ACCOUNTING TECHNICIANS DIPLOMA (ATD)

LEVEL III

FUNDAMENTALS OF FINANCE

THURSDAY: 23 April 2026. Morning Paper. **Time Allowed: 3 hours.**

This paper consists of fifty (50) Multiple Choice Questions. Answer ALL questions by indicating the letter (A, B, C or D) that represents the correct answer. Each question is allocated two (2) marks.

1. Which one of the following objectives **BEST** describes the primary objective of financial management in a company?
   A. Maximisation of sales revenue
   B. Maximisation of shareholder wealth
   C. Minimisation of production costs
   D. Maximisation of market share (2 marks)

2. Which one of the following instruments is an example of a money market instrument?
   A. Ordinary shares
   B. Preference shares
   C. Treasury bills
   D. Redeemable debentures with 10 years to maturity (2 marks)

3. Which one of the following statements about the Nairobi Securities Exchange (NSE) is **MOST ACCURATE**?
   A. It is primarily a market for trading short-term government bills
   B. It sets monetary policy for Kenya
   C. It issues all corporate securities on behalf of companies
   D. It facilitates trading of listed securities in the secondary market (2 marks)

4. Under the Capital Markets Act of Kenya, the Capital Markets Authority (CMA) primarily regulates _____.
   A. company payroll administration and expenditure
   B. capital market intermediaries and public offers of securities
   C. county government taxation and revenue expansion
   D. public sector budgeting approvals and civil society payments (2 marks)

5. Which one of the following statements is a key feature of ordinary shares?
   A. Fixed dividend payable irrespective of profits
   B. Priority over creditors on liquidation
   C. Residual claim on profits and assets after other claims are met
   D. Mandatory redemption at par value (2 marks)

6. Which one of the following statements **BEST** explains financial leverage?
   A. Use of fixed costs in production
   B. Use of debt to finance assets, potentially increasing returns and risk
   C. Holding excess cash balances
   D. Issuing shares to the public (2 marks)

7. The risk that can be reduced through diversification is known as _____.
   A. systematic risk
   B. market risk
   C. unsystematic risk
   D. interest rate risk (2 marks)

8. Which one of the following ratios is **MOST** suitable for assessing a firm's ability to meet short-term obligations?
   A. Gross profit margin
   B. Current ratio
   C. Return on equity
   D. Earnings per share (2 marks)

9. Which one of the following statements is **TRUE** regarding Net Present Value (NPV)?
   A. NPV ignores the time value of money and inflation
   B. NPV is calculated using accounting profit and discount rate
   C. NPV is suitable only for non-cash projects
   D. A positive NPV indicates that the project is expected to add value (2 marks)

10. In capital budgeting, the discount rate used in Net Present Value (NPV) analysis should **MOST** appropriately reflect the _____.
   A. firm's historical depreciation rate
   B. firm's cost of capital for the project's risk level
   C. book value of the firm's assets
   D. dividend payout ratio (2 marks)

11. Which one of the following statements **BEST** describes working capital?
   A. Total assets less total liabilities
   B. Fixed assets plus long-term liabilities
   C. Current assets less current liabilities
   D. Total equity plus long-term debt (2 marks)

12. Under the Central Bank of Kenya Act, which institution is responsible for monetary policy in Kenya?
   A. Capital Markets Authority
   B. National Treasury
   C. Nairobi Securities Exchange
   D. Central Bank of Kenya (2 marks)

13. Which one of the following statements about rights issues is **CORRECT**?
    A. They dilute existing shareholders' ownership without offering them a choice of buying the shares
    B. They offer existing shareholders the right to buy additional shares, usually at a discount
    C. They are available only to government entities and regulators usually at a premium
    D. They are issued only in the money market usually at a discount (2 marks)

14. Which one of the following actions is **MOST** likely to increase a firm's cash conversion cycle (CCC)?
    A. Reducing inventory holding period
    B. Increasing payables deferral period
    C. Increasing receivables collection period
    D. Offering early payment discounts to customers (2 marks)

15. Which one of the following statements **BEST** describes the purpose of a cash budget?
    A. To compute corporation tax
    B. To forecast cash inflows and outflows and identify funding surpluses/deficits
    C. To determine the intrinsic value of shares
    D. To prepare statutory financial statements (2 marks)

16. Calculate the future value of Sh.12,000,000 invested for 3 years at 10% per annum compounded annually.
    A. Sh.14,520,000
    B. Sh.15,972,000
    C. Sh.15,600,000
    D. Sh.13,200,000 (2 marks)

