CERTIFIED PUBLIC ACCOUNTANT INTERMEDIATE LEVEL EXAMINATIONS

I1.1: MANAGERIAL FINANCE

DATE: THURSDAY, 30 NOVEMBER 2023

MARKING GUIDE AND MODEL ANSWERS

SECTION A

QUESTION ONE

Kananga Investments Limited (KIL):
Marking Guide:

Qn	Description	Marks	Total Marks
a	THREE reasons why actions of the managers may be in conflict with the interest of KIL' shareholders:		
	The reasons in the model answer are not exhaustive and other valid points should be considered		
	Award 2 marks for a well described point and 1 mark if the point is simply listed or outlined		
	3 reasons * 2 marks = 6 maximum marks		6
b (i)	Any correct definition of the term 'payback period'		1
b (ii)	Modified payback period:		
	Present value for year 1	0.5	
	Present value for year 2	0.5	
	Present value for year 3	0.5	
	Present value for year 4	0.5	
	Formulae for modified payback period	1	
	Modified payback period (final solution)	1	4
c	Machine replacement:		
	Incremental in Initial outflow	2	
	Incremental in Depreciation and tax saving or payable on depreciation	2	
	Incremental in salvage Value	1	
	Incremental in Terminal Benefit	1	
	NPV:		
	Difference or cash flows for year 0	0.5	
	Difference or cash flows for year 1	0.5	
	Difference or cash flows for year 2	0.5	
	Difference or cash flows for year 3	0.5	
	Difference or cash flows for year 4	0.5	
	Difference or cash flows for year 5	0.5	
	Present value for year 0	0.5	
	Present value for year 1	0.5	
	Present value for year 2	0.5	
	Present value for year 3	0.5	

Qn	Description	Marks	Total Marks
	Present value for year 4	0.5	
	Present value for year 5	0.5	
	NPV	1	
	Decision	1	
			14
	Total Marks		**25**

Model Answer:

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

The actions of the managers are in conflict with the interest of shareholders will be caused by:

Incentive Problem

Managers may have fixed salary and they may have no incentive to work hard and maximize shareholder's wealth. This is because irrespective of the profits they make, their reward is fixed. They will therefore maximize leisure and work less which is against the interest of the shareholders.

Consumption of "Perquisites"

Prerequisites refer to the high salaries and generous fringe benefits which the directors might award themselves. This will constitute directors' remuneration which will reduce the dividends paid to the ordinary shareholders. Therefore, the consumption of perquisites is against the interest of shareholders since it reduces their wealth.

Different Risk-profile

Shareholders will usually prefer high-risk-high return investments since they are diversified i.e they have many investments and the collapse of one firm may have insignificant effects on their overall wealth. Managers on the other hand, will prefer low risk-low return investment since they have a personal fear of losing their jobs if the projects collapse. (Human capital is not diversifiable). This difference in risk profile is a source of conflict of interest since shareholders will forego some profits when low return projects are undertaken.

Different Evaluation Horizons

Managers might undertake projects which are profitable in short run. Shareholders on the other hand evaluate investments in long-run horizon which is consistent with the going concern aspect

of the firm. The conflict will therefore occur where management pursue short-term profitability while shareholders prefer long term profitability.

Management Buy Out (MBO)
The board of directors may attempt to acquire the business of the principal. This is equivalent to the agent buying the firm which belongs to the shareholders. This is inconsistent with the agency relationship and contract between the shareholders and the managers.

Pursuing power and self-esteem goals
This is called "empire building" to enlarge the firm through mergers and acquisitions hence increase in the rewards of managers.

Creative Accounting
This involves the use of accounting policies to report high profits e.g stock valuation methods, depreciation methods recognizing profits immediately in long term construction contracts etc.

(b) Based on KIL's intended project:
(i) **Define the term 'payback period'.**

The payback period is the time it takes the firm to recover its initial investment in a project, as calculated from cash inflows.

