your business financially competitive in the face of limited access to short-term funds. With detailed insight applicable to each phase in the business cycle, managers revamp current practices for more efficient use of assets and liabilities, including more stringent monitoring and planning of collections, disbursements, and balances. Managing a company's short-term resources is both an art and a science. Effectively maintaining funds for ongoing activities and keeping those funds liquid, mobile, and available is a masterful skillset lacking in business. Working Capital Management offers practical advice for managers in this challenging position, providing guidance that helps them in giving attention to cash budgeting, forecasting, banking relationships and other common scenarios with specific requirements.

Required:

a) As a business expert, discuss the conflict that might arise among the objectives of working capital management. (4 Marks)

b) Discuss THREE factors which determine the level of company's investment in working capital. (6 Marks)

c) (i) Explain two types of factoring of sales invoicing that may assist a firm's financial performance (4 Marks)

(ii) Explain three benefits and three disadvantages of factoring of sales invoicing (6 Marks)

(Total: 20 Marks)

End of question paper

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%	11%	12%	13%	14%	15%	16%	17%	18%	19%	20%
1	0.990	0.980	0.971	0.962	0.952	0.943	0.935	0.926	0.917	0.909	0.901	0.893	0.885	0.877	0.870	0.862	0.855	0.847	0.840	0.833
2	0.980	0.961	0.943	0.925	0.907	0.890	0.873	0.857	0.842	0.826	0.812	0.797	0.783	0.769	0.756	0.743	0.731	0.718	0.706	0.694
3	0.971	0.942	0.915	0.889	0.864	0.840	0.816	0.794	0.772	0.751	0.731	0.712	0.693	0.675	0.658	0.641	0.624	0.609	0.593	0.579
4	0.961	0.924	0.888	0.855	0.823	0.792	0.763	0.735	0.708	0.683	0.659	0.636	0.613	0.592	0.572	0.552	0.534	0.516	0.499	0.482
5	0.951	0.906	0.863	0.822	0.784	0.747	0.713	0.681	0.650	0.621	0.593	0.567	0.543	0.519	0.497	0.476	0.456	0.437	0.419	0.402
6	0.942	0.888	0.837	0.790	0.746	0.705	0.666	0.630	0.596	0.564	0.535	0.507	0.480	0.456	0.432	0.410	0.390	0.370	0.352	0.335
7	0.933	0.871	0.813	0.760	0.711	0.665	0.623	0.583	0.547	0.513	0.482	0.452	0.425	0.400	0.376	0.354	0.333	0.314	0.296	0.279
8	0.923	0.853	0.789	0.731	0.677	0.627	0.582	0.540	0.502	0.467	0.434	0.404	0.376	0.351	0.327	0.305	0.285	0.266	0.249	0.233
9	0.914	0.837	0.766	0.703	0.645	0.592	0.544	0.500	0.460	0.424	0.391	0.361	0.333	0.308	0.284	0.263	0.243	0.225	0.209	0.194
10	0.905	0.820	0.744	0.676	0.614	0.558	0.508	0.463	0.422	0.386	0.352	0.322	0.295	0.270	0.247	0.227	0.208	0.191	0.176	0.162
11	0.896	0.804	0.722	0.650	0.585	0.527	0.475	0.429	0.388	0.350	0.317	0.287	0.261	0.237	0.215	0.195	0.178	0.162	0.148	0.135
12	0.887	0.788	0.701	0.625	0.557	0.497	0.444	0.397	0.356	0.319	0.286	0.257	0.231	0.208	0.187	0.168	0.152	0.137	0.124	0.112
13	0.879	0.773	0.681	0.601	0.530	0.469	0.415	0.368	0.326	0.290	0.258	0.229	0.204	0.182	0.163	0.145	0.130	0.116	0.104	0.093
14	0.870	0.758	0.661	0.577	0.505	0.442	0.388	0.340	0.299	0.263	0.232	0.205	0.181	0.160	0.141	0.125	0.111	0.099	0.088	0.078
15	0.861	0.743	0.642	0.555	0.481	0.417	0.362	0.315	0.275	0.239	0.209	0.183	0.160	0.140	0.123	0.108	0.095	0.084	0.074	0.065
16	0.853	0.728	0.623	0.534	0.458	0.394	0.339	0.292	0.252	0.218	0.188	0.163	0.141	0.123	0.107	0.093	0.081	0.071	0.062	0.054
17	0.844	0.714	0.605	0.513	0.436	0.371	0.317	0.270	0.231	0.198	0.170	0.146	0.125	0.108	0.093	0.080	0.069	0.060	0.052	0.045
18	0.836	0.700	0.587	0.494	0.416	0.350	0.296	0.250	0.212	0.180	0.153	0.130	0.111	0.095	0.081	0.069	0.059	0.051	0.044	0.038
19	0.828	0.686	0.570	0.475	0.396	0.331	0.277	0.232	0.194	0.164	0.138	0.116	0.098	0.083	0.070	0.060	0.051	0.043	0.037	0.031
20	0.820	0.673	0.554	0.456	0.377	0.312	0.258	0.215	0.178	0.149	0.124	0.104	0.087	0.073	0.061	0.051	0.043	0.037	0.031	0.026
25	0.780	0.610	0.478	0.375	0.295	0.233	0.184	0.146	0.116	0.092	0.074	0.059	0.047	0.038	0.030	0.024	0.020	0.016	0.013	0.010
30	0.742	0.552	0.412	0.308	0.231	0.174	0.131	0.099	0.075	0.057	0.044	0.033	0.026	0.020	0.015	0.012	0.009	0.007	0.005	0.004
35	0.706	0.500	0.355	0.253	0.181	0.130	0.094	0.068	0.049	0.036	0.026	0.019	0.014	0.010	0.008	0.006	0.004	0.003	0.002	0.002
40	0.672	0.453	0.307	0.208	0.142	0.097	0.067	0.046	0.032	0.022	0.015	0.011	0.008	0.005	0.004	0.003	0.002	0.001	0.001	0.001
50	0.608	0.372	0.228	0.141	0.087	0.054	0.034	0.021	0.013	0.009	0.005	0.003	0.002	0.001	0.001	0.001	0.000	0.000	0.000	0.000

