CERTIFIED INVESTMENT AND FINANCIAL ANALYSTS (CIFA)

FOUNDATION LEVEL

INTRODUCTION TO FINANCE AND INVESTMENTS

WEDNESDAY: 19 August 2026. Afternoon Paper. **Time Allowed: 3 hours.**

This paper consists of five (5) questions. Answer ALL questions. Marks allocated to each question are shown at the end of the question. Show ALL your workings.

QUESTION ONE

(a) Asai Hardware Ltd. is expanding from two outlets to five outlets and the owners have appointed a finance manager for the first time.

Required:

Explain **THREE** financial decisions that the finance manager should prioritise in supporting the expansion. (6 marks)

(b) Majengo Ltd. has invoices amounting to Sh.4,800,000 due from credit customers in 60 days. A factoring company is willing to advance 80% of the invoice value immediately. The factor will charge a service fee of 2.5% of the invoice value and interest of 15% per annum on the amount advanced for the 60-day period. The factor will deduct both the service fee and interest from the advance at inception. Assume a 365-day year.

Required:

(i) Determine the amount to be advanced by the factor. (2 marks)

(ii) Calculate the total factoring cost. (4 marks)

(iii) Determine the net cash received immediately. (2 marks)

(c) The suppliers of Ditman Ltd. offer credit terms of 3/15, net 60. The company intends to purchase goods worth Sh.1,200,000 on credit.

Required:

(i) Calculate the cash discount available if the company pays within 15 days. (2 marks)

(ii) Determine the implied annual cost of forgoing the discount by paying on day 60 instead of day 15. Assume a 365-day year. (4 marks)

(Total: 20 marks)

QUESTION TWO

(a) Nuru Ltd. obtains market information from annual reports, prospectuses, websites and financial data vendors before advising clients.

Required:

Assess **THREE** checks that an investment adviser should perform to determine whether the information is sufficiently reliable for investment decision-making. (6 marks)

(b) An importer in Mombasa requires euros to pay a supplier in Germany. A bank provides the following spot quotations:

Currency pair	Bid	Ask
USD/Sh.	146.20	146.70
EUR/USD	1.0820	1.0860
GBP/USD	1.2630	1.2680

Required:

(i) Determine the Shilling cost of buying EUR 120,000 from the bank. (4 marks)

(ii) Calculate the cross-rate bid and ask quotation for GBP/EUR, expressed as euros per pound sterling. (4 marks)

(c) The one-year interest rate in Kenya is 11% while the one-year interest rate in the United Kingdom is 6%. The current spot rate is GBP 1 = Sh.185.00.

Required:

(i) Determine the one-year forward rate implied by interest rate parity. (4 marks)

(ii) State whether the Kenya Shilling is expected to trade at a forward premium or discount against the pound and explain the implication for a Kenyan importer with a sterling payment due in one year. (2 marks)

(Total: 20 marks)

QUESTION THREE

(a) The investment committee of BK Pension Scheme is debating whether it should rely on chart patterns or publicly available market information when valuing securities.

Required:

(i) Analyse **TWO** differences between "technical theory" and the "efficient market hypothesis". (4 marks)

(ii) Advise the committee which approach is more consistent with a market in which publicly available information is rapidly reflected in security prices. (2 marks)

(b) Uzalendo preference shares have a par value of Sh.100 and pay an annual preference dividend of 9%. The shares are redeemable at Sh.115 at the end of five years. Investors require a return of 12% per annum.

Required:

(i) Calculate the present value of the annual preference dividends. (3 marks)

(ii) Calculate the present value of the redemption value. (2 marks)

(iii) Determine the value of one preference share. (1 mark)

(c) Fresh Foods Ltd., an unlisted company, reported profit after tax attributable to ordinary shareholders of Sh.48,000,000 for the year ended 30 June 2026.The company has 12,000,000 ordinary shares in issue and no preference shares. Comparable listed food-processing firms trade at an average price earnings ratio of 9.5 times. The directors believe that a 20% discount should be applied because Fresh Foods Ltd. is unlisted and less liquid.

Required:

(i) Calculate the earnings per share. (2 marks)

(ii) Determine the value per share before applying the liquidity discount. (2 marks)

(iii) Determine the adjusted value per share after applying the liquidity discount. (2 marks)

(iv) Determine the implied total equity value and, based solely on this valuation, advise whether an offer of Sh.350,000,000 for all the ordinary shares should be accepted. (2 marks)

(Total: 20 marks)

QUESTION FOUR

(a) A newly established SACCO investment committee is classifying its proposed investments into risky and risk-free assets.

Required:

Explain **THREE** differences between "risky assets" and "assets assumed to be risk-free". (6 marks)

(b) A 91-day Treasury bill with a face value of Sh.1,000,000 is purchased for Sh.973,000.

Required:

(i) Calculate the holding period yield. (2 marks)

(ii) Determine the simple annualised yield using a 365-day year. (2 marks)

(c) Linda Fund Managers uses a risk-free return of 6.5% when assessing investments. The following information relates to two proposed investment funds:

Fund	Required risk premium	Expected return
Fund A	3.5%	10.4%
Fund B	7.0%	13.0%

Required:

(i) Calculate the required return for each fund. (2 marks)

(ii) Calculate the surplus or shortfall of each fund's expected return relative to its required return. (2 marks)

(iii) Based solely on the risk–return relationship, identify the fund that provides adequate compensation for risk. (2 marks)

(d) A parent wishes to accumulate Sh.600,000 for university fees in four years. The bank offers a deposit account earning 10% per annum compounded annually.

Required:

(i) Determine the amount that should be invested today. (3 marks)

(ii) Explain why discounting is relevant to this decision. (1 mark)

(Total: 20 marks)

QUESTION FIVE

(a) Marble Microfinance is developing Shariah-compliant products for small traders who do not wish to borrow on an interest-bearing basis.

Required:

Explain **THREE** Shariah-compliant mechanisms through which Islamic finance may generate returns without charging riba. (6 marks)

(b) Kilimo Ltd. has Sh.9,000,000 available for small expansion projects. The following projects are independent and indivisible:

Project	Initial outlay (Sh.)	Present value of future cash inflows (Sh.)
A	3,000,000	3,900,000
B	4,000,000	4,960,000
C	2,500,000	3,000,000
D	3,500,000	4,025,000

Required:

(i) Calculate the profitability index for each project. (4 marks)

(ii) Rank the projects using the profitability index. (2 marks)

(iii) Recommend the combination of projects that maximises total net present value within the capital limit and state the resulting total net present value. (2 marks)

(c) Premium Ltd. is also considering a short-term bank facility of Sh.5,000,000 for 180 days. The bank quotes a simple interest rate of 14% per annum. In addition, the bank requires a compensating balance of 10% of the loan amount to be maintained in a non-interest-bearing account. The company's maximum acceptable borrowing cost is 15% per annum. Assume a 365-day year.

Required:

(i) Calculate the interest payable for 180 days. (2 marks)

(ii) Determine the usable funds available after the compensating balance requirement. (1 mark)

(iii) Calculate the simple annualised effective cost of the facility based on usable funds. (2 marks)

(iv) Advise whether Premium Ltd. should accept the facility. (1 mark)

(Total: 20 marks)

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CERTIFIED INVESTMENT AND FINANCIAL ANALYSTS (CIFA)

FOUNDATION LEVEL

INTRODUCTION TO FINANCE AND INVESTMENTS

WEDNESDAY: 22 April 2026. Afternoon Paper. **Time Allowed: 3 hours.**

This paper consists of five (5) questions. 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) In relation to the financial system and intermediaries:

(i) Explain the term "financial intermediaries". (2 marks)

(ii) Outline **FOUR** functions performed by financial intermediaries in a financial system. (4 marks)

(b) Rose Ltd. is evaluating two mutually exclusive investment projects A and B. Each project requires an initial investment of Sh.900,000.

The expected net cash inflows for each project are as follows:

	Expected net cash inflows (Sh.)	
Year	**Project A**	**Project B**
1	300,000	420,000
2	320,000	350,000
3	350,000	280,000
4	280,000	250,000

Additional information:

1. The firm's cost of capital is 12% per annum.
2. Both projects have no residual value at the end of their useful life.
3. Depreciation is charged on a straight-line basis.

Required:

(i) The Net Present Value (NPV) for each project. (4 marks)

(ii) The profitability index (PI) for each project. (2 marks)

(iii) The Accounting Rate of Return (ARR) for each project. (4 marks)

(iv) Advise management on the project to undertake. (2 marks)

(v) Outline **TWO** limitations of Accounting Rate of Return (ARR) as a method of appraising investment projects. (2 marks)

(Total: 20 marks)

QUESTION TWO

(a) Highlight **FOUR** features of ordinary shares as a form of equity security. (4 marks)

(b) Mavuno Ltd. expects to receive USD 500,000 from an export customer in three months' time. The management is concerned about possible depreciation of the US dollar against the Kenyan Shilling.

Additional information:

1. Spot rate: USD 1=Sh.145.
2. Three-month futures rate: USD 1=Sh.142.

Required:

(i) Determine the amount that the company will receive in Kenyan Shillings if it uses a futures hedge. (2 marks)

(ii) Determine the amount the company will receive if it does not hedge and the spot rate after three months falls to USD 1=Sh.138. (2 marks)

(iii) Advise the management of Mavuno Ltd. on whether hedging is beneficial. (2 marks)

(c) Utamaduni Ltd. issued a Sh.1,000,000 bond with a coupon rate of 12% per annum payable annually. The bond will mature in 5 years and investors require a yield of 10%.

Required:

(i) Calculate the annual interest payment. (2 marks)

(ii) Determine the present value of interest payments. (2 marks)

(iii) Determine the present value of the principal repayment. (2 marks)

(iv) Calculate the market price of the bond. (2 marks)

(v) Determine whether the bond is selling at a premium or a discount. (2 marks)

(Total: 20 marks)

QUESTION THREE

(a) Highlight **FOUR** factors that may influence the dividend policy of a company. (4 marks)

(b) Describe **FOUR** stages involved in the investment management process. (8 marks)

(c) The following information relates to returns of two securities traded at the Nairobi Securities Exchange:

Economic state	Probability	Return on security A (%)	Return on security B (%)
Boom	0.30	18	10
Normal	0.40	12	14
Recession	0.30	6	8

Required:

(i) Calculate the expected return for security A and security B. (2 marks)

(ii) Determine the variance of security A and security B. (4 marks)

(iii) Determine the standard deviation of security A and security B. (2 marks)

(Total: 20 marks)

QUESTION FOUR

(a) Outline **FOUR** differences between "Islamic banking" and "conventional banking". (4 marks)

(b) Summarise **FOUR** advantages of leasing as a source of finance to a business. (4 marks)

(c) Janet Mutai obtains a mortgage loan of Sh.4,000,000 from a local bank at an interest rate of 12% per annum compounded annually. The loan is to be repaid in five (5) equal annual instalments payable at the end of each year.

Required:

Prepare a loan amortisation schedule. (6 marks)

(d) Alpha Investments Ltd. is reviewing the annual returns earned on an ordinary share over the last four years. The returns are as follows:

Year	Rate of return
1	12%
2	18%
3	-6%
4	10%

The initial value of the investment at the beginning of Year 1 was Sh.100,000.

Required:

(i) Calculate the arithmetic average rate of return over the four-year period. (2 marks)

(ii) Calculate the geometric average rate of return over the four-year period. (2 marks)

(iii) Determine the value of the investment at the end of Year 4. (2 marks)

(Total: 20 marks)

QUESTION FIVE

(a) Outline **FOUR** roles played by foreign exchange markets in the global economy. (4 marks)

(b) Explain **FOUR** reasons why investors diversify their investment portfolios. (4 marks)

(c) Chego Ltd. has Sh.7 million in equity financing and Sh.3 million in debt financing. The cost of equity is 15%. The company pays interest of 12% on its debt and the corporate tax rate is 30%.

Required:

(i) Calculate the after-tax cost of debt. (1 mark)

(ii) Determine the weighted average cost of capital (WACC) of the company. (4 marks)

(d) The shares of Tumaini Ltd. are currently selling at Sh.40 per share. The company has just paid a dividend of Sh.2 per share. Dividends are expected to grow at a constant rate of 8% per annum and investors require a rate of return of 12%.

Required:

(i) Determine the expected dividend next year. (2 marks)

(ii) Calculate the intrinsic value of the share using the Gordon growth model. (3 marks)

(iii) Determine whether the share is undervalued or overvalued. (2 marks)

(Total: 20 marks)

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CERTIFIED INVESTMENT AND FINANCIAL ANALYSTS (CIFA)

FOUNDATION LEVEL

INTRODUCTION TO FINANCE AND INVESTMENTS

WEDNESDAY: 3 December 2025. Afternoon Paper. **Time Allowed: 3 hours.**

This paper consists of five (5) questions. 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) Explain **THREE** advantages of convertible bonds to each of the following:

(i) Investors. (3 marks)

(ii) Issuers. (3 marks)

(b) Alpha Media Ltd., a company listed at the Securities Exchange, anticipates dividend growth of 18% per year for the next five years. After the fifth year, dividends are expected to grow at a constant rate of 6% per year indefinitely. The shareholders of Alpha Media Ltd. require a 12% annual rate of return on their investment. Last year, the company paid a dividend of Sh.4 per share.

Required:
Determine the current price of Alpha Media Ltd.'s share. (6 marks)

(c) Vine Limited expects to receive € 800,000 from a credit customer in the European union in 6 months time. The spot rate is € 2.512 per $1. The six-month forward rate is € 2.652 per $1. The following are the commercial rates:

	Deposit rate	**Borrowing rate**
Euros (€)	5% per year	10% per year
Dollars ($)	3% per year	4% per year

Vine Limited does not have surplus cash to use in hedging the forward Euro receipt.

Required:
Evaluate whether a money market hedge or a forward market hedge would be preferred by Vine Limited. (8 marks)

(Total: 20 marks)

QUESTION TWO

(a) Discuss **THREE** assumptions of the Gordon's model of valuing shares. (6 marks)

(b) Vulai Ltd. wishes to expand its production by purchasing a new machine costing Sh.170,000, with installation costs estimated at Sh.40,000. In the fourth year, the machine will require an overhaul costing Sh.80,000.

The expected annual cash inflows are as follows:

Year	1	2	3	4	5	6
Cash inflows (Sh.)	60,000	72,650	35,720	48,510	91,630	83,715

The company can raise finance to purchase the machine at an interest rate of 12% per annum.