(ii) **Calculate the company's modified payback period.**

Under the modified payback period approach, cash flows are first discounted before the normal payback is calculated below:

Year	Cash flows 'FRW'	DF (10%)	PV 'FRW'	Cumulative
1	6,500,000	0.9091	5,909,150	**5,909,150**
2	7,200,000	0.8264	5,950,080	**11,859,230**
3	8,100,000	0.7513	6,085,530	17,944,760
4	9,300,000	0.6830	6,351,900	24,296,660

Payback are between Year 1 and Year 2

Modified payback period $= Year\ before\ modified\ payback\ period\ occurs + \frac{Cummulative\ cash\ flow\ in\ year\ before\ recovery}{Modified\ cash\ flow\ in\ year\ after\ recovery}$

Modified payback period = $1 + \frac{10,000,000 - 5,909,150}{5,950,080}$ = 1.69 years

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

Step 1: Incremental of Initial Cost

Purchase Cost of New Machine	660,000
Less: Market Value of old Machine Now	(350,000)
Incremental in outflow	310,000
Less: Tax saving on Loss on Disposal	(13,800)
Incremental in Initial Cost	**296,200**

Working on Loss on Disposal

Book Value of old asset: 132,000 * 3 = 396,000	
Less: proceed from Disposal:	= (350,000)
Loss on Disposal	**46,000**
Tax rate	30%
Tax saving	**13,800**

Step 2: Incremental in Depreciation

	Y1	Y2	Y3	Y4	Y5
Depreciation of New machine	82,000	82,000	82,000	82,000	82,000
Depreciation of old machine	132,000	132,000	132,000	-	-
	(50,000)	(50,000)	(50,000)	82,000	82,000
30%					
Tax saving / Payable	(15,000)	(15,000)	(15,000)	24,600	24,600

Depreciation of New Machine= $\frac{Cost\ of\ New\ machine - salvage\ value}{useful\ life}$

Depreciation of New Machine= $\frac{660,000 - 250,000}{5}$ **= 82,000**

Depreciation of Old machine **= 132,000 per annum**

Step 3: Incremental in salvage value

Salvage value of New Machine = 250,000
Salvage Value of Old machine = (0)
Incremental in salvage value= 250,000

Step 4: Incremental in Terminal Benefit

Incremental in salvage value = 250,000
Add: Change in Working Capital = (0)

Incremental in Terminal Benefit= 250,000

Step 5 Incremental in operating Cash flow

To calculate the NPV of the decision on the machine now, we need the difference (Incremental) in the total cash flows of the old machine and the new machine:

		Y0''000''	Y1 ''000''	Y2 ''000''	Y3 ''000''	Y4 ''000''	Y5 ''000''	
Saving inOperating Cashflow			97,000	97,000	97,000	97,000	97,000	
Less: Tax	30%		(29,100)	(29,100)	(29,100)	(29,100)	(29,100)	
add or less: Tax Saving / payable			(15,000)	(15,000)	(15,000)	24,600	24,600	
Net operating Cashflow			**52,900**	**52,900**	**52,900**	**92,500**	**92,500**	
Incremental in Initial Cost		(296,200)						
Incremental in Terminal Benefit							250,000	
Cashflow		**(296,200)**	**52,900**	**52,900**	**52,900**	**92,500**	**342,500**	
DF (12%)		1	0.893	0.797	0.712	0.636	0.567	
PV of Cashflow		**(296,200)**	**47,234**	**42,172**	**37,654**	**58,784**	**194,335**	**380,179**
Net Present Value = PV of Cash inflow - PV of Cashoutflow		380,179						
NPV		**83,979**						

Decision: Based on Above Calculation I would Advise management to replace the old asset Because we have Positive NPV of 83,979

QUESTION TWO

Adado Limited:

Marking Guide:

Qn	Description	Marks	Total Marks
a	FIVE practical considerations which a company must consider in setting its dividend policy: The factors in the model answer are not exhaustive and other valid points should be considered Award 2 marks for a well discussed point and 1 mark if the point is simply listed or outlined 5 factors * 2 marks = 10 maximum marks		10
b	Adado Limited's most recent dividend per share paid on its stock:		
	Formulae for Po or Do (any one of these is acceptable)	1	
	Dividend (D0)	1	2
c	FOUR factors to consider in paying dividends: The factors in the model answer are not exhaustive and other valid points should be considered Award 2 marks for a well discussed point and 1 mark if the point is simply listed or outlined 4 factors * 2 marks = 8 maximum marks		8
	Total Marks		**20**

Model Answer:

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

There are several practical considerations which a company must take into account in setting its particular dividend policy. Chief among these are:

• **Taxation** – Income Tax vs Capital Gains Tax. If shareholders pay high marginal rates of Income Tax, they may prefer low dividends. If subject to low tax rate or zero tax, they may prefer high dividends.