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%	11%	12%	13%	14%	15%	16%	17%	18%	19%	20%
1	0.990	0.980	0.971	0.962	0.952	0.943	0.935	0.926	0.917	0.909	0.901	0.893	0.885	0.877	0.870	0.862	0.855	0.847	0.840	0.833
2	1.970	1.942	1.913	1.886	1.859	1.833	1.808	1.783	1.759	1.736	1.713	1.690	1.668	1.647	1.626	1.605	1.585	1.566	1.547	1.528
3	2.941	2.884	2.829	2.775	2.723	2.673	2.624	2.577	2.531	2.487	2.444	2.402	2.361	2.322	2.283	2.246	2.210	2.174	2.140	2.106
4	3.902	3.808	3.717	3.630	3.546	3.465	3.387	3.312	3.240	3.170	3.102	3.037	2.974	2.914	2.855	2.798	2.743	2.690	2.639	2.589
5	4.853	4.713	4.580	4.452	4.329	4.212	4.100	3.993	3.890	3.791	3.696	3.605	3.517	3.433	3.352	3.274	3.199	3.127	3.058	2.991
6	5.795	5.601	5.417	5.242	5.076	4.917	4.767	4.623	4.486	4.355	4.231	4.111	3.998	3.889	3.784	3.685	3.589	3.498	3.410	3.326
7	6.728	6.472	6.230	6.002	5.786	5.582	5.389	5.206	5.033	4.868	4.712	4.564	4.423	4.288	4.160	4.039	3.922	3.812	3.706	3.605
8	7.652	7.325	7.020	6.733	6.463	6.210	5.971	5.747	5.535	5.335	5.146	4.968	4.799	4.639	4.487	4.344	4.207	4.078	3.954	3.837
9	8.566	8.162	7.786	7.435	7.108	6.802	6.515	6.247	5.995	5.759	5.537	5.328	5.132	4.946	4.772	4.607	4.451	4.303	4.163	4.031
10	9.471	8.983	8.530	8.111	7.722	7.360	7.024	6.710	6.418	6.145	5.889	5.650	5.426	5.216	5.019	4.833	4.659	4.494	4.339	4.192
11	10.368	9.787	9.253	8.760	8.306	7.887	7.499	7.139	6.805	6.495	6.207	5.938	5.687	5.453	5.234	5.029	4.836	4.656	4.486	4.327
12	11.255	10.575	9.954	9.385	8.863	8.384	7.943	7.536	7.161	6.814	6.492	6.194	5.918	5.660	5.421	5.197	4.988	4.793	4.611	4.439
13	12.134	11.348	10.635	9.986	9.394	8.853	8.358	7.904	7.487	7.103	6.750	6.424	6.122	5.842	5.583	5.342	5.118	4.910	4.715	4.533
14	13.004	12.106	11.296	10.563	9.899	9.295	8.745	8.244	7.786	7.367	6.982	6.628	6.302	6.002	5.724	5.468	5.229	5.008	4.802	4.611
15	13.865	12.849	11.938	11.118	10.380	9.712	9.108	8.559	8.061	7.606	7.191	6.811	6.462	6.142	5.847	5.575	5.324	5.092	4.876	4.675
16	14.718	13.578	12.561	11.652	10.838	10.106	9.447	8.851	8.313	7.824	7.379	6.974	6.604	6.265	5.954	5.668	5.405	5.162	4.938	4.730
17	15.562	14.292	13.166	12.166	11.274	10.477	9.763	9.122	8.544	8.022	7.549	7.120	6.729	6.373	6.047	5.749	5.475	5.222	4.990	4.775
18	16.398	14.992	13.754	12.659	11.690	10.828	10.059	9.372	8.756	8.201	7.702	7.250	6.840	6.467	6.128	5.818	5.534	5.273	5.033	4.812
19	17.226	15.678	14.324	13.134	12.085	11.158	10.336	9.604	8.950	8.365	7.839	7.366	6.938	6.550	6.198	5.877	5.584	5.316	5.070	4.843
20	18.046	16.351	14.877	13.590	12.462	11.470	10.594	9.818	9.129	8.514	7.963	7.469	7.025	6.623	6.259	5.929	5.628	5.353	5.101	4.870
25	22.023	19.523	17.413	15.622	14.094	12.783	11.654	10.675	9.823	9.077	8.422	7.843	7.330	6.873	6.464	6.097	5.766	5.467	5.195	4.948
30	25.808	22.396	19.600	17.292	15.372	13.765	12.409	11.258	10.274	9.427	8.694	8.055	7.496	7.003	6.566	6.177	5.829	5.517	5.235	4.979
35	29.409	24.999	21.487	18.665	16.374	14.498	12.948	11.655	10.567	9.644	8.855	8.176	7.586	7.070	6.617	6.215	5.858	5.539	5.251	4.992
40	32.835	27.355	23.115	19.793	17.159	15.046	13.332	11.925	10.757	9.779	8.951	8.244	7.634	7.105	6.642	6.233	5.871	5.548	5.258	4.997
50	39.196	31.424	25.730	21.482	18.256	15.762	13.801	12.233	10.962	9.915	9.042	8.304	7.675	7.133	6.661	6.246	5.880	5.554	5.262	4.999