Required:
Determine the net present value (NPV) of the machine and advise management whether the company should acquire the machine. (6 marks)

(c) The following is an extract from the statement of financial position of Voyage Ltd. relating to its equity and liability as at 30 June 2025:

	Sh."000"
Ordinary shares (Sh.10 par value)	10,000
Capital reserves	40,000
Revenue reserves	100,000
10% debenture	60,000
	210,000

Additional information:

1. The profit after tax for the year ended 30 June 2025 was Sh.6,000,000.
2. The dividend pay-out ratio for the year ended 30 June 2025 was 60%.
3. The market price per share as at 30 June 2025 was Sh.36.
4. Corporation tax rate is 30%.

Required:

(i) Dividend yield. (2 marks)

(ii) Return on capital employed (ROCE). (2 marks)

(iii) Price-to-earnings (P/E) ratio. (2 marks)

(iv) Times interest cover ratio. (2 marks)

(Total: 20 marks)

QUESTION THREE

(a) Outline **FOUR** challenges facing the financing of affordable housing in Kenya. (4 marks)

(b) Analyse **THREE** differences between "open ended funds" and "closed ended funds". (6 marks)

(c) The market returns, the returns of Ariel Limited and associated probabilities in different economic states expected next year are as follows:

Economic conditions	Probability	Market return (%)	Ariel Limited return (%)
Boom	0.30	25	13
Moderate	0.25	20	10
Recession	0.45	15	8

Required:

(i) The expected market return. (1 mark)

(ii) The expected return of Ariel Limited. (1 mark)

(iii) The covariance between the market and Ariel Limited securities. (2 marks)

(iv) The standard deviation of the market and Ariel Limited securities. (4 marks)

(v) The correlation coefficient between the market returns and Ariel Limited securities. (2 marks)

(Total: 20 marks)

QUESTION FOUR

(a) Discuss **FOUR** sources of finance in Islamic finance. (8 marks)

(b) A stock index is composed of the following stocks:

Stock	Number of shares (million)	Share price 1 January 2023 (Sh. per share)	1 January 2024 (Sh. per share)	1 January 2025 (Sh. per share)
Akaline	150	60	75	60
Betaline	750	20	25	40
Cetaline	300	40	35	35

Required:
Determine the total return on the stock index over the two-year period (from 1 January 2023 to 1 January 2025) using:

(i) A value-weighted index. (3 marks)

(ii) A price-weighted index. (3 marks)

(c) A Sh.10,000,000 zero-coupon bond has a yield to maturity (YTM) of 18% and 10 years until maturity.

Required:
(i) Determine the price of the bond. (2 marks)

(ii) Determine the yield to maturity (YTM) of the bond if its price is Sh.2,000,000. (2 marks)

(iii) Summarise **TWO** factors that may influence the yield to maturity of a bond. (2 marks)
(Total: 20 marks)

QUESTION FIVE

(a) Outline **FOUR** ways in which accounting interacts with finance. (4 marks)

(b) Highlight **FOUR** factors to be considered by a firm when choosing between debt and equity finance. (4 marks)

(c) Madaraka Ltd.'s capital structure as at 30 June 2025 was as follows:

	Sh."000"
Ordinary share capital (Sh.10 par value)	186,500
Retained earnings	13,500
10% Debentures	200,000
	400,000

The company is considering the acquisition of an investment project that will cost Sh.135 million. In order to finance the investment project, the company would be required to raise additional capital.

Additional information:
1. The above capital structure is considered optimal.
2. The company can obtain additional debentures at an interest rate of 18% per annum.
3. The dividend for the year ended 30 June 2025 was Sh.2.40 per share.
4. Dividends are expected to grow at a rate of 8% each year for the foreseeable future.
5. Additional ordinary shares can be issued at securities exchange at a price of Sh.54 per share net of flotation cost amounting to Sh.6 per share.
6. Corporate tax rate is 30%.

Required:
(i) Cost of debentures. (1 mark)

(ii) Cost of retained earnings. (1 mark)

(iii) Cost of ordinary shares. (1 mark)

(iv) The amount to be financed through equity. (2 marks)

(v) The amount of equity to be raised through new ordinary shares to maintain the optimal capital structure. (2 marks)

(vi) The amount to be raised through debentures. (2 marks)

(vii) The marginal cost of capital (MCC). (3 marks)

(Total: 20 marks)

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CIFA FOUNDATION LEVEL

INTRODUCTION TO FINANCE AND INVESTMENTS

WEDNESDAY: 20 August 2025. Afternoon 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) Highlight **FOUR** mechanisms that could be used to mitigate agency problems between managers and shareholders. (4 marks)

(b) Highlight **FOUR** circumstances under which it may be appropriate for an organisation to use lease finance. (4 marks)

(c) Makina Limited intends to raise finance as follows:

- Issue 1,000,000 ordinary shares of Sh.20 each at Sh.30 per share. The floatation costs will be 10% of the market price of the share.
- Issue 500,000 8% preference shares of Sh.25 par value at Sh.40 per share.
- Utilise Sh.5,000,000 of the retained earnings.
- Raise Sh.10,000,000 through issue of 10% bonds at par.
- Borrow Sh.1,000,000 from creditors through goods for resale arrangements.

Additional information:

1. The ordinary shareholders expect a dividend of Sh.5 per share with a growth rate of 6% per annum.
2. Corporation tax rate is 30%.

Required:

(i) The cost of ordinary shares. (2 marks)

(ii) The cost of retained earnings. (2 marks)

(iii) The cost of 8% preference shares. (2 marks)

(iv) The cost of 10% bonds. (2 marks)

(v) Calculate the marginal cost of capital (MCC). (4 marks)

(Total: 20 marks)

QUESTION TWO

(a) Explain **THREE** metrics that could be used to measure the quality of loans in the mortgage market. (6 marks)

(b) The following information was extracted from the annual reports of Jenga Limited as at 31 December 2024:

Net profit before tax	Sh.12,500,000
Corporation tax rate	30%
Retention ratio	40%
Number of outstanding shares	4,000,000
Equity capitalisation rate	12%
Return on investment	14%

Required:

The market price per share using Gordon's model. (4 marks)

(c) Jane Njeri intends to invest Sh.1,000,000 in a particular venture capital project which is expected to pay Sh.18,000,000 at the end of 7 years if it is successful. The project might fail at any time between now and the end of 7 years.

Jane's cost of equity is 18%.

The following table shows the failure probability for each year:

Year	1	2	3	4	5	6	7
Failure probability	0.30	0.25	0.20	0.15	0.15	0.10	0.10

Required:

(i) The probability that the project will survive to the end of the seventh year. (3 marks)

(ii) The expected net present value of the project. (5 marks)

(iii) Advise Jane Njeri on whether to invest in the project or not. (2 marks)

(Total: 20 marks)

QUESTION THREE

(a) Explain the following principles that govern Islamic finance:

(i) Principle of equity. (2 marks)

(ii) Principle of ownership. (2 marks)

(b) Kiiru Ltd. has forecasted the following end of year prices for its shares.

Ending price per share (Sh.)	**Probability**
35	0.15
42	0.10
50	0.30
55	0.20
60	0.25

The current price per share is Sh.50.

Required:

(i) The expected return of Kiiru Ltd.'s share. (2 marks)

(ii) Variance of the end of period returns. (2 marks)

(iii) The standard deviation of the returns. (2 marks)

(c) Mary Loet, an investment consultant, is analysing the performance of a portfolio comprising shares of three listed companies on the securities exchange. She has gathered the following price data:

Company	**Opening price (Sh.)**	**Closing price (Sh.)**
X	20	25
Y	80	88
Z	50	60

Required:

Compute the following:

(i) Arithmetic mean return for the three companies. (4 marks)

(ii) Geometric mean return for the three companies. (3 marks)

(iii) The new index value, assuming an initial index value of 150 using results from (c) (i) and (c) (ii) above. (3 marks)

(Total: 20 marks)

QUESTION FOUR

(a) Enumerate **FOUR** assumptions of the fundamental theory. (4 marks)

(b) A company borrows Sh.750,000 from a bank on 1 January 2025. The loan agreement specifies a simple interest rate of 9% per annum for the first two years, then the rate increases to 11% per annum for the remaining period. The loan is to be repaid in full after five years.

Required:
Calculate the:

(i) Interest for the first two years. (2 marks)

(ii) Interest for the next three years. (2 marks)

(iii) Total interest paid by the company for 5 years. (2 marks)

(iv) Total amount to repaid after 5 years. (2 marks)

(c) Tom Sagana borrowed Sh.80,000 from Hope Bank at an interest rate of 1.25% compounded monthly. The loan is to be amortised using the reducing balance method and be repaid in 12 equal monthly installments payable at the end of each month.

Required:

(i) Determine the amount of each installment payable. (2 marks)

(ii) Prepare a loan amortisation schedule. (6 marks)

(Total: 20 marks)

QUESTION FIVE

(a) Outline **FIVE** stages of the investment management process. (5 marks)

(b) The interest rate on a one-year deposit in Kenya is 12% while the interest rate on one year deposit in the United States (US) is 8%.

The current spot rate is USD 1= Ksh.145.50.

Required:

(i) Compute the percentage (%) change in the value of the foreign currency according to Purchasing Power Parity (PPP). (3 marks)

(ii) Determine the forward rate of the US dollar after one year. (3 marks)

(c) A laptop is to be purchased on hire purchase. The cash price is Sh.120,000. The terms are:

- Deposit is 20% of cash price.
- Balance payable in 12 equal monthly installments.
- Flat interest rate of 15% per annum on the balance after deposit.

Required:

(i) Calculate the deposit amount. (2 marks)

(ii) Calculate the total hire purchase price. (3 marks)

(iii) Determine the monthly instalment amount. (2 marks)

(iv) Outline **TWO** advantages of hire purchase. (2 marks)

(Total: 20 marks)

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CIFA FOUNDATION LEVEL

INTRODUCTION TO FINANCE AND INVESTMENTS

THURSDAY: 24 April 2025. Afternoon 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) Outline **FOUR** reasons why venture capital markets are not well developed in developing countries. (4 marks)

(b) Discuss **THREE** factors to consider when making financing decisions. (6 marks)

(c) T Ltd. has two mutually exclusive projects namely; Project X and Project Y with initial outlay of Sh.100,000 each. The projects have a useful life of 5 years. The company's cost of capital is 12% with a corporate tax rate of 30%.

The expected cash flows for the projects before depreciation and tax are given below:

Year	**Project X** Sh.	**Project Y** Sh.
1	82,000	124,000
2	82,000	64,000
3	82,000	44,000
4	82,000	104,000
5	82,000	104,000

The company uses straight line method of depreciation:

Required:

(i) Compute profitability index for project X and project Y. (8 marks)

(ii) Advise the management of T Ltd. on the project to undertake. Justify your answer. (2 marks)

(Total: 20 marks)

QUESTION TWO

(a) Explain **FIVE** components of a prospectus that could be used by a public company to raise capital in the financial market. (5 marks)

(b) Explain **THREE** participants in the derivatives market. (6 marks)

(c) At the beginning of the year 2020, Alfred Charo deposited Sh.1,000,000 in an investment account which earned a compound interest at 15% per annum. At the beginning of each subsequent year, Alfred Charo deposited additional Sh.500,000 in the same account.

Required:

(i) Calculate the amount of money in the investment account by the end of the year 2024. (6 marks)

(ii) The percentage interest earned over the investment period. (3 marks)

(Total: 20 marks)

QUESTION THREE

(a) (i) Explain **TWO** factors that might affect bond prices. (4 marks)

(ii) An exchange rate mechanism (ERM) is a way that government can influence the relative price of their national currency in forex market.

In relation to the above statement, describe **TWO** types of exchange rate mechanisms. (4 marks)

(b) Opel Financial Advisory Service Ltd. provides investment advice to a wide range of clients. Most of its work is concerned with providing clients with information and advice on the returns and risks associated with investment funds. The table below shows data available for two investment funds; Fund X and Fund Y:

		Returns	
Economic conditions	**Probability (P)**	**Fund X**	**Fund Y**
Boom	0.25	21%	–5%
Normal	0.50	9%	10%
Recession	0.25	–10%	27%

Required:

(i) The expected return and standard deviation of Fund X. (4 marks)

(ii) The expected return and standard deviation of Fund Y. (4 marks)

(iii) The expected return on portfolio comprising 50% of Fund X and 50% of Fund Y. (2 marks)

(iv) Comment on your results in (b) (i) and (b) (ii) above. (2 marks)

(Total: 20 marks)

QUESTION FOUR

(a) Describe **TWO** classifications of fixed income securities. (4 marks)

(b) Explain **THREE** principles of capital budgeting. (6 marks)

(c) Mambo Ltd. made profit before tax in the year ended 31 December 2024 of Sh.9,320,000. The current market price per share (MPS) is Sh.60. An extract of Mambo Ltd.'s capital structure as at 31 December 2024 is as follows:

	Sh."000"
Ordinary share capital 1,000,000 shares at Sh.10 each	10,000
8% preference shares	2,000
10% debentures	2,000
	14,000

The corporation tax rate is 30%

Required:

Calculate Mambo Ltd.'s:

(i) Earnings per share (EPS). (2 marks)

(ii) Price/Earning ratio (P/E). (2 marks)

(iii) Return on investments (ROI). (2 marks)

(d) The following information has been extracted from the books of Dede Ltd. for the year ended 31 December 2024:

Earnings after taxes	Sh.15 million
Total dividends paid	Sh.9 million
Number of shares outstanding	2 million
Cost of capital	10%
Rate of return on investment	12%

Required:

The theoretical market value of the company's share using Walter's Model. (4 marks)

(Total: 20 marks)

QUESTION FIVE

(a) Enumerate **FOUR** differences between "Islamic banking" and "conventional banking". (4 marks)

(b) Sawa Ltd. pays a dividend of Sh.4 per share indefinitely. The minimum required rate of return by investors is 20%.