17. Determine the present value of Sh.2,200,000 receivable in 4 years' time discounted at 12% per annum, compounded annually.
    A. Sh.1,398,610
    B. Sh.1,560,000
    C. Sh.1,604,600
    D. Sh.1,750,000 (2 marks)

18. A loan of Sh.5,000,000 is to be repaid in 4 equal annual instalments at an interest rate of 10% per annum. Determine the annual instalment.
    A. Sh. 1,577,350
    B. Sh.1,700,000
    C. Sh.1,250,000
    D. Sh.1,800,000 (2 marks)

19. XYZ Company borrowed Sh.3,600,000 at 12% interest repayable in equal annual instalments over 3 years. Determine the annual interest in the first year.
    A. Sh.144,000
    B. Sh.360,000
    C. Sh.432,000
    D. Sh.1,200,000 (2 marks)

20. A bond has a par value of Sh.1,000, coupon rate 10% payable annually and 5 years to maturity. If investors require 12%, what is the approximate current price?
A. Sh.928
B. Sh.1,000.00
C. Sh.1,072.80
D. Sh.950.30 (2 marks)

21. Kingi Ltd. has just paid a dividend of Sh.4 per share. Dividends are expected to grow at 6% per annum. If the required return is 14%, determine the current share price using Gordon growth model.
A. Sh.53.00
B. Sh.54.00
C. Sh.52.00
D. Sh.66.25 (2 marks)

22. A preference share pays a fixed dividend of Sh.12 per year and currently trades at Sh.96. Determine the cost of preference share capital.
A. 8.0%
B. 10.0%
C. 12.5%
D. 14.0% (2 marks)

23. A company has 40% debt and 60% equity (market weights). Cost of debt before tax is 11% and corporate tax rate is 30%. Cost of equity is 16%. Determine the Weighted Average Cost of Capital.
A. 11.2%
B. 12.68%
C. 13.6%
D. 14.0% (2 marks)

24. A company's ordinary shares are selling at Sh.50. Expected dividend next year is Sh.4.00 and dividends are expected to grow at 5% per annum. Determine the cost of equity using Dividend Growth Model.
A. 11.0%
B. 12.0%
C. 13.0%
D. 14.0% (2 marks)

25. A company's Earnings Before Interest and Tax (EBIT) is Sh.9,600,000 and annual interest expense is Sh.1,200,000. Determine the interest coverage ratio.
A. 6 times
B. 7 times
C. 8 times
D. 9 times (2 marks)

26. A project requires an initial outlay of Sh.2,500,000 and is expected to generate net cash inflows of Sh.800,000 per year for 4 years. Determine the payback period.
A. 2.5 years
B. 3.1 years
C. 3.5 years
D. 4.0 years (2 marks)

27. A project has an initial outlay of Sh.1,200,000 and present value of inflows of Sh.1,500,000 at the required rate of return. Determine the Net Present Value (NPV).
A. Sh.300,000
B. Sh.2,700,000
C. Sh.1,500,000
D. Sh.1,200,000 (2 marks)

28. A project has initial outlay of Sh.5,000,000 and Net Present Value of Sh.600,000 at 10% and Net Present Value of Sh.200,000 at 15%. Estimate the Internal rate of Return.
A. 12.5%
B. 17.5%
C. 14.0%
D. 15.5% (2 marks)

29. A firm has inventory days 60, receivables days 45 and payables days 30. Determine the cash conversion cycle (CCC) in days.
A. 75
B. 90
C. 105
D. 135 (2 marks)

30. A firm's annual credit sales are Sh.36,000,000 and average receivables are Sh.3,600,000. Determine the receivables collection period (assume 360-day year).
A. 30 days
B. 36 days
C. 45 days
D. 60 days (2 marks)

31. A company expects annual cash requirement for transactions of Sh.4,000,000. The cost per conversion is Sh.50 and the interest rate is 10% per annum. Using the Baumol model, determine the optimal cash transfer size.
A. Sh.44,721
B. Sh.63,246
C. Sh.89,443
D. Sh.126,491 (2 marks)

32. A company has a current ratio of 2.5 and current liabilities of Sh.4,800,000. Determine current assets.
A. Sh.1,920,000
B. Sh.2,500,000
C. Sh.7,200,000
D. Sh.12,000,000 (2 marks)

ANSWER:D

Use the following information to answer Question 33 to Question 38.

