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"**	**Sh."000"**	**Sh."000"**	**Sh."000"**	**Sh."000"**
	5,600	6,000	6,400	7,600	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:

	Initial cash outflow Sh."000"	**Cash inflows Sh."000"**		
Projects		**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**	**Market price per share**	**Probability**
	Sh.	**Sh.**	**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	3.3288
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	0.3565	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	4.0388	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