Required:

(i) Total present value of dividends. (2 marks)

(ii) Assuming dividends shall grow at a constant rate of 5%, calculate the total present value of dividends. (2 marks)

(c) The following information was extracted from the books of Hope Ltd.:

	Sh."000"
Ordinary shares (Sh.50 par value)	96,000
10% preference shares (Sh.30 par value)	48,000
12% debentures (Sh.1,000 par value)	60,000
Total capital employed	204,000

Additional information:

1. The current market price of an ordinary share is Sh.85 per share inclusive of Sh.5 as floatation costs. Ordinary shareholders expect cash dividend of Sh.6.50 per share and a dividend growth at the rate of 10% at the end of every year.
2. The 10% preference shares currently sell at Sh.50 per share with a floatation cost of Sh.2 per share.
3. The 12% debentures currently sell for Sh.1,200 per debenture.
4. The corporate rate of tax is 30% per annum.

Required:

(i) The cost of ordinary shares. (3 marks)

(ii) The cost of 10% preference shares. (2 marks)

(iii) The cost of 12% debentures. (3 marks)

(iv) The weighted average cost of capital (WACC) using market values. (4 marks)

(Total: 20 marks)

CIFA FOUNDATION LEVEL

INTRODUCTION TO FINANCE AND INVESTMENTS

WEDNESDAY: 4 December 2024. Afternoon 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 "alternative investments". (2 marks)

(ii) Identify **FOUR** goals of alternative investments. (2 marks)

(b) Highlight **FOUR** features of Eurobonds. (4 marks)

(c) Texas Limited intends to invest Sh.5,000,000 in either Project A or Project B. The returns and states of economy for the two projects are as follows:

	State of economy	Return (%)	Probability
Project A			
	Recession	-10	0.20
	Normal	45	0.60
	Prosperity	30	0.20
Project B			
	Recession	-15	0.20
	Normal	30	0.60
	Prosperity	20	0.20

Required:

(i) Determine the expected return for each project. (4 marks)

(ii) Determine the standard deviation for each project. (6 marks)

(iii) Advise the management of Texas limited on which project to invest in. (2 marks)

(Total: 20 marks)

QUESTION TWO

(a) Highlight **FOUR** reasons why wealth maximisation is considered to be superior to profit maximisation goal of a firm. (4 marks)

(b) Tony Magu intends to purchase the shares of Akili Limited at the beginning of the forth coming year. The dividend at the end of the year is expected to be Sh.4 per share. The market price of the share is expected to be Sh.50. Tony Magu's expected rate of return is 16%.

Required:

Calculate the value of the share for Akili Limited. (4 marks)

(c) Salama Ltd.'s capital structure, which is considered optimal, is as follows:

	Sh."000"
Ordinary share capital (Sh.20 par value)	80,000
Reserves	40,000
14% debentures (Sh.1,000 par value)	80,000
	200,000

The firm's management is considering raising an additional Sh.40 million to finance an expansion programme. The company expects to generate Sh.5 million from internal sources.

Additional information:

1. The firm will issue new ordinary shares at Sh.50 each to raise the desired external equity. A floatation cost of Sh.5 per share will be incurred.
2. The company will issue new 16% redeemable debentures to raise desired debt capital. The issue price will be at Sh.1,200 subject to a floatation cost of Sh.60 and a discount of Sh.40. The debentures will mature after 10 years. The par value of each debenture unit is Sh.1,000.
3. The most recent ordinary dividend paid by the firm is Sh.4.50 per share, while future dividends shall grow at the rate of 6% each year in perpetuity.
4. The corporation tax rate applicable is 30%.

Required:

(i) The cost of retained earnings. (2 marks)

(ii) The cost of new ordinary share capital. (2 marks)

(iii) The cost of 16% redeemable debentures. (3 marks)

(iv) The firm's weighted marginal cost of capital (WMCC). (5 marks)

(Total: 20 marks)

QUESTION THREE

(a) Explain **FOUR** roles of derivatives markets. (4 marks)

(b) Jaro Limited borrowed Sh.24,000,000 from Mali Bank at an interest rate of 12% per annum. The loan is to be repaid in four (4) equal annual instalments.

Required:

(i) Determine the amount of annual instalment payable. (2 marks)

(ii) Prepare a loan amortisation schedule. (6 marks)

(c) The following table shows the foreign exchange rates between the British Pound, the Japanese Yen and the United States (U.S) Dollar:

	Contract	**US Dollar equivalent**	**Currency per U.S ($)**
British Pound	Spot	1.330	0.75187
	30 day future	1.300	0.76923
	90 day future	1.290	0.7752
	180 day future	1.250	0.8000
Japanese Yen	Spot	0.0069	144.93
	30 day future	0.0072	138.89
	90 day future	0.0083	120.48
	180 day future	0.0090	111.11

Required:

Determine the premium or discount for:

(i) 30 day British Pound. (2 marks)

(ii) 180 day British Pound. (2 marks)

(iii) 30 day Japanese Yen. (2 marks)

(iv) 90 day Japanese Yen. (2 marks)

(Total: 20 marks)

QUESTION FOUR

(a) Explain **FOUR** reasons why Islamic finance prohibits interest (riba). (4 marks)

(b) In the recent past, there has been conflict of interest between the government and shareholders of public limited companies.

Assess **FOUR** strategies that could be used by the government to resolve these conflicts. (8 marks)

(c) Viwanda Ltd. is considering the acquisition of a new machine that will be used in production of product "Alpha". The machine will require an initial capital outlay of Sh.1.4 million. The expected cash flows before depreciation and tax are given below:

Year	Cash outflows (Sh.)	Cash inflows (Sh.)
1	65,000	800,000
2	80,000	750,000
3	50,000	900,000
4	55,000	1,200,000
5	70,000	1,100,000

Additional information:

1. The machine is to be depreciated on a straight line basis with a nil residual value at the end of its useful life of five years.
2. The company's cost of capital is 10%.
3. The corporation tax rate is 30%.
4. Assume that cash flows occur at the end of the year.

Required:

Determine the Net Present Value (NPV) of the machine and advise the company on whether or not to acquire the machine. (8 marks)

(Total: 20 marks)

QUESTION FIVE

(a) Highlight **FOUR** differences between "risky assets" and "risk-free assets". (4 marks)

(b) Examine **THREE** factors that may influence bond redemption. (6 marks)

(c) Sally Ltd. is currently issuing 10% bonds redeemable at Sh.100 par value in five years time. Alternatively, each bond may be converted on that date into 30 ordinary shares of the company. The current market price per share is Sh.4.50 and this is expected to grow at the rate of 6% per annum for the foreseeable future. The company's cost of debt is 12% per annum.

Required:

(i) Market value of the bond. (4 marks)

(ii) Floor value of the bond. (3 marks)

(iii) Conversion premium per share. (3 marks)

(Total: 20 marks)

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CIFA FOUNDATION LEVEL

INTRODUCTION TO FINANCE AND INVESTMENTS

WEDNESDAY: 21 August 2024. Afternoon 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) There are certain conditions which should be satisfied for a securities market to be considered efficient.

With reference to the above statement, highlight **FOUR** such conditions. (4 marks)

(b) Explain **THREE** non-financial goals of a firm. (6 marks)

(c) Kingo Ltd. has followed a policy of paying out a gradually increasing dividend per share over the past five years as shown below:

Year	Earnings per share (Sh.)	Dividend per share (Sh.)
2019	59.0	2.50
2020	62.5	2.75
2021	73.0	3.00
2022	67.50	3.25
2023	80.00	3.65

Additional information:

1. The company has paid the year 2023 dividend. The shares are therefore quoted ex-dividend.
2. The management is considering a change in the financing policy whereby greater financing will be provided from internally generated funds. This change is expected to reduce the dividend per share to Sh.2.50 in year 2024.
3. The growth rate in earnings per share (EPS) and dividend per share (DPS) is expected to increase to 14% per annum from year 2024.
4. The company's shareholders require a minimum return on investment of 16%.

Required:

(i) Using the dividend growth model, calculate the market price per share as at 31 December 2023 prior to the change in the financing policy. (4 marks)

(ii) Calculate the market price per share as at 31 December 2024 under the new financing policy. (3 marks)

(iii) Determine the break-even growth rate in dividend per share using the market price calculated in (c)(i) above. (3 marks)

(Total: 20 marks)

QUESTION TWO

(a) Outline **FOUR** disadvantages of capital budgeting to a company. (4 marks)

(b) Assess **FIVE** factors that may influence the level of foreign direct investments in a country. (5 marks)

(c) Joe Vilakazi deposited Sh.200,000 in a commercial bank at the start of each year over a period of five years. The bank offers an interest rate of 6% per annum.

Required:

(i) Total future value of the deposit after five years. (3 marks)

(ii) The interest rate earned over the five year period. (2 marks)

(d) Ivy John intends to make a payment of USD $2,000,000 in three months' time. She decided to invest the dollars for three months period prior to the payment date.

The following information is available:
1. US dollar deposit rate is 7% per annum.
2. The Kenya Shilling deposit rate is 10% per annum.
3. Spot exchange rate 1Ksh. = $0.0076.
4. 3 months forward rate 1Ksh. = $0.0070.

Advise Ivy John on whether or not she should invest the dollars in Kenya. (6 marks)
(Total: 20 marks)

QUESTION THREE

(a) Describe **FIVE** factors that could influence the dividend policy of a firm. (5 marks)

(b) Explain **FIVE** benefits of Islamic Finance. (5 marks)

(c) Patrick Mbabu, a financial analyst, has been presented with the following information relating to a portfolio of three companies' shares trading at the securities exchange.

Company share	**Opening price Sh.**	**Closing price Sh.**
A	12	15
B	52	60
C	38	46

Required:
Compute the following;

(i) Arithmetic mean. (4 marks)

(ii) Geometric mean. (3 marks)

(iii) The value of the new index using the results obtained in (c) (i) and (c) (ii) above. Assume an initial index value of 130. (3 marks)
(Total: 20 marks)

QUESTION FOUR

(a) Highlight **FOUR** advantages to a company of having its shares quoted at the securities exchange. (4 marks)

(b) Brian Ofuko is considering buying shares of Jitegemee Ltd. which are currently selling at the securities exchange for Sh.100. His financial consultant, Daima Consultants, has forecasted the market price of Jitegemee Ltd.'s shares at the end of one years' holding period and the corresponding probability of occurrence will be as follows:

Economic condition	**Probability**	**Market price per share after one year (Sh.)**
Poor	0.2	90
Moderate	0.3	110
Good	0.5	120

Required:
(i) The expected rate of return for Jitegemee's Ltd.'s share. (2 marks)

(ii) The standard deviation of Jitegemee's Ltd. shares. (4 marks)

(c) Luna Ltd. is evaluating an investment project which requires the importation of a new machine at a cost of Sh.2,700,000. The machine has a useful life of six years.

Additional information:
1. The following additional costs would be incurred in relation to the machine.

	Sh. '000'
Modification costs	225
Installation costs	375
Import duty	900

2. The machine is expected to increase the company's annual cash flows (before tax) as shown below:

Year	**1**	**2**	**3**	**4**	**5**	**6**
	'000'	**'000'**	**'000'**	**'000'**	**'000'**	**'000'**
Increase in cash flows (Shs)	1,800	1,400	1,100	1,000	900	800

3. The machine is to be fully depreciated over its useful life using the straight line method.
4. The corporate tax is 30% while the cost of capital is 12%.
5. The maximum acceptable payback period to the company for all capital projects is four years.

Required:

(i) Payback period of the machine. (5 marks)

(ii) Net present value (NPV) of the machine. (3 marks)

(iii) Advise the company on whether to import the machine based on your results in (c) (i) and (c) (ii) above. (2 marks)

(Total: 20 marks)

QUESTION FIVE

(a) Assess **FOUR** functions of foreign exchange markets in the global economy. (4 marks)

(b) A Sh.1,000,000 zero coupon bond has a yield to maturity (YTM) of 16% and 10 years until maturity.

Required:

(i) The bond price. (2 marks)

(ii) Yield to maturity (YTM) of this bond if its price is Sh.200,000. (2 marks)

(c) Blue Line Investments Limited is expanding its production line and will need to raise Sh.50 million to finance the expansion. The proposed methods of financing are:

- Sh.30 million from debt
- Sh.20 million from floating new ordinary shares

The capital structure of the company is made up as follows:

- 3,000,000 fully paid ordinary shares of Sh.10 each.
- Retained earnings of Sh.20 million.
- 1,000,000, 10% preference shares of Sh.20 each.
- 200,000, 6% long term debentures of Sh.150 each.

Additional information:

1. The market value of the firm's ordinary shares is Sh.60 per share. The expected ordinary share dividend next year is Sh.2.40 per share, with an average growth rate of 10% for the last 10 years.
2. Earnings have also been growing 10% over the last ten years. The growth rate is expected to remain constant for some time.
3. The firm's long term debentures market price is Sh.100 each. The debentures will mature in 100 years.
4. The preference shares were issued four years ago and are still selling at face value.
5. The corporate tax rate is 30%.

Required:

(i) The cost of ordinary shares. (3 marks)

(ii) The cost of the 6% long term debentures. (2 marks)

(iii) The cost of 10% preference shares. (3 marks)

(iv) The weighted average cost of capital (WACC) using market values. (4 marks)

(Total: 20 marks)

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CIFA FOUNDATION LEVEL

INTRODUCTION TO FINANCE AND INVESTMENTS

WEDNESDAY: 24 April 2024. Afternoon 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) Outline **FOUR** challenges that may be faced by a company when investing in foreign securities. (4 marks)

(b) Amani Ltd. is evaluating two mutually exclusive projects, Alpha and Beta. The expected cost of each of the project is Sh.8 million. However, an additional Sh.1 million in working capital will be required if the firm was to invest in project Alpha and Sh.1.5 million for project Beta. Project Alpha has an estimated useful life of five years while project Beta has an estimated useful life of four years. Estimated net operating cash flows (NOCF) from each project in each year are given as follows:

	Net operating cash flow	
Year	**Project Alpha**	**Project Beta**
	Sh.“000”	**Sh.“000”**
1	2,600	3,600
2	3,000	3,600
3	3,400	3,600
4	2,900	3,600
5	1,900	—

Additional information:

1. The resale values for project Alpha and project Beta are estimated at Sh.300,000 and Sh.400,000 respectively at the end of their useful lives.
2. The expected cost of capital is projected at 16%.

Required:

Using the Net Present Value (NPV) approach, advise the management of Amani Ltd. on which project to undertake. (10 marks)

(c) The interest rate on a one-year Commercial Bank deposit is 14% while the interest rate on a one-year United Kingdom (UK) bank deposit is 16%.
The spot rate is £1 = Ksh.183.713.

