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CPA ADVANCED LEVEL

ADVANCED FINANCIAL MANAGEMENT

TUESDAY: 25 April 2023. Morning Paper. Time Allowed: 3 hours. Answer ALL questions. Marks allocated to each question are shown at the end of the question. Show ALL your workings. Do NOT write anything on this paper.

QUESTION ONE

(a) (i) Explain the term "static trade off theory of capital structure". (2 marks)

(ii) Selected financial information for Tembo Ltd. is shown below:

- Yield to maturity on debt 8%
- Market value of debt Sh.100 million
- Number of ordinary shares 10 million
- Market price per ordinary share Sh.30
- Cost of capital if all equity financed 10.3%
- Marginal tax rate 30%

Additional information:

1. Johnson Njogu, a financial analyst expects that an increase in Tembo Ltd's financial leverage will increase its costs of debt and equity.

2. Based on an examination of similar companies in Tembo Ltd. industry, Johnson Njogu estimates that the company's cost of debt and cost of equity at various debt to total capital ratios are as shown below:

Estimates of Tembo Ltd. before tax costs of debt and equity:

Debt to total capital ratio (%)	Cost of debt (%)	Cost of equity (%)
20	7.7	12.5
30	8.4	13.0
40	9.3	14.0
50	10.4	16.0

Required

Determine the debt to total capital ratio that would minimise Tembo Ltd.'s weighted average cost of capital (WACC). (5 marks)

(b) Adept Consultants is a research firm that provides market related data for use by market participants. Michael Aloo is a financial manager at Adept Consultants tasked with estimating stock beta.

Required:

Explain THREE practical considerations that Adept Consultants should take when forecasting beta of an asset. (3 marks)

(c) XYZ Limited is considering six investment projects with the following details:

Project	Initial outlay Sh. "000"	Net present value Sh. "000"
1	1,000	390
2	750	325
3	1,125	590
4	1,850	840
5	1,300	635
6	1,500	

Additional information:

1. Project 6 is expected to generate the following annual cash flows:

Year	1	2	3	4
	Sh. "000"	Sh. "000"	Sh. "000"	Sh. "000"

Sales 725 765 885 612
Cost 145 168 202 94

Project 6 cash flows are exclusive of inflation at the rate of 4% per year for sales income and 5% per year for costs.

2. The cost of capital is 10%.
3. Due to management reluctance to raise additional finance, the capital for investment is currently restricted to Sh.5,000,000.
4. Project 1, 3, 5 and 6 are all independent but project 2 and 4 are mutually exclusive.
5. All of the above projects are divisible and none can be delayed or repeated.

Required:

(i) The net present value (NPV) for project 6. (3 marks)

(ii) The optimum investment combination given the capital constraint. (6 marks)

(iii) The resulting net present value (NPV) in (c) (ii) above. (1 mark)

(Total: 20 marks)

QUESTION TWO

(a) (i) Differentiate between "white knight" and "white squire" in relation to mergers and acquisitions. (4 marks)

(ii) Felix Bodo has collected the following information relating to the pro-forma financial statements of ABC Ltd., a company that is a target of its competitors.

Pro forma statement of profit or loss:

Year
2022 2023 2024 2025 2026
Sh."000" Sh."000" Sh."000" Sh."000" Sh."000"
Revenue 15,752 17,327 19,060 20,966 23,023
Cost of goods sold 8,664 9,530 10,483 11,531 12,685
Gross profit 7,088 7,797 8,577 9,435 10,378
Selling, general expenses 2,363 2,599 2,859 3,145 3,459
Depreciation 551 606 667 734 807
Earning before interest and taxes 4,174 4,592 5,051 5,556 6,112
Net interest expense 642 616 583 543 495
Earning before taxes 3,532 3,976 4,468 5,013 5,617
Income tax 1,236 1,392 1,564 1,755 1,966
Net income 2,296 2,584 2,904 3,258 3,651

Selected pro forma statement of financial position:

	2022	2023	Year 2024	2025	2026
	Sh."000"	Sh."000"	Sh."000"	Sh."000"	Sh."000"
Change in deferred income tax	19	21	23	26	28

Selected pro forma cash flow statement:

	2022	2023	Year 2024	2025	2026
	Sh."000"	Sh."000"	Sh."000"	Sh."000"	Sh."000"
Change in networking capital	455	551	607	667	734
Capital expenditures	1,461	1,709	1,880	2,068	2,275

Additional information:
1. ABC Ltd. has a corporate tax rate of 30%.
2. The weighted average cost of capital is 10%.
3. The terminal growth rate is 6%.