Rhanis Ltd. is evaluating Project P requiring an initial investment of Sh.6,000,000 now. The project is expected to generate net cash inflows of Sh.2,000,000 per year for 4 years. At the end of year 4, the project will have a residual value of Sh.800,000. The required rate of return is 12% per annum.

33. Compute the present value of the annual net cash inflows.
    A. Sh.6,074,000
    B. Sh.6,800,000
    C. Sh.5,200,000
    D. Sh.4,074,000 (2 marks)

34. Compute the present value of the residual value.
    A. Sh. 508,421
    B. Sh.636,000
    C. Sh.800,000
    D. Sh.480,000 (2 marks)

35. Compute the Net Present Value (NPV) of Project P.
    A. Sh.582,800
    B. Sh.583,021
    C. Sh.1,074,000
    D. Sh.1,582,800 (2 marks)

36. Compute the profitability index (PI) of Project P.
    A. 0.95
    B. 1.05
    C. 1.10
    D. 1.25 (2 marks)

37. Determine the payback period for Project P (ignore time value of money).
    A. 2.4 years
    B. 3.0 years
    C. 3.2 years
    D. 4.0 years (2 marks)

38. Based on the Net Present Value decision rule, which action is **MOST** appropriate?
    A. Reject because Net Present Value is negative
    B. Accept because Net Present Value is positive
    C. Reject because Profitability Index exceeds 1
    D. Accept only if payback exceeds 4 years (2 marks)

Use the following information to answer Question 39 to Question 44.

- Misanda Ltd. has the following market values and financing costs:
- Ordinary equity: Sh.900 million
- Preference shares: Sh.300 million
- Debt: Sh.600 million.
- Cost of equity (ke) = 15%.

- Preference shares pay a dividend of Sh.18 per share and trade at Sh.150 per share.
- Debt is 12% debentures trading at Sh.1,050 per Sh.1,000 par value, redeemable at par in 8 years.
- Corporate tax rate is 30%.

39. Determine the cost of preference shares (kp).
    A. 8.0%
    B. 10.0%
    C. 12.0%
    D. 15.0% (2 marks)

40. Compute the annual coupon interest per debenture.
    A. Sh.100
    B. Sh.120
    C. Sh.126
    D. Sh.150 (2 marks)

41. Determine the approximate pre-tax cost of debt (kd) for the debentures
    A. 11.1%
    B. 11.24%
    C. 12.00%
    D. 13.80% (2 marks)

42. Determine the after-tax cost of debt.
    A. 7.26%
    B. 7.77%
    C. 8.00%
    D. 8.40% (2 marks)

43. Compute Misanda Ltd.'s weighted average cost of capital based on market values.
    A. 11.70%
    B. 12.09%
    C. 13.00%
    D. 14.10% (2 marks)

44. If a proposed project has an Internal Rate of Return (IRR) of 12%, what is the **MOST** appropriate decision using Weighted Average Cost of Capital (WACC) as the hurdle rate?
    A. Accept because IRR exceeds WACC
    B. Reject because IRR is less than WACC
    C. Accept because kd is lower than ke
    D. Reject because preference shares exist (2 marks)

Use the following information to answer Question 45 to Question 50.

Alison Kianda operates Matata Wholesalers. The following data relates to year 2025 (360-day year):

- Credit sales: Sh.54,000,000
- Cost of sales: Sh.36,000,000.
- Average receivables: Sh.6,750,000
- Average inventory: Sh.6,000,000
- Average payables: Sh.3,000,000.
- The firm is considering offering a 2% discount to customers to reduce the collection period by 10 days.

45. Determine the receivables collection period (days).
    A. 46
    B. 40
    C. 35
    D. 50 (2 marks)

46. Determine the inventory holding period (days).
    A. 40
    B. 50
    C. 61
    D. 75 (2 marks)

47. Determine the payables deferral period (days).
    A. 25
    B. 30
    C. 35
    D. 40 (2 marks)

48. Determine the cash conversion cycle (CCC) in days.
    A. 60
    B. 70
    C. 75
    D. 77 (2 marks)

49. If the collection period reduces by 10 days, by how many days will the cash conversion cycle (CCC) change (assuming other periods remain constant)?
    A. Decrease by 5 days
    B. Decrease by 10 days
    C. Increase by 10 days
    D. No change (2 marks)

50. If the discount reduces average receivables by Sh.1,500,000, what is the annual financing cost saving at 12% per annum?
    A. Sh.120,000
    B. Sh.150,000
    C. Sh.180,000
    D. Sh.240,000 (2 marks)

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ACCOUNTING TECHNICIANS DIPLOMA (ATD)

LEVEL III

FUNDAMENTALS OF FINANCE

THURSDAY: 4 December 2025. Morning Paper. **Time Allowed: 3 hours.**

This paper consists of fifty (50) Multiple Choice Questions. Answer ALL questions by indicating the letter (A, B, C or D) that represents the correct Answer. Each question is allocated two (2) marks. Do NOT write anything on this paper.