Required:

(i) Compute the percentage (%) change in the value of foreign currency according to purchasing power parity (PPP). (3 marks)

(ii) Determine the forward rate of the Sterling Pound after one year. (3 marks)

(Total: 20 marks)

QUESTION TWO

(a) Highlight **SIX** functions of Islamic Development Bank. (6 marks)

(b) Describe **FOUR** arguments in favour of earnings retention by firms. (8 marks)

(c) Bernard Mwema intends to invest Sh.2,000,000 in either of the following plans:

1. Invest in a bank paying interest at a rate of 10% per year compounded annually for 10 years.

2. Invest in a bond that pays interest at a rate of 8% per annum compounded semi-annually for 10 years.

Required:

(i) Determine the future value under each option. (4 marks)

(ii) Advise Bernard Mwema on the option to undertake. (2 marks)

(Total: 20 marks)

QUESTION THREE

(a) Explain the following terms in relation to alternative investment markets.

(i) Collective investment trusts. (2 marks)

(ii) Structured products. (2 marks)

(b) Evaluate **THREE** motivations for investing in real estate. (6 marks)

(c) An investment promises to pay Sh.10,000 annually forever. If the appropriate discounting rate is 10%, determine the value of the investment today. (2 marks)

(d) Victoria Kibe is considering buying ordinary shares of Upendo Ltd. The shares are currently trading at a market price per share of Sh.50. The forecasted market price of each share after one year and their probability of occurrence in different states of nature are given as follows:

State of nature	**Probability**	**Forecasted market price at the end of the year**
Boom	0.4	Sh.60
Average	0.3	Sh.58
Recession	0.3	Sh.45

Required:

(i) The return under each state of nature. (3 marks)

(ii) The expected rate of return from investment in the shares. (2 marks)

(iii) The standard deviation of the expected return. (2 marks)

(iv) The coefficient of variation. (1 mark)

(Total: 20 marks)

QUESTION FOUR

(a) In relation to the investment environment:

(i) Explain the term "investment environment". (2 marks)

(ii) Describe **FOUR** factors that affect the investment environment. (8 marks)

(b) The shares of Usawa Ltd. are currently selling at Sh.60 each at the securities exchange. Usawa Ltd's price earnings ratio is 6 times. The company adopts a constant retention ratio of 60%. It is predicted that the company's dividends will grow at an annual rate of 15% for the first two years, 10% for the next two years and thereafter at a constant rate of 6% per annum in perpetuity. The investors' minimum required rate of return is 10%.

Required:

(i) Earnings per share (EPS). (2 marks)

(ii) Dividend per share (DPS). (2 marks)

(iii) Current intrinsic value of the shares. (6 marks)

(Total: 20 marks)

QUESTION FIVE

(a) Describe the process of asset securitisation. (8 marks)

(b) ABC Ltd. is considering raising additional Sh.20 million to finance an expansion programme. The firm's capital structure which is considered to be optimal is given as follows:

	(%)
Equity capital	60
8% debt capital (Sh.100 par value)	30
12% preference share capital (Sh.50 par value)	10
	100

Additional information:

1. The firm expects to raise Sh.4 million from internal sources.
2. The firm has paid a dividend of Sh.2.50 per share. The dividend is expected to grow at a constant rate of 10% per year.
3. The firm will issue new ordinary shares at a current price of Sh.50 per share and will incur a floatation cost of Sh.5 per share.
4. New 8% irredeemable debentures will be issued at Sh.120 each. Floatation cost of 10% of par value will be incurred.
5. New 12% preference shares will be issued at Sh.70 each. The par value of each share is Sh.50. Floatation cost of Sh.5 per share will be incurred.
6. Corporate tax rate applicable is 30%.

Required:

(i) Cost of retained earnings. (2 marks)

(ii) Cost of ordinary shares. (2 marks)

(iii) Cost of 8% debentures. (2 marks)

(iv) Cost of 12% preference shares. (2 marks)

(v) Weighted marginal cost of capital (WMCC). (4 marks)

(Total: 20 marks)

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CIFA FOUNDATION LEVEL

INTRODUCTION TO FINANCE AND INVESTMENTS

WEDNESDAY: 6 December 2023. Afternoon 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) Outline **FOUR** roles of a finance manager in an organisation. (4 marks)

(b) Explain **THREE** ways in which goals of a firm may complement one another. (6 marks)

(c) The following is the capital structure of Hekima Ltd.:

	Sh.“000”
Ordinary share capital (par value Sh.150)	90,000
Preference share capital (par value Sh.100)	50,000
14% debentures (par value Sh.1,000)	40,000
	180,000

Additional information:

1. The shareholders of Hekima Ltd. expect earnings and dividends to grow at a constant rate of 10% in the future. The company has just paid a dividend of Sh.2.50 per share.
2. The current market price of one ordinary share of Hekima Ltd. is Sh.120.
3. New preference shares can be sold at Sh.120 per share with a dividend of Sh.10 per share and floatation cost of Sh.5 per share.
4. The company will sell 14% debentures with a maturity of 10 years at Sh.1,200 per debenture.
5. The corporation tax rate is 30%.

Required:

(i) The cost of ordinary share capital. (2 marks)

(ii) The cost of preference share capital. (2 marks)

(iii) The cost of 14% debenture capital. (2 marks)

(iv) The weighted average cost of capital (WACC) using the market values. (4 marks)

(Total: 20 marks)

QUESTION TWO

(a) Highlight **FOUR** characteristics of a well functioning financial system. (4 marks)

(b) Explain **THREE** sources of finance in Islamic financing. (6 marks)

(c) Juhudi Ltd., a manufacturing company, intends to invest in a new product line. This requires an investment of Sh.10 million in plant and machinery. The production is expected to last for five years and will have a salvage value of Sh.2 million.

Additional information:

1. The annual contribution margin from the product will be Sh.6,900,000.
2. Fixed production cost excluding depreciation would amount to Sh.1,425,000 per annum.
3. As a result of the expansion of the product line, working capital is expected to increase by Sh.1,600,000 at the start of production and will be released at the end of economic life of the project.
4. The company employs a straight line depreciation policy.
5. The corporate tax rate is 30% per annum.
6. The company’s cost of capital is 10% per annum.

Required:

(i) The total initial cost. (2 marks)

(ii) The total terminal cash flow. (2 marks)

(iii) The annual net operating cash flows. (3 marks)

(iv) The net present value (NPV). (3 marks)

(Total: 20 marks)

QUESTION THREE

(a) Summarise **FOUR** functions of the foreign exchange market. (4 marks)

(b) Explain **THREE** differences between alternative investments and traditional investments. (6 marks)

(c) The following information was extracted from the financial statements of Maziwa Ltd.:

Net profit after tax	Sh.20 million
Number of ordinary shares	2 million
Cost of capital	12%
Payout ratio	60%
Internal rate of return	16%

Required:

(i) The earnings per share (EPS). (2 marks)

(ii) The dividend per share (DPS). (2 marks)

(iii) The price of a share using Gordon's growth model. (3 marks)

(iv) The price of a share using Walter's model. (3 marks)

(Total: 20 marks)

QUESTION FOUR

(a) Describe **TWO** uncontrollable factors that could influence the cost of capital of a firm. (4 marks)

(b) Explain **FOUR** benefits of globalisation in an economy. (8 marks)

(c) Peter Wafula invested Sh.1 million with XYZ bank at an annual interest rate of 8% compounded quarterly for a period of 5 years.

Required:

Determine the total amount at the end of five years. (1 mark)

(d) A Certified Investments and Financial Analyst graduate has forecasted that the market returns in News Securities Exchange in the next seven years will be as follows:

Year	**Market return %**	**Probability**
1	–30	0.05
2	–10	0.10
3	10	0.20
4	20	0.25
5	25	0.20
6	30	0.15
7	40	0.05

Required:

(i) Compute the expected rate of market return. (3 marks)

(ii) Determine the standard deviation of market return. (4 marks)

(Total: 20 marks)

QUESTION FIVE

(a) Enumerate **FOUR** reasons why venture capital markets are not well developed in most developing countries. (4 marks)

(b) Explain **THREE** factors to consider when selecting a source of finance. (6 marks)

(c) Highrise Ltd. issued a 10 year bond two years ago. The bond has a coupon rate of 13% per annum payable semi-annually. Upon maturity, it will be redeemed at Sh.102 for every Sh.100 par.

Required:
Compute the highest amount you can pay to acquire the bond today if the required rate of return is 14%. (4 marks)

(d) Peter Makazi borrowed Sh.2,000,000 from a local bank repayable semi-annually for a three year period. The interest on the loan is 14% per annum.

Required:

(i) Determine the semi-annual instalment. (2 marks)

(ii) Prepare a loan repayment schedule over the three year period. (4 marks)

(Total: 20 marks)

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CIFA FOUNDATION LEVEL

INTRODUCTION TO FINANCE AND INVESTMENTS

WEDNESDAY: 23 August 2023. Afternoon 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) One of the ways of resolving conflicts between shareholders and creditors is by use of restrictive covenants.

Highlight **FOUR** such restrictive covenants that may be used. (4 marks)

(b) Explain **THREE** differences between accounting and finance. (6 marks)

(c) Kipawa Ltd. is considering raising additional Sh.50 million to finance an expansion programme. The firm's capital structure which is considered to be optimal is given as follows:

	(%)
Equity capital	60
10% debt capital (Sh.1,000 par value)	30
12% preference share capital (Sh.60 par value)	10
	100

Additional information:

1. The firm expects to raise Sh.10 million from internal sources.
2. The firm has paid an ordinary dividend of Sh.3 per share in the last financial year. This is expected to grow at constant rate of 10% per annum.
3. The firm will issue new ordinary shares at a current price of Sh.35 per share and will incur a floatation cost of Sh.5 per share.
4. New 10% irredeemable debentures will be issued at Sh.1,200 per debenture. Floatation cost of 5% of market value will be incurred.
5. New 12% preference shares will be issued at Sh.80 each. The par value of each share is Sh.60. Floatation cost of Sh.5 per share will be incurred.
6. Corporate tax rate applicable is 30%.

Required:

(i) Cost of retained earnings. (1 mark)

(ii) Cost of ordinary shares. (2 marks)

(iii) Cost of 10% debentures capital. (2 marks)

(iv) Cost of 12% preferences share capital. (2 marks)

(v) Weighted marginal cost of capital of the firm. (3 marks)

(Total: 20 marks)

QUESTION TWO

(a) Identify **FOUR** categories of alternative investments. (4 marks)

(b) Explain **THREE** types of risks that could be faced by investors who own shares of a company. (6 marks)

(c) Kwekwe Ltd. is evaluating an investment project which requires the importation of a new machine at a cost of Sh.20 million. The machine has a useful life of five years and will have a salvage value of Sh.4 million.

Additional information:

1. The following additional costs would be incurred in relation to the machine:

	Sh."000"
Installation cost	1,000
Import duty	2,000
Freight charges	3,000

2. The annual contribution margin from the product will be Sh.10 million.
3. Fixed production cost excluding depreciation would amount to Sh.2 million per annum.
4. The working capital is expected to increase by Sh.3 million at the start of the year and recovered at the end of the period.
5. The company employs a straight line depreciation policy.
6. The corporate tax rate is 30% per annum.
7. The company's cost of capital is 10% per annum.

Required:

(i) Total initial cash outlay. (2 marks)

(ii) Total terminal cash flow. (2 marks)

(iii) Annual net cash flows after tax. (3 marks)

(iv) The net present value (NPV) of the machine. (3 marks)

(Total: 20 marks)

QUESTION THREE

(a) Outline **FOUR** reasons for time preference of money. (4 marks)

(b) Ndume Limited intends to borrow Sh.18,000,000 from a bank to finance its project. The rate of interest is 12% per annum. Interest is charged on a reducing balance basis. The loan is to be repaid in 4 equal annual instalments.

Required:

(i) Determine the annual instalment. (2 marks)

(ii) Prepare a loan amortisation schedule. (4 marks)

(c) Bali Ltd. has provided the following information relating to its two securities; security X and security Y under three states of nature:

State of economy	**Probability (P_i)**	**Security returns (%)**	
		Security X	**Security Y**
Boom	0.20	14	8
Normal	0.60	16	10
Recession	0.20	12	6

Required:

(i) The expected return for each security. (2 marks)

(ii) The standard deviation for each security. (2 marks)

(iii) The covariance between the two securities returns. (2 marks)

(iv) The expected return of a portfolio consisting 75% of security X and 25% of security Y. (2 marks)

(v) The standard deviation of the portfolio in (c) (iv) above. (2 marks)

(Total: 20 marks)

QUESTION FOUR

(a) Enumerate **FOUR** reasons why use of debentures as source of finance is unpopular in any developing country. (4 marks)

(b) Discuss **THREE** objectives of financing decisions in a business context. (6 marks)

(c) Akili Ltd. generated Sh. 60 million profit after tax (PAT) in the previous financial year. The firm adopts 50% payout ratio as its dividend policy. The total number of issued ordinary shares are 15 million.

The company has a potential investment opportunity. If undertaken, dividends are expected to grow at the rate of 12% each year for the first 2 years, 8% for the next 2 years and then stabilise at the rate of 5% each year thereafter in perpetuity. The investors minimum required rate of return is 10%.

Required:

(i) The earnings per shares (EPS) in last financial year. (2 marks)

(ii) The dividend per share (DPS) in the last financial year. (2 marks)

(iii) The current intrinsic value of the share. (6 marks)

(Total: 20 marks)

QUESTION FIVE

(a) State **FOUR** differences between Islamic banking and Conventional banking. (4 marks)

(b) Explain **THREE** key investor information documents. (6 marks)

(c) Johny Kim intends to make an investment in South Africa. The South African Rand exhibits an interest rate of 16% per annum while the Kenyan Shilling exhibits an interest rate of 18% per annum.

Required:

(i) Compute the forward rate premium of the South African Rand in respect to Kenyan Shilling. (2 marks)

(ii) If the current spot rate of the South African Rand is Ksh. 0.141, compute the one year forward rate of the rand with respect to Ksh. (2 marks)

(d) Moran Ltd. has issued a 10 year bond with a nominal value of Sh.1,000 and a coupon rate of 12%. The coupon payments are made annually in arrears. The yield to maturity of the bond is 10% per annum.