• **Investment Opportunities** – **'Residual Theory'** => retain sufficient funds until all profitable investments (those with a positive NPV) have been funded. Balance to be paid as dividends.

Drawback is that dividends may vary dramatically from year to year. Also, consider the timing of the cash flows from the investments as these will be required to pay future dividends.

• **Availability of Finance** – If the company is highly geared it may have little option but to retain. Retentions will build up the equity base, thus reducing gearing and assisting future borrowing. Certain types of company (e.g. small/unquoted) may not have access to external funds and may need to retain.

• **Liquidity** – Profits do not equal cash. Adequate cash must be available to pay dividends. Also, for growth companies, sufficient liquidity must be available for reinvestment in fixed. assets.

• **Cost of New Finance** – The costs associated with raising new equity/debt can be quite high. If debt is raised interest rates may be high at that point in time.

• **Transaction Costs** – Some shareholders may depend on dividends. If earnings are retained they can create "home-made" dividends by selling some shares (capital). However, this may be inconvenient and costly (brokerage fees etc.).

• **Control** – If high dividends are paid the company may subsequently require capital and this may be obtained by issuing shares to new shareholders. This may result in a dilution of control for existing shareholders.

• **Inflation** – In periods of high inflation companies may have to retain funds to maintain their existing operating capability. On the other hand, shareholders require increased dividends in order to maintain their purchasing power.

• **Information Content** – The declared dividend provides information to the market about the company's current performance and expected prospects. An increase or a reduction will be reflected in the share price.

• **Existing Debt** – Restrictive covenants in existing loan agreements may limit the dividend payout or prohibit the company from arranging further borrowing. Existing debt which may be due for repayment will require funds and may cause a reduction in the level of dividend.

• **Legal Restrictions** – Dividends can only be paid out of realized profits. Past losses must first be made good.

• **Perceived Risk** – The earnings from retained dividends may be perceived as being a more risky return than actual cash dividends, thereby causing their perceived value to be lower (the

"Bird in the Hand Theory").

• **Stable Dividends** – Generally, shareholders require a stable dividend policy and hopefully, steady dividend growth.

(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.*

Using the constant dividend growth model:

Market Value of share Under Business Valuation Po= $\frac{Do(1+g)}{R-G}$

Cost of Equity under Cost of Capital Ke = $\frac{Do(1+g)}{MPS} + g$

Making D_0 the subject of the formula gives:

(Ke –g) = $\frac{Do(1+g)}{MPS}$

(Ke –g) MPS = Do(1+g)

Do= $\frac{(\text{Ke} - g)\ \text{MPS}}{1+g} = \frac{(12\% - 7\%) * 800}{1+7\%} =$ **37.38**

Particulars	**Unit**	**Remarks**
Stock Market price Per (P_0)	FRW	800
Dividend growth rate (g)	%	7%
Cost of equity or Required return (R)	%	12%

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

The following are factors to be considered in paying dividends:

1. Legal rules

• Net purchase rule states that dividend may be paid from company's profit either past or present.

• Capital impairment rule prohibits payment of dividends from capital i.e. from sale of assets. This is liquidating the firm.

• Insolvency rule prohibits payment of dividend when company is insolvent. Insolvent company is one where assets are less than liabilities. Insolvent company is one where assets are less than liabilities. In such a case all earnings and assets of company belong to debt holders and no dividends is paid.

2. Profitability and liquidity

A company's capacity to pay dividend will be determined primarily by its ability to generate adequate and stable profits and cash flow. If the company has liquidity problem, it may be unable to pay cash dividend and result to paying stock dividend.

3. Taxation position of shareholders

Dividend payment is influenced by tax regime of a country. The effect of tax differential is to discourage shareholders from wanting high dividends.