1. Which one of the following statements is considered a routine or administrative finance function?
   A. Capital budgeting decisions for a new project
   B. Managing the company's dividend policy
   C. Preparing cash budgets and managing short-term cash flows
   D. Evaluating the firm's optimal capital structure (2 marks)

2. A potential conflict of objectives can arise when a firm's management pursues the goal of sales maximisation, as it may lead to_____.
   A. increased profitability and shareholder value
   B. a decline in the firm's market share
   C. excessive price reductions that negatively impact profitability
   D. an improvement in the firm's liquidity position (2 marks)

3. A company is facing a short-term cash flow deficit due to a seasonal increase in its inventory. The finance manager is considering a bank overdraft or trade credit as a financing solution. Which one of the following statements is a primary demerit of relying on trade credit in this scenario?
   A. It is often an expensive form of financing if cash discounts are forgone
   B. It requires the company to pledge specific assets as collateral, which can be a complex process
   C. It can only be used for a maximum of 30 days and is not suitable for a seasonal need
   D. The interest rate is variable and can increase without warning from the supplier (2 marks)

4. Which one of the following external financing options is **MOST** likely to introduce contingent liabilities on the statement of financial position?
   A. Trade credit
   B. Sale and leaseback arrangement
   C. Issue of equity shares
   D. Retained earnings (2 marks)

5. Which one of the following characteristics **MOST** accurately describes the nature of mezzanine financing?
   A. Secured by tangible assets and carries fixed interest
   B. Combines debt and equity features and is subordinated to senior debt
   C. Short-term financing instrument with high liquidity
   D. Form of equity financing with voting rights (2 marks)

6. Caroline Nkatha takes a loan of Sh.300,000 at 12% interest rate to be repaid in annual instalments of Sh.100,000. How long will it take Nkatha to fully repay the loan?
   A. 3 years
   B. 4 years
   C. 5 years
   D. 7 years (2 marks)

7. Paul Kilonzo is considering to investing Sh.200,000 at 12% compounded quarterly for 2 years, what will be the accumulated amount?
   A. Sh.250,576
   B. Sh.253,354
   C. Sh.252,000
   D. Sh.254,180 (2 marks)

8. Kali Capital has a debenture with par value Sh.1,000 that pays 10% annual coupon and has 5 years to maturity. If the required rate of return by investors is 12%, what price should Kali Capital debenture trade at?
   A. Sh.927.90
   B. Sh.950.30
   C. Sh.970.50
   D. Sh.980.20 (2 marks)

9. MA Limited share just paid a dividend of Sh.5. Dividends are expected to grow at 6% annually and investors require 12%. Using the Gordon Growth Model, determine the current share price.
   A. Sh.80.33
   B. Sh.85.43
   C. Sh.88.33
   D. Sh.90.33 (2 marks)

10. A preference share with a par value of Sh.100 pays an annual dividend of Sh.7.50 and is currently trading at Sh. 90. What is the dividend yield of the preference share?
   A. 8.00%
   B. 8.33%
   C. 8.50%
   D. 8.75% (2 marks)

Use the following information to answer Question 11 to Question 16.

Kiwetu Manufacturing Ltd. (KML) is a medium-sized firm listed on the securities exchange. The following information relates to its financing structure and performance in 2025:

(i) **Capital structure (market values):**
- Ordinary equity: Sh.600 million
- Preference shares: Sh.200 million
- Long-term debt: Sh.400 million

(ii) **Financial details:**
- **Ordinary shares:**
  Market price = Sh.30 per share
  Expected dividend next year = Sh.2.40
  Dividend growth = 6% per annum
- **Preference shares:**
  Dividend = Sh.15 per share annually
  Current market price = Sh.120
- **Debt:**
  10% debentures, redeemable at par in 10 years, currently trading at Sh.950 per bond

