CERTIFIED PUBLIC ACCOUNTANT
INTERMEDIATE LEVEL EXAMINATIONS

I1.1: MANAGERIAL FINANCE

DATE: THURSDAY 30, NOVEMBER 2023

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

Kananga Investments Limited (KIL):

The relationship between shareholders and managers

Kananga Investments Limited's (KIL) shareholders are closely related with its managers. However, shareholders have often complained that management does not always act in shareholders' best interests. The actions of the managers are believed to conflict with the interest of the shareholders.

An intended project

KIL intends to invest in a project that has annual cash inflows of FRW 6,500,000, FRW 7,200,000, FRW 8,100,000, and FRW 9,300,000 for the first 4 years respectively. The project initial cost is FRW 10,000,000 and the cost of capital is 10%.

Machine dilemma

KIL's management is considering replacing an old machine with a new one to be used in the new project. The old machine cost the company FRW 530 million while the new machine is expected to cost FRW 660 million and will have a five-year useful life. KIL advises that the new machine will be depreciated straight-line over its useful life. The new machine shall be worth FRW 250 million after five years.

The depreciation of the old machine is FRW 132 million per year and will be worthless in three years. KIL can replace the old machine now and sell at FRW 350 million or will have to replace it in two years in this case it will be worth FRW 72 million. KIL anticipates that the new machine will save FRW 97 million per year in operating costs. KIL has a tax rate of 30% and a cost of capital of 12%.

You are a Financial Analyst at KIL. Management is not sure whether it should replace the old machine or not. It is only concerned with whether to replace the old machine and it is not worried about what will happen in two years.

Required:

(a) Describe three reasons why actions of the managers may be in conflict with the interest of KIL's shareholders. (6 Marks)

(b) Based on KIL's intended project:

(i) Define the term 'payback period'. (1 Mark)

(ii) Calculate the company's modified payback period. *Note: Round your calculations off to two decimal places, except DF values if any.* (4 Marks)

(c) Using appropriate calculations, **advise management on whether it should replace the old machine or not.** (14 Marks)

Note: Round off your discounting factor figures (if any) in all computational parts of this question to four decimal places.

(Total: 25 Marks)

QUESTION TWO

Adado Limited is a manufacturing company listed on the stock exchange. The company's shares currently sell for FRW 800 per share. The company usually pays out dividends and has a constant dividend growth rate of 7%. The company's latest market data suggest that investors require a rate of return of 12% on their stock.

Required:

(a) Discuss five practical considerations which a company must consider in setting its dividend policy. (10 Marks)

(b) Using the information provided in the case study, **compute Adado Limited's most recent dividend per share paid on its stock.** *Note: Round your answer off to two decimal places.* (2 Marks)

(c) Explain four factors to consider in paying dividends. (8 Marks)

(Total: 20 Marks)

QUESTION THREE

You are a Financial Analyst at Kanombe Real Estates (KRE). The company has FRW 50 million to invest. Your manager has presented two five-year investment opportunities, A and B, but the company can only invest in one of them for affordability purposes. KRE's average cost of attracting both bondholders and stockholders is 9%. If KRE invests in project A, it will earn annual cash flows presented in table 3.1:

Table 3.1: Potential cash flows from project A

Year	Cash flows 'FRW'
1	15,000,000
2	34,000,000
3	33,000,000
4	16,000,000
5	0, Project Closeout

However, if the company invests in project B, it will generate no cash flows in the first four years and is expected to be sold for FRW 136 million at the end of its life.

Your manager has asked you to advise on which project to invest in. The manager has also asked you to use discounted cash flow approach to reach your conclusion.

Required:

(a) Refer to your manager's reference to the discounted cash flow approach:

(i) Briefly explain how Discounted Cash Flow works. (2 Marks)

(ii) List three advantages and two disadvantages of the Discounted Cash Flow valuation approach. (5 Marks)

(b) Using appropriate calculations, **advise your manager on which project to invest in and why.** (8 Marks)

(Total: 15 Marks)

SECTION B

QUESTION FOUR

Galkayo Cement Limited (GCL) is a cement manufacturing company listed on the stock exchange. The company recently issued a 20-year convertible bond with a call option and an annual coupon rate of 10%. GCL has advised that the bond's par value and conversion price of FRW 10,000 and FRW 950 respectively. GCL's ordinary shares are selling for FRW 550 per share. Under the conversion arrangement, bond holders will be required to convert if the bond's conversion value is ever greater than or equal to FRW 10,200. The required return on comparable nonconvertible bonds is 12%.

GCL's management is also considering sourcing additional funding from angel investors and through venture capital. These funds are expected to be used in financing prospective ambitious projects that are in line with the company's strategy for the next five years.

Required:

(a) With reference to GCL's bond information above:

(i) Calculate the minimum value of the bond. *Note: Round your calculations off to two decimal places, except DF values if any.* (5 Marks)

(ii) Why will convertible bonds not be voluntarily converted to stock before expiration? (1 Mark)

(iii) When and why should a firm force conversion of convertibles? (2 Marks)

(b) Refer to GCL's additional funding information above and answer the following questions:

(i) Differentiate between a venture capitalist and an angel investor. (4 Marks)

(ii) Explain two advantages two disadvantages of venture capital. (8 Marks)

(Total: 20 Marks)

QUESTION FIVE

Kanyaru Maize Mill (KMM) has cost of goods sold of FRW 3,500,000 and on average settles trade payables after 60 days. KMM buys raw maize worth 50% of its cost of goods sold from COPEM, a maize growing cooperative that supplies maize to KMM. COPEM has offered KMM an early settlement discount of 1% for payment within half the normal payment period. KMM currently incurs FRW 200,000 in administration costs per year, which will be increased by 2% per year if the early settlement discount is taken. KMM incurs 5% per year on overdraft financing. Assume there are 360 days in a year.

KMM has FRW 12 million of 9% outstanding debt, and its unlevered cost of capital is 11%. The company's expected Earnings Before Interest and Taxes (EBIT) is FRW 5 million in perpetuity and a tax rate of 30%.

Required:

(a) Refer to trade payables information in the case above and answer the following questions:

(i) Advise whether KMM should accept the early settlement discount offered by COPEM. *Note: Round off your computations to the nearest whole number.* (6 Marks)

(ii) List four problems companies may face by delaying payment to suppliers. (4 Marks)

(b) With reference to KMM's outstanding debt information in the case above only:

(i) Compute the value of KMM according to Modigliani-Miller (MM) Proposition I with taxes and comment on your answer. *Note: Round off your computations to the nearest whole number.* (4 Marks)

(ii) Briefly explain proposition I of the MM theory. (2 Marks)

(iii) State four assumptions of the MM theory. (4 Marks)

(Total 20 Marks)

QUESTION SIX

You are an Investment Analyst at Katikati Limited. Your manager has asked you to do a presentation to senior management scheduled for next week. Your presentation is to cover sources of government financing to the private sector and capital markets.

Required:

Provide the presentation content by answering the following questions:

(a) Briefly explain the following forms of public finance to the private sector:

(i) Government grant. (2 Marks)

(ii) Government bond. (2 Marks)

(iii)Tax incentives. (2 Marks)

(b) With reference to capital markets:

(i) Briefly explain the three forms of market efficiency. (6 Marks)

(ii) Explain four benefits of investing within the capital market. (8 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	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%	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

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