Required:

(i) The value of the bond. (3 marks)

(ii) The new value of the bond assuming that the yield to maturity increases to 14% per annum. (3 marks)

(Total: 20 marks)

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CIFA FOUNDATION LEVEL

INTRODUCTION TO FINANCE AND INVESTMENTS

WEDNESDAY: 26 April 2023. Afternoon 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 "fixed income indices". (2 marks)

(ii) Highlight **TWO** challenges that make it costly and challenging for investors to replicate fixed income indices. (2 marks)

(b) Propose **THREE** challenges faced by real estate developers in providing affordable housing in developing countries. (6 marks)

(c) James Mwangi has invested in a portfolio that comprises of two assets; asset A and asset B as shown below:

	Asset A	**Asset B**
Amount invested	Sh.10,000,000	Sh.15,000,000
Expected return	8.8%	20%
Standard deviation	18%	24%

Correlation coefficient between the rates of returns of asset A and asset B is 1.0.

Required:

(i) Based on correlation coefficient, advise James Mwangi on whether he should hold his portfolio. (2 marks)

(ii) Calculate expected return of the portfolio. (3 marks)

(iii) Calculate the covariance of the portfolio. (2 marks)

(iv) Compute the standard deviation of the portfolio. (3 marks)

(Total: 20 marks)

QUESTION TWO

(a) Outline **FOUR** limitations of the profit maximisation goal of firm. (4 marks)

(b) Explain **THREE** types of agency costs. (6 marks)

(c) The earnings per share (EPS) and dividend per share (DPS) of Maputo Ltd. for each of the five years ended 31 December 2018 to 31 December 2022 were as follows:

Year ended 31 December	**EPS (Sh.)**	**DPS (Sh.)**
2018	2.95	1.25
2019	3.125	1.375
2020	3.65	1.5125
2021	3.375	1.665
2022	4.00	1.830

The directors of the company are considering a change in the company's dividend policy. This change would result to reduction in dividend per share for the year ending 31 December 2023 to Sh.1.25 in order to increase the level of internally generated funds.

Additional information:
1. The growth rate in dividend per share after the change in policy is expected to be 12% per annum.
2. The shareholders require a return on investment at a rate of 14% per annum.

Required:
(i) Determine the average dividend growth rate over the five-year period. (2 marks)

(ii) Using the dividend valuation model, calculate the intrinsic value of a share before the change in dividend policy. (3 marks)

(iii) Determine the intrinsic value of a share after the change in dividend policy using dividend valuation model. (3 marks)

(iv) Advise the directors of the company whether or not to change the dividend policy. (2 marks)
(Total: 20 marks)

QUESTION THREE
(a) Highlight **FOUR** benefits of Eurobond to the issuers. (4 marks)

(b) Explain **THREE** principles of Islamic finance. (6 marks)

(c) The following is the capital structure of Richy Ltd:

	Sh.“000”
Ordinary share capital (par value Sh.50)	48,000
Preference share capital (par value Sh.60)	21,000
12 % Debentures (par value Sh.1,000)	16,200
	85,200

Additional information:
1. The shareholders of Richy Ltd. expect earnings and dividends to grow at a constant rate of 10% in the future. The company has just paid a dividend of Sh.3.60 per share.
2. The current market price of one ordinary share is Sh.60.
3. New preference shares can be sold at Sh.90 per share with a dividend of Sh.6 per share and floatation costs of Sh. 10 per share.
4. The company pays out all its earnings as dividends.
5. The company will sell 12% debentures with a maturity of 10 years at Sh.1,200 per debenture.
6. The corporation tax rate is 30%.

Required:
Calculate the following:

(i) The cost of ordinary share capital. (2 marks)

(ii) The cost of preference share capital. (2 marks)

(iii) The cost of 12% debentures capital. (3 marks)

(iv) The weighted average cost capital (WACC) using market values. (3 marks)
(Total: 20 marks)

QUESTION FOUR
(a) Highlight **FOUR** advantages of using intermediate term loans to finance a business organisation. (4 marks)

(b) Describe **THREE** components of a prospectus as a source of financial and market data. (6 marks)

(c) Bali Ltd. is evaluating an investment project whose initial cost is Sh.12 million. It has expected economic life of 5 years after which it will have a zero salvage value. The earnings before depreciation and tax (EBDT) from the project are expected as follows:

Year	**1**	**2**	**3**	**4**	**5**
Earnings before depreciation and tax (EBDT)	**Sh.“000”** 5,600	**Sh.“000”** 6,000	**Sh.“000”** 6,400	**Sh.“000”** 7,600	**Sh.“000”** 8,000

The corporation tax rate is 30% and depreciation is on a straight line basis. The firm’s cost of capital is 12%.

Required:
Calculate the following:

(i) The annual cash flows after tax. (3 marks)

(ii) The net present value (NPV). (3 marks)

(iii) The profitability index (PI). (1 mark)

(iv) The internal rate of return (IRR). (3 marks)

(Total: 20 marks)

QUESTION FIVE

(a) Outline **FOUR** assumptions of capital budgeting. (4 marks)

(b) Explain **TWO** components of a financial system. (4 marks)

(c) Describe **THREE** controllable factors that could influence the cost of capital of a firm. (6 marks)

(d) At the beginning of the year 2022, Nyiro Wekeza deposited Sh.500,000 in an investment account which earned compound interest at a rate of 10% per annum. At the beginning of each subsequent year, Nyiro Wekeza intend to deposit a further Sh.250,000 in the same account.

Required:

(i) The amount of money expected to be in the investment account by the end of year 2026. (4 marks)

(ii) The percentage interest to be earned over the investment period. (2 marks)

(Total: 20 marks)

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CIFA FOUNDATION LEVEL

INTRODUCTION TO FINANCE AND INVESTMENTS

WEDNESDAY: 7 December 2022. Afternoon 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) The goal of wealth maximisation is considered to be the modern approach to finance and any organisation should strive to ensure it maximises the wealth of its shareholders.

Required:
Argue **FOUR** cases in support of the above statement. (4 marks)

(b) Explain **TWO** differences between forwards contracts and futures contracts as types of derivatives. (4 marks)

(c) Hazina Microfinance Limited intends to borrow Sh.10,000,000 from Pesa Limited. The loan will attract an interest rate of 14% per annum on reducing balance basis. The loan will be repaid in four equal annual instalments.

Required:
Prepare a loan amortisation schedule for Hazina Microfinance Limited. (6 marks)

(d) Define the following terms as used in foreign exchange markets in your country:

(i) Bid price. (1 mark)

(ii) Ask price. (1 mark)

(iii) Bid-Ask spread. (1 mark)

(iv) Initial margin. (1 mark)

(e) With reference to time value of money, define the following terms:

(i) Compounding. (1 mark)

(ii) Future value. (1 mark)

(Total: 20 marks)

QUESTION TWO

(a) With reference to cost of capital:

(i) Explain the term "cost of capital" to a firm. (2 marks)

(ii) Highlight **THREE** purposes of cost of capital to a firm. (3 marks)

(b) Summarise **FIVE** advantages of investing in mutual funds as an alternative investment. (5 marks)

(c) Outline **FOUR** challenges facing Islamic banking in your country. (4 marks)

(d) Poa Ltd. made profits before tax in the financial year ended 31 December 2021 of Sh.9,320,000. The current market price per share of the company is Sh.60. An extract of the capital structure as at 31 December 2021 is as follows:

	Sh."000"
Ordinary share capital (1,000,000 shares of Sh.10 each)	10,000
8% preference share capital	2,000
10% debenture	2,000
	14,000

- Corporate tax rate is 30%

Required:

(i) Earnings per share (EPS). (2 marks)

(ii) Price/earnings (P/E) ratio. (2 marks)

(iii) Return on investment (ROI). (2 marks)

(Total: 20 marks)

QUESTION THREE

(a) Highlight **FOUR** characteristics of a good investment appraisal method. (4 marks)

(b) Distinguish between a "Eurobond market" and "foreign exchange market". (2 marks)

(c) Market risk is the risk that the value of an investment will decrease due to changes in market conditions.

In relation to the above statement, summarise **FOUR** types of market risks that could affect an investment. (4 marks)

(d) Zamu Ltd. is considering its budget for the year 2023. The following information relates to four mutually exclusive projects that the management is contemplating to undertake:

Projects	Initial cash outflow Sh."000"	Cash inflows Sh."000" Year 1	Year 2	Year 3
A	8,000	2,000	4,000	6,000
B	10,000	4,000	6,000	6,000
C	20,000	8,000	12,000	10,000
D	16,000	6,000	10,000	8,000

Additional information:

1. The cost of capital for Zamu Ltd. is 10%.
2. The cash flows are assumed to occur at the end of each year.

Required:

(i) Net present value (NPV) of each investment. (4 marks)

(ii) Advise Zamu Ltd. on the best alternative to choose using the NPV criteria. (1 mark)

(e) Majibu investments account was analysed for performance in the last three years each ending 31 December and the data tabulated as below:

Year	Beginning value Sh."000"	Ending value Sh."000"
2019	100.0	115.0
2020	115.0	138.0
2021	138.0	110.4

Required:

(i) The geometric mean (GM) rate of return. (3 marks)

(ii) The arithmetic mean (AM) rate of return. (2 marks)

(Total: 20 marks)

QUESTION FOUR

(a) Distinguish between "primary markets" and "secondary markets". (4 marks)

(b) With reference to agency theory, explain the following terminologies:

(i) Agency relationship. (2 marks)

(ii) Agency costs. (2 marks)

(c) Jawabu Ltd. is a wholly equity financed company. The shares of the company are currently trading in the securities exchange at a price of Sh.60 per share. The company's earnings per share is Sh.10 and growth in earnings is expected to remain at 10% per annum for the foreseeable future. Jawabu Ltd. has a policy of paying 30% of the profits after tax as dividends to the shareholders. The company's cost of capital is 16%.

Required:

(i) The theoretical value of the company's share using the Gordon's model. (3 marks)

(ii) Comment on its valuation on the securities exchange. (1 mark)

(iii) Outline **THREE** drawbacks of the Gordon dividend growth model. (3 marks)

(d) The following information relates to the capital structure of Kora Limited as at 31 December 2021:

	Sh."000"
6% mortgage bonds	20,000
Ordinary shares (Sh.25 each)	25,000
Retained earnings	55,000
	100,000

Additional information:

1. Mortgage bonds of similar quantity could be sold at a yield of 8%.
2. The ordinary shares sell at Sh.120 each.
3. The ordinary shareholders have just received a dividend of Sh.4 per share. Earnings grow at the rate of 6% per annum.
4. Corporation tax rate is 30%.

Required:

(i) After-tax cost of mortgage bonds. (1 mark)

(ii) Cost of equity. (2 marks)

(iii) Weighted average cost of capital (WACC) for the firm. (2 marks)

(Total: 20 marks)

QUESTION FIVE

(a) Outline **FOUR** advantages of investing in bonds. (4 marks)

(b) Assess three objectives of using a prospectus by companies intending to list at the stock market. (6 marks)

(c) The following information relates to the prices of a share of Delight Ltd. under various states of nature:

Economic conditions	**Dividend per share Sh.**	**Market price per share Sh.**	**Probability Sh.**
High growth	4.00	305.50	0.20
Expansion	3.25	285.50	0.25
Stagnation	2.50	261.25	0.35
Decline	2.00	243.50	0.20

The current share price of Delight Ltd. is Sh.261.25.

Required:

(i) The rate of return for each state of nature. (4 marks)

(ii) The expected rate of return. (3 marks)

(iii) The standard deviation. (3 marks)

(Total: 20 marks)

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CIFA FOUNDATION LEVEL

INTRODUCTION TO FINANCE AND INVESTMENTS

FRIDAY: 17 December 2021. **Time Allowed: 3 hours.**

Answer ALL questions. Marks allocated to each question are shown at the end of the question. Show ALL your workings.

QUESTION ONE

(a) For a long time, profit maximisation has been considered as the main goal of a firm. However, shareholder's wealth maximisation goal has recently gained acceptance amongst most companies as the key goal of a firm.

Required:

In relation to the above statement:

(i) Distinguish between "profit maximisation goal" and "shareholder wealth maximisation goal". (4 marks)

(ii) Explain three limitations of profit maximisation goal. (6 marks)

(b) Discuss three types of Eurocurrency loans as a source of finance for enterprises. (6 marks)

(c) (i) Edwin Malenya is considering to borrow Sh.100,000 from his employer to buy a motor cycle for his personal use. His employer has agreed to lend him the total amount repayable in three years at an interest rate of 9% per annum.

Required:

The annual instalments payable by the borrower. (2 marks)

(ii) Determine the amount that an investor should deposit in an account today that pays an interest rate of 12% per annum compounded quarterly so that he can have a balance of Sh.2,000,000 in the account at the end of 10 years. (2 marks)

(Total: 20 marks)

QUESTION TWO

(a) Describe four types of derivatives contract. (8 marks)

(b) Outline four contents of a bond indenture. (4 marks)

(c) Explain four purposes of valuation of securities by investors. (4 marks)

(d) The following information was extracted from the financial statements of Twiga Investments Ltd. as at 30 September 2021:

	Sh."000"
Non-current assets (carrying value)	9,000
Net current assets	3,000
Total Assets	12,000
Represented by:	
Ordinary shares (Sh.10 each)	4,000
Revenue reserves	5,000
6% loan stock	3,000
Total Equity and Liabilities	12,000

Additional information:

1. The 6% loan stock is redeemable at 3% premium.
2. The current market value of freehold property exceeds the book value by Sh.600,000.
3. All the assets other than freehold property are estimated to be realisable at market value.

Required:

The value of 75% holding of ordinary shares in the company as at 30 September 2021 using the net assets basis valuation method. (4 marks)

(Total: 20 marks)

QUESTION THREE

(a) Highlight four principles underlying Islamic finance. (4 marks)

(b) Faustin Onyango was faced with a choice of receiving Sh.1,000,000 today or Sh.1,050,000 in six months' time. An analyst has advised him to take Sh.1,000,000 because of time value of money.

Required:
Explain to Faustin Onyango, who is a layman in finance:

(i) The meaning of the term "time value of money". (1 mark)

(ii) Three key factors that makes time value of money important. (3 marks)

(c) The finance manager of Mambo Mazuri Limited has complied the following information regarding the company's capital structure:

Ordinary shares
The company's equity shares are currently selling at Sh.100 per share. Over the past five years, the company's dividend pay-outs which have been approximately 60% of the earnings per share (EPS) were as follows:

Year ended 31 October 2021	Dividend per share (DPS) Sh.
2017	5.23
2018	5.50
2019	5.85
2020	6.25
2021	6.60

The dividend for the year ended 31 October 2021 was recently paid.