(iii) **Additional information:**
- The corporate tax rate is 30%
- Expansion project requires raising Sh.300 million in new funds.
- Cost of new equity will rise by 2% due to flotation and investor expectations.
- The company's board wants to evaluate whether this expansion adds value, given its overall cost of capital

11. What is the after-tax cost of debt for KML?
    A. 7.37%
    B. 7.54%
    C. 7.50%
    D. 8.54% (2 marks)

12. What is the cost of ordinary equity before flotation adjustment?
    A. 13%
    B. 14%
    C. 15%
    D. 16% (2 marks)

13. What is the cost of preference shares for KML?
    A. 21.5%
    B. 11.5%
    C. 12.5%
    D. 15.2%
    (2 marks)

14. Based on current market values and costs, what is KML's weighted average cost of capital (WACC)?
    A. 11.2%
    B. 11.6%
    C. 12.0%
    D. 12.5% (2 marks)

15. If KML raises Sh.300 million in new funds through equity issuance, the cost of equity rises to 16%. Assuming the same capital structure, what will be the weighted marginal cost of capital (WMCC) for the new funds?
    A. 12.10%
    B. 12.48%
    C. 12.58%
    D. 13.00% (2 marks)

16. If the expansion project has an expected IRR of 12%, should KML accept it given its WMCC?
    (i) Yes, because 12% > WACC (11.6%)
    (ii) Yes, because IRR equals 12% exactly
    (iii) No, because 12% < WMCC (12.6%)
    (iv) No, because IRR is not greater than both WACC and WMCC (2 marks)

Use the following information to answer Question 17 to Question 21.

Jane Mwangi has evaluated a new investment proposal and determined that the profitability index (PI) of the project is 1.25. The project requires an initial cash outlay of Sh.8 million and has a useful life of 4 years. The minimum required rate of return is 14%.

17. Compute the present value (PV) of inflows for the project.
    A. Sh.8,000,000
    B. Sh.10,000,000
    C. Sh.2,000,000
    D. Sh.6,400,000 (2 marks)

18. Compute the net present value (NPV) of the project.
    A. Sh.1,250,000
    B. Sh.2,000,000
    C. Sh.2,500,000
    D. Sh.3,000,000 (2 marks)

19. Compute the annual cash inflows from the project.
    A. Sh.2,741,000
    B. Sh.3,432,000
    C. Sh.4,200,000
    D. Sh.5,000,000 (2 marks

20. Compute the project's payback period.
    A. 1.75 years
    B. 2.00 years
    C. 2.33 years
    D. 3.00 years (2 marks)

21. Compute the project's Internal Rate of Return (IRR).
    A. 14%
    B. 18%
    C. 20%
    D. 25.78% (2 marks)

Use the following information to answer Question 22 to Question 25.

The management of Tano Ltd. has ascertained that the company will require Sh.3,200,000 in cash for transaction purposes during the coming financial year. The interest rate on marketable securities is currently 8% per annum and is expected to remain constant over the next year. The cost of converting marketable securities to cash is Sh.40 per transaction.

Required:
Using the Baumol cash management model:

22. Calculate the optimum cash conversion size for Tano Ltd.
    A. Sh.40,000
    B. Sh.50,000
    C. Sh.56,569
    D. Sh.45,000 (2 marks)

23. Calculate the average cash balance.
    A. Sh.25,068
    B. Sh.28,442
    C. Sh.30,047
    D. Sh.28,285 (2 marks)

24. Calculate how often (in days) Tano Ltd. should convert securities into cash.
    A. 6 days
    B. 8 days
    C. 9 days
    D. 10 days (2 marks)

25. Calculate the total annual cost of managing the optimal cash balance.
    A. Sh.5,525
    B. Sh.4,835
    C. Sh.4,525
    D. Sh.5,265 (2 marks)

Use the following information to answer Question 26 to Question 29.

The shares of Amani Ltd. are currently selling at Sh.75 each on the securities exchange. Amani Ltd.'s price to earnings (P/E) ratio is 7.5 times. The company adopts a constant retention ratio of 70%. It is predicted that the company's dividends will grow at 5% per annum in perpetuity. The investors' minimum required rate of return is 11%.