4. Investment opportunity

Lack of appropriate investment opportunities i.e. those with positive returns (NPV), may encourage a firm to increase its dividend distribution. If a firm has many investment opportunities, it will pay low dividends and have high retention.

5. Capital Structure

A company's management may wish to achieve or restore an optimal capital structure i.e. if they consider gearing to be too high, they may pay low dividends and allow reserves to accumulate until a more optimal/appropriate capital structure is restored/achieved.

6. Industrial Practice

Companies will be resistant to deviation from accepted dividend or payment norms within the industry.

7. Growth Stage

Dividend policy is likely to be influenced by firm's growth stage e.g a young rapidly growing firm is likely to have high demand for development finance and therefore may pay low dividend or a defer dividend payment until company reaches maturity. It will retain high amount.

8. Ownership Structure

A dividend policy may be driven by Time Ownership Structure e.g in small firms where owners and managers are same, dividend payout are usually low. However, in a large quoted public company dividend payout are significant because the owners are not the managers. However, the values and preferences of small group of owner managers would exert more direct influence on dividend policy.

9. Shareholders expectation

Shareholder clientele that has become accustomed to receiving stable and increasing dividend will expect a similar pattern to continue in the future. Any sudden reduction or reversal of such a policy is likely to dissatisfy the shareholders and may result in a fail in share prices.

10. Access to capital markets

Large, well-established firms have access to capital markets hence can get funds easily They pay high dividends thus, unlike small firms which pay low dividends (high retention) due to limited borrowing capacity.

11. Contractual obligations on debt covenants

They limit the flexibility and number of dividends to pay e.g. no payment of dividends from retained earnings.

QUESTION THREE

Kanombe Real Estates (KRE):

Marking Guide:

Qn	Description	Marks	Total Marks
a (i)	How Discounted Cash Flow works:	2	
	The explanation should include key features of the DCF. This may be a definition, assumptions, or other features such as time value of money, discount factor etc		
	Award 1 mark to any valid point (1 mark * 2 points = 2 maximum marks)		
a (ii)	THREE advantages and TWO disadvantages of the Discounted Cash Flow valuation approach:		
	The points in the model answer are not exhaustive and other valid points should be considered		
	Award 1 mark for any valid point and no need for explanation since the requirement is to list		
	3 advantages * 1 mark = 3 maximum marks	3	
	2 advantages * 1 mark = 2 maximum marks	2	7
b	Projects A and B:		
	Project A:		
	PV of year 1	0.5	
	PV of year 2	0.5	
	PV of year 3	0.5	
	PV of year 4	0.5	
	PV of year 5	0.5	
	NPV	1	
	Project B:		
	PV of year 1	0.5	
	PV of year 2	0.5	
	PV of year 3	0.5	

Qn	Description	Marks	Total Marks
	PV of year 4	0.5	
	PV of year 5	0.5	
	NPV	1	
	Decision (Award 0.5 marks for a correct decision and 0.5 marks for a correct justification)	1	8
	Total Marks		**15**

Model Answer:

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

(i) Briefly explain how Discounted Cash Flow works.

Discounted cash flow (DCF) refers to a valuation method that estimates the value of an investment using its expected future cash flows. The purpose of DCF analysis is to estimate the money an investor would receive from an investment, adjusted for the time value of money.

The time value of money assumes that a Franc or dollar that you have today is worth more than a Franc or dollar that you receive tomorrow because it can be invested. As such, a DCF analysis is useful in any situation where a person is paying money in the present with expectations of receiving more money in the future. Discounted cash flow analysis finds the present value of expected future cash flows using a discount rate. Investors can use the concept of the present value of money to determine whether the future cash flows of an investment or project are greater than the value of the initial investment.

If the DCF value calculated is higher than the current cost of the investment, the opportunity should be considered. If the calculated value is lower than the cost, then it may not be a good opportunity, or more research and analysis may be needed before moving forward with it. To conduct a DCF analysis, an investor must make estimates about future cash flows and the ending value of the investment, equipment, or other assets.