The average growth rate of dividend is 6% per annum.
To issue additional ordinary shares, the company would have to give a discount of Sh.3 per share and it would cost Sh.5 in floatation cost per share.

The company can issue unlimited number of shares under the above terms.

Preference shares
The company can issue an unlimited number of 8% preference shares of Sh.10 par value at a floatation cost of 5% of the face value per share.

Debt
The company can raise funds by selling Sh.100, 8% coupon interest rate, 20 year bonds, on which annual interest will be made.

The bonds will be issued at a discount of Sh.3 per bond and a floatation cost of an equal amount per bond will be incurred.

Capital structure
The company's current capital structure, which is considered optimal, is as follows:

	Sh.
Long term debt	30,000,000
Preference shares	20,000,000
Ordinary shares	45,000,000
Retained earnings	5,000,000
	100,000,000

The company is in the 30% tax bracket.

Required:

(i) The cost of ordinary shares. (3 marks)

(ii) The cost of preference shares. (2 marks)

(iii) The cost of debt. (3 marks)

(iv) The cost of retained earnings. (2 marks)

(v) The weighted average cost of capital (WACC) using book values. (2 marks)

(Total: 20 marks)

QUESTION FOUR

(a) Discuss three features of a good capital investment appraisal technique. (6 marks)

(b) Mageuzi Limited has approached you to advice on an equipment to be purchased for use in the production line.

The investment will involve an initial outlay of Sh.2 million and the expected cash flows are as follows:

Year	Cash inflows Sh. "000"	Cash out flows Sh. "000"
1	1,750	175
2	900	80
3	1,200	50
4	1,100	70

Additional information:

1. The equipment's economic life is 4 years with a residual value of Sh.400,000.
2. It is the company policy to depreciate its assets on a straight line basis.
3. The cost of capital is 12%.
4. The corporate tax rate is 30%.

Required:

(i) The net present value (NPV) of the investment. (12 marks)

(ii) Advise the management on whether to invest in the project. (2 marks)

(Total: 20 marks)

QUESTION FIVE

(a) A Certified Investment and Financial Analyst graduate has forecasted that the market returns in the securities exchange in the next seven years will be as follows:

Year	Market return (%)	Probability
1	-30	0.05
2	-10	0.10
3	10	0.20
4	20	0.25
5	25	0.20
6	30	0.15
7	40	0.05

Required:

(i) The expected rate of the market returns. (3 marks)

(ii) The standard deviation of the market returns. (5 marks)

(b) Waigizaji Limited is an advisory and capital investments firm. The firm is in the process of preparing a bulletin to present to potential clients in their upcoming road shows. They have approached you to prepare a presentation on the various investments processes that the new investors will be taken through.

Required:

Discuss four investment processes that will feature as part of your presentation to Waigizaji Limited. (8 marks)

(c) Summarise two functions of foreign exchange market. (4 marks)

(Total: 20 marks)

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Present Value Interest factor of 1 Received at the End of n Periods at r Percent:

$$PVIF_{r,n} = 1 / (1+r)^{n} = (1+r)^{-n}$$

Period	1%	2%	3%	4%	5%	6%	7%	8%	9%	10%	11%	12%	13%	14%	15%	16%	20%	24%	25%	30%
1	0.9901	0.9804	0.9709	0.9615	0.9524	0.9434	0.9346	0.9259	0.9174	0.9091	0.9009	0.8929	0.8850	0.8772	0.8696	0.8621	0.8333	0.8065	0.8000	0.7692
2	0.9803	0.9612	0.9426	0.9246	0.9070	0.8900	0.8734	0.8573	0.8417	0.8264	0.8116	0.7972	0.7831	0.7695	0.7561	0.7432	0.6944	0.6504	0.6400	0.5917
3	0.9706	0.9423	0.9151	0.8890	0.8638	0.8396	0.8163	0.7938	0.7722	0.7513	0.7312	0.7118	0.6931	0.6750	0.6575	0.6407	0.5787	0.5245	0.5120	0.4552
4	0.9610	0.9238	0.8885	0.8548	0.8227	0.7921	0.7629	0.7350	0.7084	0.6830	0.6587	0.6355	0.6133	0.5921	0.5718	0.5523	0.4823	0.4230	0.4096	0.3501
5	0.9515	0.9057	0.8626	0.8219	0.7835	0.7473	0.7130	0.6806	0.6499	0.6209	0.5935	0.5674	0.5428	0.5194	0.4972	0.4761	0.4019	0.3411	0.3277	0.2693
6	0.9420	0.8880	0.8375	0.7903	0.7462	0.7050	0.6663	0.6302	0.5963	0.5645	0.5346	0.5066	0.4803	0.4556	0.4323	0.4104	0.3349	0.2751	0.2621	0.2072
7	0.9327	0.8706	0.8131	0.7599	0.7107	0.6651	0.6227	0.5835	0.5470	0.5132	0.4817	0.4523	0.4251	0.3996	0.3759	0.3538	0.2791	0.2218	0.2097	0.1594
8	0.9235	0.8535	0.7894	0.7307	0.6768	0.6274	0.5820	0.5403	0.5019	0.4665	0.4339	0.4039	0.3762	0.3506	0.3269	0.3050	0.2326	0.1789	0.1678	0.1226
9	0.9143	0.8368	0.7664	0.7026	0.6446	0.5919	0.5439	0.5002	0.4604	0.4241	0.3909	0.3606	0.3329	0.3075	0.2843	0.2630	0.1938	0.1443	0.1342	0.0943
10	0.9053	0.8203	0.7441	0.6756	0.6139	0.5584	0.5083	0.4632	0.4224	0.3855	0.3522	0.3220	0.2946	0.2697	0.2472	0.2267	0.1615	0.1164	0.1074	0.0725
11	0.8963	0.8043	0.7224	0.6496	0.5847	0.5268	0.4751	0.4289	0.3875	0.3505	0.3173	0.2875	0.2607	0.2366	0.2149	0.1954	0.1346	0.0938	0.0859	0.0558
12	0.8874	0.7885	0.7014	0.6246	0.5568	0.4970	0.4440	0.3971	0.3555	0.3186	0.2858	0.2567	0.2307	0.2076	0.1869	0.1685	0.1122	0.0757	0.0687	0.0429
13	0.8787	0.7730	0.6810	0.6006	0.5303	0.4688	0.4150	0.3677	0.3262	0.2897	0.2575	0.2292	0.2042	0.1821	0.1625	0.1452	0.0935	0.0610	0.0550	0.0330
14	0.8700	0.7579	0.6611	0.5775	0.5051	0.4423	0.3878	0.3405	0.2992	0.2633	0.2320	0.2046	0.1807	0.1597	0.1413	0.1252	0.0779	0.0492	0.0440	0.0254
15	0.8613	0.7430	0.6419	0.5553	0.4810	0.4173	0.3624	0.3152	0.2745	0.2394	0.2090	0.1827	0.1599	0.1401	0.1229	0.1079	0.0649	0.0397	0.0352	0.0195
16	0.8528	0.7284	0.6232	0.5339	0.4581	0.3936	0.3387	0.2919	0.2519	0.2176	0.1883	0.1631	0.1415	0.1229	0.1069	0.0930	0.0541	0.0320	0.0281	0.0150
17	0.8444	0.7142	0.6050	0.5134	0.4363	0.3714	0.3166	0.2703	0.2311	0.1978	0.1696	0.1456	0.1252	0.1078	0.0929	0.0802	0.0451	0.0258	0.0225	0.0116
18	0.8360	0.7002	0.5874	0.4936	0.4155	0.3503	0.2959	0.2502	0.2120	0.1799	0.1528	0.1300	0.1108	0.0946	0.0808	0.0691	0.0376	0.0208	0.0180	0.0089
19	0.8277	0.6864	0.5703	0.4746	0.3957	0.3305	0.2765	0.2317	0.1945	0.1635	0.1377	0.1161	0.0981	0.0829	0.0703	0.0596	0.0313	0.0168	0.0144	0.0068
20	0.8195	0.6730	0.5537	0.4564	0.3769	0.3118	0.2584	0.2145	0.1784	0.1486	0.1240	0.1037	0.0868	0.0728	0.0611	0.0514	0.0261	0.0135	0.0115	0.0053
21	0.8114	0.6598	0.5375	0.4388	0.3589	0.2942	0.2415	0.1987	0.1637	0.1351	0.1117	0.0926	0.0768	0.0638	0.0531	0.0443	0.0217	0.0109	0.0092	0.0040
22	0.8034	0.6468	0.5219	0.4220	0.3418	0.2775	0.2257	0.1839	0.1502	0.1228	0.1007	0.0826	0.0680	0.0560	0.0462	0.0382	0.0181	0.0088	0.0074	0.0031
23	0.7954	0.6342	0.5067	0.4057	0.3256	0.2618	0.2109	0.1703	0.1378	0.1117	0.0907	0.0738	0.0601	0.0491	0.0402	0.0329	0.0151	0.0071	0.0059	0.0024
24	0.7876	0.6217	0.4919	0.3901	0.3101	0.2470	0.1971	0.1577	0.1264	0.1015	0.0817	0.0659	0.0532	0.0431	0.0349	0.0284	0.0126	0.0057	0.0047	0.0018
25	0.7798	0.6095	0.4776	0.3751	0.2953	0.2330	0.1842	0.1460	0.1160	0.0923	0.0736	0.0588	0.0471	0.0378	0.0304	0.0245	0.0105	0.0046	0.0038	0.0014
30	0.7419	0.5521	0.4120	0.3083	0.2314	0.1741	0.1314	0.0994	0.0754	0.0573	0.0437	0.0334	0.0256	0.0196	0.0151	0.0116	0.0042	0.0016	0.0012	*
35	0.7059	0.5000	0.3554	0.2534	0.1813	0.1301	0.0937	0.0676	0.0490	0.0356	0.0259	0.0189	0.0139	0.0102	0.0075	0.0055	0.0017	0.0005	*	*
36	0.6989	0.4902	0.3450	0.2437	0.1727	0.1227	0.0875	0.0626	0.0449	0.0323	0.0234	0.0169	0.0123	0.0089	0.0065	0.0048	0.0014	*	*	*
40	0.6717	0.4529	0.3066	0.2083	0.1420	0.0972	0.0668	0.0460	0.0318	0.0221	0.0154	0.0107	0.0075	0.0053	0.0037	0.0026	0.0007	*	*	*
50	0.6080	0.3715	0.2281	0.1407	0.0872	0.0543	0.0339	0.0213	0.0134	0.0085	0.0054	0.0035	0.0022	0.0014	0.0009	0.0006	*	*	*	*

Present Value Interest factors for Annuity of 1 Discounted at r Percent for n Periods:

$$PVIFA_{r,n} = [1 - 1/(1+r)^{n}]/r$$

Period	1%	2%	3%	4%	5%	6%	7%	8%	9%	10%	11%	12%	13%	14%	15%	16%	20%	24%	25%	30%
1	0.9901	0.9804	0.9709	0.9615	0.9524	0.9434	0.9346	0.9259	0.9174	0.9091	0.9009	0.8929	0.8850	0.8772	0.8696	0.8621	0.8333	0.8065	0.8000	0.7692
2	1.9704	1.9416	1.9135	1.8861	1.8594	1.8334	1.8080	1.7833	1.7591	1.7355	1.7125	1.6901	1.6681	1.6467	1.6257	1.6052	1.5278	1.4568	1.4400	1.3609
3	2.9410	2.8839	2.8286	2.7751	2.7232	2.6730	2.6243	2.5771	2.5313	2.4869	2.4437	2.4018	2.3612	2.3216	2.2832	2.2459	2.1065	1.9813	1.9520	1.8161
4	3.9020	3.8077	3.7171	3.6299	3.5460	3.4651	3.3872	3.3121	3.2397	3.1699	3.1024	3.0373	2.9745	2.9137	2.8550	2.7982	2.5887	2.4043	2.3616	2.1662
5	4.8534	4.7135	4.5797	4.4518	4.3295	4.2124	4.1002	3.9927	3.8897	3.7908	3.6959	3.6048	3.5172	3.4331	3.3522	3.2743	2.9906	2.7454	2.6893	2.4356
6	5.7955	5.6014	5.4172	5.2421	5.0757	4.9173	4.7665	4.6229	4.4859	4.3553	4.2305	4.1114	3.9975	3.8887	3.7845	3.6847	3.3255	3.0205	2.9514	2.6427
7	6.7282	6.4720	6.2303	6.0021	5.7864	5.5824	5.3893	5.2064	5.0330	4.8684	4.7122	4.5638	4.4226	4.2883	4.1604	4.0386	3.6046	3.2423	3.1611	2.8021
8	7.6517	7.3255	7.0197	6.7327	6.4632	6.2098	5.9713	5.7466	5.5348	5.3349	5.1461	4.9676	4.7988	4.6389	4.4873	4.3436	3.8372	3.4212	3.3289	2.9247
9	8.5660	8.1622	7.7861	7.4353	7.1078	6.8017	6.5152	6.2469	5.9952	5.7590	5.5370	5.3282	5.1317	4.9464	4.7716	4.6065	4.0310	3.5655	3.4631	3.0190
10	9.4713	8.9826	8.5302	8.1109	7.7217	7.3601	7.0236	6.7101	6.4177	6.1446	5.8892	5.6502	5.4262	5.2161	5.0188	4.8332	4.1925	3.6819	3.5705	3.0915
11	10.368	9.7868	9.2526	8.7605	8.3064	7.8869	7.4987	7.1390	6.8052	6.4951	6.2065	5.9377	5.6869	5.4527	5.2337	5.0286	4.3271	3.7757	3.6564	3.1473
12	11.255	10.575	9.9540	9.3851	8.8633	8.3838	7.9427	7.5361	7.1607	6.8137	6.4924	6.1944	5.9176	5.6603	5.4206	5.1971	4.4392	3.8514	3.7251	3.1903
13	12.134	11.348	10.635	9.9856	9.3936	8.8527	8.3577	7.9038	7.4869	7.1034	6.7499	6.4235	6.1218	5.8424	5.5831	5.3423	4.5327	3.9124	3.7801	3.2233
14	13.004	12.106	11.296	10.563	9.8986	9.2950	8.7455	8.2442	7.7862	7.3667	6.9819	6.6282	6.3025	6.0021	5.7245	5.4675	4.6106	3.9616	3.8241	3.2487
15	13.865	12.849	11.938	11.118	10.380	9.7122	9.1079	8.5595	8.0607	7.6061	7.1909	6.8109	6.4624	6.1422	5.8474	5.5755	4.6755	4.0013	3.8593	3.2682
16	14.718	13.578	12.561	11.652	10.838	10.106	9.4466	8.8514	8.3126	7.8237	7.3792	6.9740	6.6039	6.2651	5.9542	5.6685	4.7296	4.0333	3.8874	3.2832
17	15.562	14.292	13.166	12.166	11.274	10.477	9.7632	9.1216	8.5436	8.0216	7.5488	7.1196	6.7291	6.3729	6.0472	5.7487	4.7746	4.0591	3.9099	3.2948
18	16.398	14.992	13.754	12.659	11.690	10.828	10.059	9.3719	8.7556	8.2014	7.7016	7.2497	6.8399	6.4674	6.1280	5.8178	4.8122	4.0799	3.9279	3.3037
19	17.226	15.678	14.324	13.134	12.085	11.158	10.336	9.6036	8.9501	8.3649	7.8393	7.3658	6.9380	6.5504	6.1982	5.8775	4.8435	4.0967	3.9424	3.3105
20	18.046	16.351	14.877	13.590	12.462	11.470	10.594	9.8181	9.1285	8.5136	7.9633	7.4694	7.0248	6.6231	6.2593	5.9288	4.8696	4.1103	3.9539	3.3158
21	18.857	17.011	15.415	14.029	12.821	11.764	10.836	10.017	9.2922	8.6487	8.0751	7.5620	7.1016	6.6870	6.3125	5.9731	4.8913	4.1212	3.9631	3.3198
22	19.660	17.658	15.937	14.451	13.163	12.042	11.061	10.201	9.4424	8.7715	8.1757	7.6446	7.1695	6.7429	6.3587	6.0113	4.9094	4.1300	3.9705	3.3230
23	20.456	18.292	16.444	14.857	13.489	12.303	11.272	10.371	9.5802	8.8832	8.2664	7.7184	7.2297	6.7921	6.3988	6.0442	4.9245	4.1371	3.9764	3.3254
24	21.243	18.914	16.936	15.247	13.799	12.550	11.469	10.529	9.7066	8.9847	8.3481	7.7843	7.2829	6.8351	6.4338	6.0726	4.9371	4.1428	3.9811	3.3272
25	22.023	19.523	17.413	15.622	14.094	12.783	11.654	10.675	9.8226	9.0770	8.4217	7.8431	7.3300	6.8729	6.4641	6.0971	4.9476	4.1474	3.9849	3.3286
30	25.808	22.396	19.600	17.292	15.372	13.765	12.409	11.258	10.274	9.4269	8.6938	8.0552	7.4957	7.0027	6.5660	6.1772	4.9789	4.1601	3.9950	3.3321
35	29.409	24.999	21.487	18.665	16.374	14.498	12.948	11.655	10.567	9.6442	8.8552	8.1755	7.5856	7.0700	6.6166	6.2153	4.9915	4.1644	3.9984	3.3330
36	30.108	25.489	21.832	18.908	16.547	14.621	13.035	11.717	10.612	9.6765	8.8786	8.1924	7.5979	7.0790	6.6231	6.2201	4.9929	4.1649	3.9987	3.3331
40	32.835	27.355	23.115	19.793	17.159	15.046	13.332	11.925	10.757	9.7791	8.9511	8.2438	7.6344	7.1050	6.6418	6.2335	4.9966	4.1659	3.9995	3.3332
50	39.196	31.424	25.730	21.482	18.256	15.762	13.801	12.233	10.962	9.9148	9.0417	8.3045	7.6752	7.1327	6.6605	6.2463	4.9995	4.1666	3.9999	3.3333

CIFA FOUNDATION LEVEL

INTRODUCTION TO FINANCE AND INVESTMENTS

WEDNESDAY: 3 August 2022. Afternoon 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) Explain three elements of the financial decision-making process. (6 marks)

(b) Highlight four roles of a finance manager in an organisation. (4 marks)

(c) The following is an extract from the financial position of Joba Ltd. as at 31 December 2021:

	Sh.“000”
Ordinary shares of Sh.50 each	130,000
Reserves	121,250
9% preference shares of Sh.100 each	112,500
15% debentures	125,000
	488,750

Additional information:

1. The ordinary shares are quoted at Sh.80 per share. Ordinary shareholders expect cash dividend of Sh.8 per share and a dividend growth at the rate of 10% at the end of every year.
2. The preference shares which are unredeemable are quoted at Sh.74 per share and a floatation cost of Sh.2 per share.
3. The debentures are trading at Sh.120 per debenture with a floatation cost of Sh.5 per debenture. The par value of each debenture is Sh.100.
4. The corporate tax rate is 30%.

Required:

(i) The cost of ordinary shares. (2 marks)

(ii) The cost of preference shares. (2 marks)

(iii) The cost of debentures. (2 marks)

(iv) The market weighted average cost of capital (WACC). (4 marks)

(Total: 20 marks)

QUESTION TWO

(a) Explain three goals of alternative investments. (6 marks)

(b) Discuss three criticisms of derivative markets. (6 marks)

(c) The following information was extracted from the financial statements of Kenland Ltd.:

Earnings per share (EPS)	Sh.20
Payout ratio	60%
Internal rate of return (IRR)	16%
Capitalisation rate	12%

Required:

The intrinsic value of a share under:

(i) Gordon’s model. (4 marks)

(ii) Walter’s model. (4 marks)

(Total: 20 marks)

QUESTION THREE

(a) Explain three types of investments. (6 marks)

(b) Examine four reasons why ordinary share capital is attractive to investors. (4 marks)

(c) The following information relates to the returns forecasted of securities Alpha and Beta trading in the Securities Exchange for the year ended 30 June 2022:

Probability	**Security Alpha Return (%)**	**Security Beta Return (%)**
0.20	10	8
0.10	12	10
0.35	8	7
0.05	15	12
0.15	14	11
0.15	9	8

Required:

(i) The expected return on security Alpha. (2 marks)

(ii) The expected return on security Beta. (2 marks)

(iii) The standard deviations on securities Alpha and Beta. (4 marks)

(iv) Based on the relative risk, advise a potential investor on which of the two securities to invest in. (2 marks)

(Total: 20 marks)

QUESTION FOUR

(a) Summarise four advantages of internal rate of return (IRR) investment appraisal technique used in capital budgeting. (4 marks)

(b) The following information is a feasibility study of two ventures to be undertaken by Sircho Ltd., a small scale manufacturing company:

1. **Project Alfa:** The project will cost Sh.100,000 initially and will need an additional Sh.160,000 at the beginning of the 4th year. It is projected that it will generate Sh.80,000 cash per year in year 1 to year 3, and Sh.50,000 per year from year 4 to 6.
2. **Project Omega:** The project will cost Sh.200,000 initially and Sh.80,000 at the beginning of the 4th year. It will generate Sh.100,000 per annum in year 1 and 2, and Sh.70,000 per annum in years 3 to 6.

The cost of finance for the two ventures is 12%.

Required:

(i) The profitability index (P.I) of the two ventures. (8 marks)

(ii) Comment on your results in (b) (i) above. (1 mark)

(c) Mdosi Pesa has deposited Sh.100,000 in a fund for 5 years that pays an interest rate of 12% compounded annually. The Fund Manager also advises Mdosi Pesa that compounding can also be done semi-annually and continuously.

Required:

The future value of the fund assuming:

(i) Annual compounding. (2 marks)
(ii) Semi-annual compounding. (2 marks)
(iii) Continuous compounding. (3 marks)

(Total: 20 marks)

QUESTION FIVE

(a) Summarise four reasons for the Islamic prohibition of interest (riba). (4 marks)

(b) Explain three methods of forecasting exchange rates. (6 marks)

(c) Outline four reasons why venture capital is not well developed in developing countries. (4 marks)

(d) Simon Kirwa obtained a loan of Sh.2,000,000 on 1 January 2022. The rate of interest was fixed at 12% per annum. The loan is to be repaid semi-annually over a period of three years.

Required:

A loan amortisation schedule. (6 marks)

(Total: 20 marks)

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CIFA FOUNDATION LEVEL

INTRODUCTION TO FINANCE AND INVESTMENTS

WEDNESDAY: 6 April 2022. Afternoon 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) An agency relationship in management of investment and finance arises where one or more parties hires another to perform on his behalf some services and then delegates decision making authority to the hired party.

Required:

In relation to the above statement, explain three main forms of agency relationship that could arise in a limited company. (6 marks)

(b) Outline four categories of asset classes available in the investment environment. (4 marks)

(c) Maisha Bora Investments Ltd. wishes to raise funds amounting to Sh.100 million to finance a project in the following manner:

- Sh.60 million from debt.
- Sh.40 million from floating new ordinary shares.

The present capital structure of the company is made up as follows:

1. 6,000,000 fully paid ordinary shares of Sh.10 each.
2. Retained earnings of Sh.40 million.
3. 2,000,000, 10% preference shares of Sh.20 each.
4. 400,000, 6% long term debentures of Sh.150 each.

Additional information:

1. The current market value of the company's ordinary shares is Sh.60 per share.
2. The expected ordinary share dividends in a year's time is Sh.2.40 per share.
3. The average growth rate in both dividends and earnings has been 10% over the past ten years and this growth rate is expected to be maintained in the foreseeable future.
4. The company's long term debentures are currently trading at Sh.100 each. The debentures will mature in 100 years.
5. The preference shares were issued four years ago and still trade at face value.
6. Corporate tax rate is 30%.

Required:

(i) Cost of ordinary share capital. (2 marks)

(ii) Cost of debt capital. (3 marks)

(iii) Cost of preference share capital. (1 mark)

(iv) The company's market weighted average cost of capital (WACC). (4 marks)

(Total: 20 marks)

QUESTION TWO

(a) Assess four factors that an entrepreneur should take into account when deciding whether to use short term sources or long term sources to finance business operations. (4 marks)

(b) Discuss four common features of alternative investments. (4 marks)

(c) Outline four types of fixed income securities. (4 marks)

(d) Describe four challenges faced by banks as new entrants in the provision of mortgage finance. (4 marks)

(e) Summarise four purposes of derivative market in your country. (4 marks)

(Total: 20 marks)

QUESTION THREE

(a) Explain six roles played by financial intermediaries to an economy. (6 marks)

(b) Examine three challenges of the average rate of return (AAR) method for appraising new investment projects. (3 marks)

(c) Biashara Ltd. is considering the acquisition of a grading machine whose expected impact on the cash flows would be as follows:

Year	Saving on labour Sh."000"	Increased fuel cost Sh."000"	Redundancy cost Sh."000"
1 – 5	-	-	1,000
6 – 10	3,000	2,000	-
11 – 15	6,000	4,000	-
16 – 20	4,000	1,000	-

Additional information:

1. The machine can be acquired at Sh.3 million.
2. The machine has a nil residual value.
3. The cost of capital is 10%.
4. Ignore corporate tax.

Required:

(i) Using the Net Present Value (NPV) method, advise Biashara Ltd. whether the machine should be acquired. (7 marks)

(ii) Outline four advantages of using the NPV technique in project appraisal. (4 marks)

(Total: 20 marks)

QUESTION FOUR

(a) Simon Makori borrowed Sh.1,000,000 on 1 March 2022 from Kena Commercial Bank repayable semi-annually over a three year period. The interest rate on the loan was 10% per annum.

Required:

A loan repayment schedule over the three year period. (6 marks)

(b) Explain the following theories in relation to valuation of financial assets:

(i) Technical theory. (2 marks)

(ii) Random walk theory. (2 marks)

(iii) Fundamental theory. (2 marks)

(c) The dividend per share (DPS) of Mambo Yote Limited as at 31 December 2021 was Sh.25. The company's financial analyst has predicted that dividends would grow at a rate of 20% for the first five years and thereafter growth rate would fall to a constant rate of 7% per annum. The analyst has also projected a required rate of return of 10% for the equity market. Mambo Yote Limited shares have a similar risk to the typical equity market.

Required:

The intrinsic value of shares of Mambo Yote Limited as at 31 December 2021. (8 marks)

(Total: 20 marks)

QUESTION FIVE

(a) Explain two sources of finance in Islamic financing. (4 marks)

(b) The following information relates to two forex bureaus; Tausi Forex Bureau and Ziko Forex Bureau.

	Tausi Forex Bureau		Ziko Forex Bureau	
	Bid	**Ask**	**Bid**	**Ask**
Tsh quote:	Ksh.0.07	Ksh.0.08	Ksh.0.09	Ksh.0.10

Required:

Compute the gain from locational arbitrage for a Kenyan investor with Ksh.2,000,000. (4 marks)

(c) Samuel Kakuju wishes to make an investment of Sh.100,000 to pay school fees for his children. He will make the deposit at the end of every year.