Required:

Determine using the discounted free cash flow analysis the value of ABC Ltd. (10 marks)

(b) Consider a two-period binomial model in which a share currently trades at a price of Sh.65. The share price can go up 20% or down 17% each period. The risk free rate is 5%.

Required:

The price of a put option expiring in two periods with an exercise price of Sh.60. (6 marks)

(Total: 20 marks)

QUESTION THREE

(a) In regards to restructuring in the public sector, the ministry of finance or an equivalent body can use performance results to motivate agencies to improve performance.

Required:

Examine THREE broad categories of potential mechanisms available to the Ministry of Finance to motivate performance including the rewards and sanctions in each category line. (6 marks)

(b) One of the instruments of real estate financing is mortgages.

Highlight FOUR methods by which the interest on a mortgage may be charged. (4 marks)

(c) You have been appointed as a finance manager of Mamba Ltd. After evaluating the investment portfolio of the company, you have divided the market into four portfolios following two dimensions; value/growth and small/large.

The weight of each portfolio in the index is given below:

Portfolio	Weight (%)	Sensitivity to factor 1 (Market beta)	Sensitivity to factor 2 (Price/book)	Sensitivity to factor 3 Average capitalisation
Small value	10	0.87	0.83	2
Small growth	10	0.97	0.33	2
Large value	30	0.92	5	20
Large growth	50	1.12	6 –	22
Risk premium		8%	3%	0.40%

The risk free rate is 3%.

Required:

(i) Using the arbitrage pricing theory (APT), determine the portfolio that has the highest expected return. (4 marks)

(ii) The portfolio that would maximise your return if you decide to use capital asset pricing model (CAPM). (4 marks)

(iii) In order to diversify his perceived risk, a competitor wants to combine the small value and large growth portfolios. The new portfolio should have an overall sensitivity to factor 1 (market beta) of 1. Determine the proportion to be invested in the small value and large growth. (2 marks)

(Total: 20 marks)

QUESTION FOUR

(a) Explain THREE differences between "futures contracts" and "forward contracts". (6 marks)

(b) Pine Ltd. is considering an investment in one of two corporate bonds namely A and B. Both bonds have a par value of Sh.1,000 and pay coupon interest on an annual basis.

The market price of bond A is Sh.1,079.60 with a coupon rate of 6% and is due to be redeemed at par in five years. Bond B is about to be issued with a coupon rate of 4% and will also be redeemable at par in five years.

Additional information:

1. Both bonds are expected to have the same gross redemption yield (yield to maturity).
2. The yield to maturity of a company bond is determined by its credit rating.

Pine Ltd. considers duration of the bond to be a key factor when making decisions on which bond to invest in.

Required:

(i) The Macaulay duration for bond A and bond B. (10 marks)

(ii) Discuss TWO limitations of duration as a measure of a bond price to changes in interest rates. (4 marks)

(Total: 20 marks)

QUESTION FIVE

(a) Globalisation has resulted in several organisations engaging in corporate alliances and the establishment of trading blocks. The advent of e-commerce has enabled companies to greatly expand their market.

Required:

Elaborate on FOUR factors that complicate financial management in multinational firms. (8 marks)

(b) Explain THREE divestment strategies available to a company undertaking restructuring. (6 marks)

(c) A group of companies controlled from the United States has subsidiaries in the United Kingdom (UK), South Africa (SA) and France (FR).

As at 30 November 2022, intercompany indebtness were as follows:

Debtors	Creditors	Amount	Currency
UK	SA	1,236,000	SA Rand
UK	FR	494,400	Euro
FR	SA	824,000	SA Rand
SA	UK	76,220	Sterling Pound
SA	FR	386,250	Euro

Additional information:

1. It is the company's policy to net off inter-company balances to the greatest extent possible.
2. The central treasury is to use the following exchange rates for netting off purposes:

US$ = SA Rand 6.4323/

£0.7140/Euro 6.1740

Required:

Calculate the net payment to be made between the subsidiaries after netting of inter-company balances. (6 marks)

(Total: 20 marks)

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