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

The following are some advantages of the Discounted Cash Flow valuation approach:

- Correctly accounts for the time value of money.
- Uses all cash flows.
- Is an absolute measure of the increase in wealth.
- Consistent with the idea of maximising shareholder wealth i.e. telling managers to maximise Net Present Value (NPV) is equivalent to telling them to maximise shareholder wealth.

- It can be used for benchmarking in post-audit review.

The following are some disadvantages of the Discounted Cash Flow valuation approach:

- The major limitation of discounted cash flow analysis is that it involves estimates, not actual figures. So, the result of DCF is also an estimate.
- Difficult to estimate cost of capital.
- Not easily interpreted by management i.e. managers untrained in finance often have difficulty in understanding the meaning of a NPV.
- Future cash flows rely on a variety of factors, such as market demand, the status of the economy, technology, competition, and unforeseen threats or opportunities. These can't be quantified exactly.

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

Year	Project A 'FRW'	Project B 'FRW'	DF (9%)	PVA 'FRW'	PVB 'FRW'
0	(50,000,000)	(50,000,000)	1.000	(50,000,000)	(50,000,000)
1	15,000,000	-	0.9174	13,761,000	-
2	34,000,000	-	0.8417	28,617,800	-
3	33,000,000	-	0.7722	25,482,600	-
4	16,000,000	-	0.7084	11,334,400	-
5	-	136,000,000	0.6499	-	88,386,400
	NPV			**29,195,800**	**38,386,400**

As a Financial Analyst, I would recommend to my manager that our company should invest in **project B** since it has a higher NPV than project A. Although project A has steady cash flow streams during its life, project B earns the company a large payoff at the end of its life.

SECTION B

QUESTION FOUR

Galkayo Cement Limited (GCL):

Marking Guide:

Qn	Description	Marks	Total Marks
a (i)	The minimum value of the bond:		
	If the formula option was used and the final result is correct, award full marks. Please note that there might be slight variances due to decimal places of DF used by candidates, which is acceptable		
	Conversion ratio	0.5	
	Conversion price	1	
	Coupon payment of 1,000	0.5	
	PV of coupons	0.5	
	PV of face value	0.5	
	Total PV or Straight bond value	1	
	The minimum price of the bond	1	5
a (ii)	Why will convertible bonds not be voluntarily converted to stock before expiration?		
	Award 1 mark to valid reason		1
a (iii)	When and why should a firm force conversion of convertibles?		
	Award 1 mark for a correct answer to the 'when'	1	
	Award 1 mark for a correct answer to the 'why'	1	2
b (i)	Differentiate between a venture capitalist and an angel investor:		
	Consider other valid differences		
	Award 1 mark for any valid feature of venture capitalists	2	
	Award 1 mark for any valid feature of angel investors or angels	2	4
b (ii)	TWO advantages TWO disadvantages of venture capital:		
	The points in the model answer are not exhaustive and other valid points should be considered		
	Advantages (Award 2 for any well explained and correct advantage. Award 1 mark if it's not explained or unclear)	4	
	Disadvantages (Award 2 for any well explained and correct disadvantage. Award 1 mark if it's not explained or unclear)	4	8
	Total Marks		**20**

Model Answers:

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

(i) Calculate the minimum value of the bond.

The minimum convertible bond value is the greater of the conversion price or the straight bond price.

The below tables indicate how the conversion price of the bond and straight bond value are calculated:

Conversion value = Conversion ratio × market price per share at Conversion date
Conversion premium = Current market value – current conversion value

Conversion Ration = Conversion Value / Market price per share at Conversion date

Particulars	**FRW**	**FRW**
Conversion ratio:		
Par value	10,000	
Bond conversion price	950	
Conversion ratio		= 10,000 / 950 = 10.53
Conversion price:		
Conversion ratio	10.53	
Current Share price	550	
Conversion price		= 10.53 * 550 = 5,789.47
Straight bond value (W1)		8,506.40
The minimum price of the bond		**8,506.40**

Working 1 (W1):

Period	**Value 'FRW'**	**DF (12%)**	**PV 'FRW'**
1-20 – coupons (10,000 * 10% = 1,000)	1,000	7.4694	7,469.40
20 – face value	10,000	0.1037	1,037.00
Total PV			**8,506.40**