Required:

The future value of a Sh.100,000 investment made at the end of every year for 5 years assuming the required rate of return is 12% compound annually. (6 marks)

(d) The financial manager of Jumbo Technologies Limited has received the following data from a proposed investment project. The expected returns from the project are related to future performance of the economy over the period as follows:

Economic scenario	Probability of occurrence (Pi)	Rate of return (r)
Strong growth	0.25	15%
Moderate growth	0.50	12%
Low growth	0.25	8%

Required:

(i) The expected rate of return from the proposed investment project. (2 marks)

(ii) The standard deviation of the proposed investment project. (4 marks)

(Total: 20 marks)

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Present Value Interest factor of 1 Received at the End of *n* Periods at r Percent:

$PVIF_{r,n} = 1/(1+r)^n = (1+r)^{-n}$

Period	1%	2%	3%	4%	5%	6%	7%	8%	9%	10%	11%	12%	13%	14%	15%	16%	20%	24%	25%	30%
1	0.9901	0.9804	0.9709	0.9615	0.9524	0.9434	0.9346	0.9259	0.9174	0.9091	0.9009	0.8929	0.8850	0.8772	0.8696	0.8621	0.8333	0.8065	0.8000	0.7692
2	0.9803	0.9612	0.9426	0.9246	0.9070	0.8900	0.8734	0.8573	0.8417	0.8264	0.8116	0.7972	0.7831	0.7695	0.7561	0.7432	0.6944	0.6504	0.6400	0.5917
3	0.9706	0.9423	0.9151	0.8890	0.8638	0.8396	0.8163	0.7938	0.7722	0.7513	0.7312	0.7118	0.6931	0.6750	0.6575	0.6407	0.5787	0.5245	0.5120	0.4552
4	0.9610	0.9238	0.8885	0.8548	0.8227	0.7921	0.7629	0.7350	0.7084	0.6830	0.6587	0.6355	0.6133	0.5921	0.5718	0.5523	0.4823	0.4230	0.4096	0.3501
5	0.9515	0.9057	0.8626	0.8219	0.7835	0.7473	0.7130	0.6806	0.6499	0.6209	0.5935	0.5674	0.5428	0.5194	0.4972	0.4761	0.4019	0.3411	0.3277	0.2693
6	0.9420	0.8880	0.8375	0.7903	0.7462	0.7050	0.6663	0.6302	0.5963	0.5645	0.5346	0.5066	0.4803	0.4556	0.4323	0.4104	0.3349	0.2751	0.2621	0.2072
7	0.9327	0.8706	0.8131	0.7599	0.7107	0.6651	0.6227	0.5835	0.5470	0.5132	0.4817	0.4523	0.4251	0.3996	0.3759	0.3538	0.2791	0.2218	0.2097	0.1594
8	0.9235	0.8535	0.7894	0.7307	0.6768	0.6274	0.5820	0.5403	0.5019	0.4665	0.4339	0.4039	0.3762	0.3506	0.3269	0.3050	0.2326	0.1789	0.1678	0.1226
9	0.9143	0.8368	0.7664	0.7026	0.6446	0.5919	0.5439	0.5002	0.4604	0.4241	0.3909	0.3606	0.3329	0.3075	0.2843	0.2630	0.1938	0.1443	0.1342	0.0943
10	0.9053	0.8203	0.7441	0.6756	0.6139	0.5584	0.5083	0.4632	0.4224	0.3855	0.3522	0.3220	0.2946	0.2697	0.2472	0.2267	0.1615	0.1164	0.1074	0.0725
11	0.8963	0.8043	0.7224	0.6496	0.5847	0.5268	0.4751	0.4289	0.3875	0.3505	0.3173	0.2875	0.2607	0.2366	0.2149	0.1954	0.1346	0.0938	0.0859	0.0558
12	0.8874	0.7885	0.7014	0.6246	0.5568	0.4970	0.4440	0.3971	0.3555	0.3186	0.2858	0.2567	0.2307	0.2076	0.1869	0.1685	0.1122	0.0757	0.0687	0.0429
13	0.8787	0.7730	0.6810	0.6006	0.5303	0.4688	0.4150	0.3677	0.3262	0.2897	0.2575	0.2292	0.2042	0.1821	0.1625	0.1452	0.0935	0.0610	0.0550	0.0330
14	0.8700	0.7579	0.6611	0.5775	0.5051	0.4423	0.3878	0.3405	0.2992	0.2633	0.2320	0.2046	0.1807	0.1597	0.1413	0.1252	0.0779	0.0492	0.0440	0.0254
15	0.8613	0.7430	0.6419	0.5553	0.4810	0.4173	0.3624	0.3152	0.2745	0.2394	0.2090	0.1827	0.1599	0.1401	0.1229	0.1079	0.0649	0.0397	0.0352	0.0195
16	0.8528	0.7284	0.6232	0.5339	0.4581	0.3936	0.3387	0.2919	0.2519	0.2176	0.1883	0.1631	0.1415	0.1229	0.1069	0.0930	0.0541	0.0320	0.0281	0.0150
17	0.8444	0.7142	0.6050	0.5134	0.4363	0.3714	0.3166	0.2703	0.2311	0.1978	0.1696	0.1456	0.1252	0.1078	0.0929	0.0802	0.0451	0.0258	0.0225	0.0116
18	0.8360	0.7002	0.5874	0.4936	0.4155	0.3503	0.2959	0.2502	0.2120	0.1799	0.1528	0.1300	0.1108	0.0946	0.0808	0.0691	0.0376	0.0208	0.0180	0.0089
19	0.8277	0.6864	0.5703	0.4746	0.3957	0.3305	0.2765	0.2317	0.1945	0.1635	0.1377	0.1161	0.0981	0.0829	0.0703	0.0596	0.0313	0.0168	0.0144	0.0068
20	0.8195	0.6730	0.5537	0.4564	0.3769	0.3118	0.2584	0.2145	0.1784	0.1486	0.1240	0.1037	0.0868	0.0728	0.0611	0.0514	0.0261	0.0135	0.0115	0.0053
21	0.8114	0.6598	0.5375	0.4388	0.3589	0.2942	0.2415	0.1987	0.1637	0.1351	0.1117	0.0926	0.0768	0.0638	0.0531	0.0443	0.0217	0.0109	0.0092	0.0040
22	0.8034	0.6468	0.5219	0.4220	0.3418	0.2775	0.2257	0.1839	0.1502	0.1228	0.1007	0.0826	0.0680	0.0560	0.0462	0.0382	0.0181	0.0088	0.0074	0.0031
23	0.7954	0.6342	0.5067	0.4057	0.3256	0.2618	0.2109	0.1703	0.1378	0.1117	0.0907	0.0738	0.0601	0.0491	0.0402	0.0329	0.0151	0.0071	0.0059	0.0024
24	0.7876	0.6217	0.4919	0.3901	0.3101	0.2470	0.1971	0.1577	0.1264	0.1015	0.0817	0.0659	0.0532	0.0431	0.0349	0.0284	0.0126	0.0057	0.0047	0.0018
25	0.7798	0.6095	0.4776	0.3751	0.2953	0.2330	0.1842	0.1460	0.1160	0.0923	0.0736	0.0588	0.0471	0.0378	0.0304	0.0245	0.0105	0.0046	0.0038	0.0014
30	0.7419	0.5521	0.4120	0.3083	0.2314	0.1741	0.1314	0.0994	0.0754	0.0573	0.0437	0.0334	0.0256	0.0196	0.0151	0.0116	0.0042	0.0016	0.0012	*
35	0.7059	0.5000	0.3554	0.2534	0.1813	0.1301	0.0937	0.0676	0.0490	0.0356	0.0259	0.0189	0.0139	0.0102	0.0075	0.0055	0.0017	0.0005	*	*
36	0.6989	0.4902	0.3450	0.2437	0.1727	0.1227	0.0875	0.0626	0.0449	0.0323	0.0234	0.0169	0.0123	0.0089	0.0065	0.0048	0.0014	*	*	*
40	0.6717	0.4529	0.3066	0.2083	0.1420	0.0972	0.0668	0.0460	0.0318	0.0221	0.0154	0.0107	0.0075	0.0053	0.0037	0.0026	0.0007	*	*	*
50	0.6080	0.3715	0.2281	0.1407	0.0872	0.0543	0.0339	0.0213	0.0134	0.0085	0.0054	0.0035	0.0022	0.0014	0.0009	0.0006	*	*	*	*

Present Value Interest factors for Annuity of 1 Discounted at r Percent for *n* Periods:

$PVIFA_{r,n} = [1 - 1/(1+r)^n]/r$

Period	1%	2%	3%	4%	5%	6%	7%	8%	9%	10%	11%	12%	13%	14%	15%	16%	20%	24%	25%	30%
1	0.9901	0.9804	0.9709	0.9615	0.9524	0.9434	0.9346	0.9259	0.9174	0.9091	0.9009	0.8929	0.8850	0.8772	0.8696	0.8621	0.8333	0.8065	0.8000	0.7692
2	1.9704	1.9416	1.9135	1.8861	1.8594	1.8334	1.8080	1.7833	1.7591	1.7355	1.7125	1.6901	1.6681	1.6467	1.6257	1.6052	1.5278	1.4568	1.4400	1.3609
3	2.9410	2.8839	2.8286	2.7751	2.7232	2.6730	2.6243	2.5771	2.5313	2.4869	2.4437	2.4018	2.3612	2.3216	2.2832	2.2459	2.1065	1.9813	1.9520	1.8161
4	3.9020	3.8077	3.7171	3.6299	3.5460	3.4651	3.3872	3.3121	3.2397	3.1699	3.1024	3.0373	2.9745	2.9137	2.8550	2.7982	2.5887	2.4043	2.3616	2.1662
5	4.8534	4.7135	4.5797	4.4518	4.3295	4.2124	4.1002	3.9927	3.8897	3.7908	3.6959	3.6048	3.5172	3.4331	3.3522	3.2743	2.9906	2.7454	2.6893	2.4356
6	5.7955	5.6014	5.4172	5.2421	5.0757	4.9173	4.7665	4.6229	4.4859	4.3553	4.2305	4.1114	3.9975	3.8887	3.7845	3.6847	3.3255	3.0205	2.9514	2.6427
7	6.7282	6.4720	6.2303	6.0021	5.7864	5.5824	5.3893	5.2064	5.0330	4.8684	4.7122	4.5638	4.4226	4.2883	4.1604	4.0386	3.6046	3.2423	3.1611	2.8021
8	7.6517	7.3255	7.0197	6.7327	6.4632	6.2098	5.9713	5.7466	5.5348	5.3349	5.1461	4.9676	4.7988	4.6389	4.4873	4.3436	3.8372	3.4212	3.3289	2.9247
9	8.5660	8.1622	7.7861	7.4353	7.1078	6.8017	6.5152	6.2469	5.9952	5.7590	5.5370	5.3282	5.1317	4.9464	4.7716	4.6065	4.0310	3.5655	3.4631	3.0190
10	9.4713	8.9826	8.5302	8.1109	7.7217	7.3601	7.0236	6.7101	6.4177	6.1446	5.8892	5.6502	5.4262	5.2161	5.0188	4.8332	4.1925	3.6819	3.5705	3.0915
11	10.368	9.7868	9.2526	8.7605	8.3064	7.8869	7.4987	7.1390	6.8052	6.4951	6.2065	5.9377	5.6869	5.4527	5.2337	5.0286	4.3271	3.7757	3.6564	3.1473
12	11.255	10.575	9.9540	9.3851	8.8633	8.3838	7.9427	7.5361	7.1607	6.8137	6.4924	6.1944	5.9176	5.6603	5.4206	5.1971	4.4392	3.8514	3.7251	3.1903
13	12.134	11.348	10.635	9.9856	9.3936	8.8527	8.3577	7.9038	7.4869	7.1034	6.7499	6.4235	6.1218	5.8424	5.5831	5.3423	4.5327	3.9124	3.7801	3.2233
14	13.004	12.106	11.296	10.563	9.8986	9.2950	8.7455	8.2442	7.7862	7.3667	6.9819	6.6282	6.3025	6.0021	5.7245	5.4675	4.6106	3.9616	3.8241	3.2487
15	13.865	12.849	11.938	11.118	10.380	9.7122	9.1079	8.5595	8.0607	7.6061	7.1909	6.8109	6.4624	6.1422	5.8474	5.5755	4.6755	4.0013	3.8593	3.2682
16	14.718	13.578	12.561	11.652	10.838	10.106	9.4466	8.8514	8.3126	7.8237	7.3792	6.9740	6.6039	6.2651	5.9542	5.6685	4.7296	4.0333	3.8874	3.2832
17	15.562	14.292	13.166	12.166	11.274	10.477	9.7632	9.1216	8.5436	8.0216	7.5488	7.1196	6.7291	6.3729	6.0472	5.7487	4.7746	4.0591	3.9099	3.2948
18	16.398	14.992	13.754	12.659	11.690	10.828	10.059	9.3719	8.7556	8.2014	7.7016	7.2497	6.8399	6.4674	6.1280	5.8178	4.8122	4.0799	3.9279	3.3037
19	17.226	15.678	14.324	13.134	12.085	11.158	10.336	9.6036	8.9501	8.3649	7.8393	7.3658	6.9380	6.5504	6.1982	5.8775	4.8435	4.0967	3.9424	3.3105
20	18.046	16.351	14.877	13.590	12.462	11.470	10.594	9.8181	9.1285	8.5136	7.9633	7.4694	7.0248	6.6231	6.2593	5.9288	4.8696	4.1103	3.9539	3.3158
21	18.857	17.011	15.415	14.029	12.821	11.764	10.836	10.017	9.2922	8.6487	8.0751	7.5620	7.1016	6.6870	6.3125	5.9731	4.8913	4.1212	3.9631	3.3198
22	19.660	17.658	15.937	14.451	13.163	12.042	11.061	10.201	9.4424	8.7715	8.1757	7.6446	7.1695	6.7429	6.3587	6.0113	4.9094	4.1300	3.9705	3.3230
23	20.456	18.292	16.444	14.857	13.489	12.303	11.272	10.371	9.5802	8.8832	8.2664	7.7184	7.2297	6.7921	6.3988	6.0442	4.9245	4.1371	3.9764	3.3254
24	21.243	18.914	16.936	15.247	13.799	12.550	11.469	10.529	9.7066	8.9847	8.3481	7.7843	7.2829	6.8351	6.4338	6.0726	4.9371	4.1428	3.9811	3.3272
25	22.023	19.523	17.413	15.622	14.094	12.783	11.654	10.675	9.8226	9.0770	8.4217	7.8431	7.3300	6.8729	6.4641	6.0971	4.9476	4.1474	3.9849	3.3286
30	25.808	22.396	19.600	17.292	15.372	13.765	12.409	11.258	10.274	9.4269	8.6938	8.0552	7.4957	7.0027	6.5660	6.1772	4.9789	4.1601	3.9950	3.3321
35	29.409	24.999	21.487	18.665	16.374	14.498	12.948	11.655	10.567	9.6442	8.8552	8.1755	7.5856	7.0700	6.6166	6.2153	4.9915	4.1644	3.9984	3.3330
36	30.108	25.489	21.832	18.908	16.547	14.621	13.035	11.717	10.612	9.6765	8.8786	8.1924	7.5979	7.0790	6.6231	6.2201	4.9929	4.1649	3.9987	3.3331
40	32.835	27.355	23.115	19.793	17.159	15.046	13.332	11.925	10.757	9.7791	8.9511	8.2438	7.6344	7.1050	6.6418	6.2335	4.9966	4.1659	3.9995	3.3332
50	39.196	31.424	25.730	21.482	18.256	15.762	13.801	12.233	10.962	9.9148	9.0417	8.3045	7.6752	7.1327	6.6605	6.2463	4.9995	4.1666	3.9999	3.3333