Note:

The straight bond value can also be calculated using the formula as below:

$$\sum \frac{C}{(1+r)^t} + \frac{F}{(1+r)^T}$$

where:

C=future cash flows, that is, coupon payments

r=discount rate, that is, yield to maturity

F=face value of the bond
t=number of periods
T=time to maturity

$$\sum \frac{1{,}000}{(1+12\%)^{20}} + \frac{10{,}000}{(1+12\%)^{20}} = 8{,}506.40$$

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

Because the holder of the convertible bond has the option to wait and perhaps do better than what is implied by current stock prices.

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

When: In theory, conversion should be forced as soon as the conversion value reaches the call price because other conversion policies will reduce shareholder value.

Why: If conversion is forced when conversion values are above the call price, bondholders will be allowed to exchange fewer valuable bonds for more valuable common stock. In the opposite situation, shareholders are giving bondholders the excess value.

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

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

A venture capitalist (VC) can be described as an investor in private equity who lends capital to companies with high growth potential in exchange for equity stakes. VCs are often a professionally managed public/private firm.

Whereas;

Angel investors or angels are people who offer promising start-up businesses funding by offering a share of the company, generally as royalties or equity. Angels are often individual investors (often successful businesspeople).

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

Advantages of Venture Capital (VC):

- Large Amounts of Capital Can Be Raised. Many startups seeking small business loans may only qualify for large financing and qualifying can be difficult. However, venture capital is available in small amounts. There's also a tendency for startups to raise venture capital several

times, allowing companies to access large amounts of capital that would otherwise be impossible to obtain.

- Business expertise. Aside from the financial backing, obtaining venture capital financing can provide a start-up or young business with a valuable source of guidance and consultation. This can help with a variety of business decisions, including financial management and human resource management. Making better decisions in these key areas can be vitally important as your business grows.
- Additional resources. In several critical areas, including legal, tax and personnel matters, a VC firm can provide active support, all the more important at a key stage in the growth of a young company. Faster growth and greater success are two potential key benefits.
- Connections. Venture capitalists are typically well connected in the business community. Tapping into these connections could have tremendous benefits.
- No Monthly Payments. When a venture capital firm invests in your business, it'll do so for equity in the company. This means that, unlike small business and personal loans, there are no regular payments for your business to make. This frees up working capital for your business, allowing you to reinvest by improving products, hiring a larger team, or further expanding operations.

Disadvantages of VC:

- Loss of control. With a large injection of cash and professional – and possibly aggressive – investors, it is likely that your VC partners will want to be involved. The size of their stake could determine how much say they have in shaping your company's direction.
- Minority ownership status. Depending on the size of the VC firm's stake in your company, which could be more than 50%, you could lose management control. Essentially, you could be giving up ownership of your own business.
- Finding Investors Can Distract Founders From Their Business. Startups decide it's time to raise venture capital when other funding sources have been exhausted and more money is necessary for growth. However, fundraising can take several months and shouldn't come at the cost of managing the company. By starting the process before funding is critical, founders give themselves enough time to both continue to manage the company and raise enough money to keep growing.
- Overall Cost of Financing Is Expensive. Giving up equity in your company may seem inexpensive compared to taking out a loan. However, the cost of equity is only realized when the business is sold. Venture capital provides much more than capital, like advice and introductions. However, the decision shouldn't be made lightly, especially if there are other funding alternatives.

QUESTION FIVE

Kanyaru Maize Mill (KMM):

Marking Guide:

Qn	Description	Marks	Total Marks
a (i)	Advise whether KMM should accept the early settlement discount offered by COPEM:		
	Purchases (50%)	0.5	
	Relevant trade payables before discount	0.5	
	New payables payment period (50%)	0.5	
	Relevant trade payables after discount	0.5	
	Reduction in trade payables	0.5	
	Increase in finance cost	0.5	
	Administration cost increase	0.5	
	Early settlement discount	0.5	
	Net benefit of discount	1	
	Advice	1	6
a (ii)	Four problems companies may face by delaying payment to suppliers:		
	The points in the model answer are not exhaustive and other valid points should be considered		
	Award 1 mark to valid problem listed. Not extra marks for explaining		4
b (i)	The value of KMM according to Modigliani-Miller (MM) Proposition I with taxes:		
	Formula for value of an unlevered firm	0.5	
	Value of an unlevered firm	1	
	Formula for value of a levered firm	0.5	
	Value of an levered firm	1	
	Comment	1	4
b (ii)	Proposition I of the MM theory:		
	Award 2 marks for any valid description of MM Proposition I		2
b (iii)	Four assumptions of the MM theory:		
	The points in the model answer are not exhaustive and other valid points should be considered		
	Award 1 mark to valid problem stated. Not extra marks for explaining		4
	Total Marks		**20**

Model Answers:

(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.

Particulars	**FRW/days**	**FRW**
Relevant trade payables before discount:		
Credit sales	3,500,000	
Purchases (50%)	= 3,500,000 * 50% = 1,750,000	
Normal payables payment period	60	
Days in a year	360	= 1,750,000 * (60/360) = 291,667
Relevant trade payables after discount:		
New payables payment period (50%)	= 60 * 50% = 30	1,750,000 * (30/360) = 145,833
Reduction in trade payables		145,833
Increase in finance cost:		
Cost of overdraft (5%)	= 145,833 * 5% =	7,292
Administration cost increase	= 200,000 * 2% =	4,000
Discount from supplier:		
Early settlement discount (1%)	= 1,750,000 * 1% =	17,500
Net benefit of discount = 17,500 – 7,292 – 4,000 =		**6,208**

KMM should accept the supplier's early settlement discount offer because the net effect is positive.

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

By delaying payment to suppliers, companies face possible problems:

- Supplier may refuse to supply in future.
- Supplier may only supply on a cash basis.
- There may be loss of reputation.
- Supplier may increase price in future.

(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.*

Particulars	**FRW**	**FRW**
Value of an unlevered firm (V_U):		V_U = EBIT $(1 - t_C) / R_0$
EBIT	5,000,000	
Tax rate (t_C)	30%	
Unlevered cost of capital (R_0)	11%	= 5,000,000 * (1-30%) / 11% = 31,818,182
Value of a levered firm (V_L):		$V_L = V_U + t_C B$
Value of an unlevered firm	31,818,182	
Tax rate ($t_C B$)	30%	
Debt	12,000,000	= 31,818,182 + (12,000,000 * 30%) = 35,418,182

Applying MM Proposition, I with taxes, KMM has increased its value by issuing debt. As long as M&M Proposition I hold, that is, there are no bankruptcy costs etc, then the company should continue to increase its debt–equity ratio to maximize the value of the firm.

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

MM proposition I essentially claims that the company's capital structure does not impact its value. Since the value of a company is calculated as the present value of future cash flows, the capital structure cannot affect it. Also, in perfectly efficient markets, companies do not pay any taxes. Therefore, the company with a 100% leveraged capital structure does not obtain any benefits from tax-deductible interest payments.

(iii) State four assumptions of the MM theory.

MM has the following assumptions:

- Capital markets are perfect and thus there are no transaction costs.
- The average expected future operating earnings of a firm are represented by subjective random variables.
- Firms can be categorized into "equivalent return" classes and that all firms within a class have.
- the same degree of business risk.
- They also assumed that debt, both firm's and individual's is riskless.
- Corporate taxes are ignored.

QUESTION SIX
Katikati Limited:

Marking Guide:

Qn	Description	Marks	Total Marks
a	Explain the following forms of public finance to the private sector:		
	Government grant (Award 2 marks to any valid brief explanation. Award 1 mark if the explanation is insufficient, unclear, or poor)	2	
	Government bond (Award 2 marks to any valid brief explanation. Award 1 mark if the explanation is insufficient, unclear, or poor)	2	
	Tax incentives (Award 2 marks to any valid brief explanation. Award 1 mark if the explanation is insufficient, unclear, or poor)	2	6
b (i)	Three forms of market efficiency:		
	Weak Form (Award 1 mark for correctly identifying this form and award 1 mark for any valid brief explanation of this form. Award 0.5 marks if the explanation is insufficient, unclear or poor)	2	
	Semi-Strong Form (Award 1 mark for correctly identifying this form and award 1 mark for any valid brief explanation of this form. Award 0.5 marks if the explanation is insufficient, unclear, or poor)	2	
	Strong Form (Award 1 mark for correctly identifying this form and award 1 mark for any valid brief explanation of this form. Award 0.5 marks if the explanation is insufficient, unclear, or poor)	2	6
b (ii)	Four benefits of investing within the capital market: The benefits in the model answer are not exhaustive and other valid points should be considered Award 2 marks for a well discussed point and 1 mark if the point is simply listed or outlined		
	4 factors * 2 marks = 8 maximum marks		8
	Total Marks		**20**

Model Answers:

(c) Briefly explain the following forms of public finance to the private sector:
(i) Government grant.

A government grant is a financial award given by a government authority for a beneficial project. It is effectively a transfer payment. A grant does not include technical assistance or other financial assistance, such as a loan or loan guarantee, an interest rate subsidy, direct appropriation, or revenue sharing. The grantee is not expected to repay the money but is expected to use the funds from the grant for their stated purpose, which typically serves some larger good.

(ii) Government bond.
A government bond is a debt security issued by a government to support government spending and obligations. Government bonds can pay periodic interest payments called coupon payments. Government bonds issued by national governments are often considered low-risk investments since the issuing government backs them.

(iii) Tax incentives.
A tax incentive is a government measure that is intended to encourage individuals and businesses to spend money or to save money by reducing the amount of tax that they must pay. A tax incentive is an aspect of a government's taxation policy designed to incentivize or encourage a particular economic activity by reducing tax payments.

(d) With reference to capital markets:
(i) Briefly explain the three forms of market efficiency.

The following are the three forms of market efficiency:

Weak Form
The weak form suggests that today's stock prices reflect all the data of past prices and that no form of technical analysis can be effectively utilized to aid investors in making trading decisions. Advocates for the weak form efficiency theory believe that if the fundamental analysis is used, undervalued and overvalued stocks can be determined, and investors can research companies' financial statements to increase their chances of making higher-than-market-average profits.

Semi-Strong Form
The semi-strong form efficiency theory follows the belief that because all information that is public is used in the calculation of a stock's current price, investors cannot utilize either technical or fundamental analysis to gain higher returns in the market. Those who subscribe to this version of

the theory believe that only information that is not readily available to the public can help investors boost their returns to a performance level above that of the general market.

Strong Form

The strong form version of the efficient market hypothesis states that all information—both the information available to the public and any information not publicly known—is completely accounted for in current stock prices, and there is no type of information that can give an investor an advantage on the market. Advocates for this degree of the theory suggest that investors cannot make returns on investments that exceed normal market returns, regardless of information retrieved or research conducted.

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

The following are some of the benefits of investing within the capital market:

Savings

Investing in securities that are listed in the Capital or Stock market encourages investors to accumulate their savings in small amounts over time.

Income

Investment in the stock market provides a source of income. Shares pay dividends when companies declared profits and decide to distribute part of the profits to shareholders. Bonds pay an interest income to the bondholders. Sometimes the income earned from listed securities is higher than interest earned from the money or banking sector.

Wealth or Capital gain

Whenever the prices of securities listed in the market go up, the value of the investment of the holders of those securities increases. This is called capital gain and is an important way of growing wealth through the stock market. It is important to note that a one –off investment in the Capital market does not make sense. It is therefore the accumulative investment over time that creates opportunities for growth in wealth through the Capital Market.

Securities as Collateral

Listed securities are easily acceptable as collateral against loans from financial institutions.

Liquidity

Liquidity is the ability to convert shares or bonds into cash by selling within the shortest time possible without losing much value. When one needs funds urgently, listed securities could be very useful because they are more liquid than most other forms of assets.

Bonds pay an interest income and shares pay dividends income

- Grow wealth: Over time, the value of your investment increases, whenever the prices of your stock go up. This is called capital gains.
- Listed securities are easily acceptable as collateral against loans.

END OF MARKING GUIDE AND MODEL ANSWERS