26. Determine the earnings per share (EPS).
    A. Sh.7.50
    B. Sh.10.00
    C. Sh.11.20
    D. Sh.12.00 (2 marks)

27. Determine the dividend per share (DPS).
    A. Sh.3.00
    B. Sh.5.00
    C. Sh.7.00
    D. Sh.10.00 (2 marks)

28. Determine the current intrinsic value of the shares.
    A. Sh. 45.00
    B. Sh. 50.00
    C. Sh. 52.50
    D. Sh. 55.00 (2 marks)

29. Determine whether Amani Ltd.'s shares are undervalued, fairly valued or overvalued and advise on the appropriate investment action.
    A. Buy, because the share is undervalued
    B. Buy, because the share is fairly valued
    C. Do not buy, because the share is overvalued
    D. Hold, because the share is correctly priced (2 marks)

Use the following information to answer Question 30 to Question 33.

In the year 2024, Arrow Ltd. paid dividends totaling Sh.4.2 million on a net income of Sh.12.6 million. The year 2024 was a normal year and for the past 8 years earnings had grown at a constant rate of 5% per annum.
However, in the year 2025, earnings are expected to increase to Sh.16.8 million and the company expects to have profitable investment opportunities worth Sh.10 million. The high earnings level in 2025 is attributable to an exceptionally profitable short-term contract won early in the year; the company expects to return to its previous 5% growth rate thereafter. The firm's target debt ratio is 35%.

Required:
Determine Arrow Ltd.'s dividend for the year 2025 assuming it adopts each of the following independent policies:

30. If Kiburi Ltd. adopts a constant payout ratio policy, what will be the dividend for 2025?
    A. Sh.5.6 million
    B. Sh.6.0 million
    C. Sh.4.2 million
    D. Sh.5.2 million (2 marks)

31. If Arrow Ltd. adopts a stable predictable dividend policy, what dividend will it pay in 2025?
    A. Sh.4.2 million
    B. Sh.5.6 million
    C. Sh.6.0 million
    D. Sh.4.41 million (2 marks)

32. If Arrow Ltd. adopts a pure residual policy, what will be the dividend in 2025?
    A. Sh.10.3 million
    B. Sh.7.2 million
    C. Sh.12.4 million
    D. Sh.5.6 million (2 marks)

33. If Arrow Ltd. adopts a regular plus extra dividend policy, and sets the regular dividend equal to the 2024 dividend, what will be the dividend in 2025?
    A. Sh.6.2 million
    B. Sh.7.2 million
    C. Sh.8.4 million
    D. Sh.10.3 million
    (2 marks)

34. Which one of the following terms refer to the statistical measure that indicates the degree to which two variables such as securities returns move together?
    A. Variance
    B. Covariance
    C. Coefficient of variation
    D. Certainty equivalent (2 marks)

35. Which one of the following terms refers to the line that shows the relationship between an individual security's return and the return on the market portfolio?
A. Characteristic line
B. Security market line
C. Capital market line
D. Beta (2 marks)

36. Which one of the following represents the two major sources of funds for Islamic banks?
A. Transaction deposits and account receivables
B. Investments deposits and current accounts
C. Accounts payable and investments accounts
D. Transaction deposits and investments deposits (2 marks)

37. Which one of the following statements is **NOT** a reason why the actual market value of a rights issue may differ from its theoretical value?
A. The size of the firm's marginal tax rate
B. The amount of transaction costs incurred
C. Investor's speculation
D. The irregular exercise and sale of rights over the subscription period (2 marks)

38. Which one of the following terms refers to a situation where an investment banker bears the risk of not being able to sell a new security at the established price?
A. A best effort offering
B. Underwriting
C. Shelf registration
D. Making a market (2 marks)

39. Which one of the following statements **BEST** describes the concept of "asymmetric information" in the issuance of ordinary shares or debt?
A. Investor have nearly perfect information
B. The market has nearly perfect information
C. Investor have more accurate information than the management
D. Management has more accurate information than the investor has (2 marks)

40. Which of the following statements is **NOT** a driver of growth in Islamic finance?
A. Rising demand for ethical and socially responsible finance
B. Expansion of Muslim populations and wealth
C. Prohibition of gharar (uncertainty) and riba (interest)
D. Development of Islamic fintech platforms (2 marks)

41. Which one of the following statements **BEST** describes a typical Shariah-compliant crowdfunding model?
A. Lends money at fixed interest to entrepreneurs
B. Uses donations, equity-based or profit-sharing contracts to fund projects
C. Involves speculation in derivatives markets
D. Ignores risk-sharing principles (2 marks)

42. Which one of the following fundamental economic concepts forms the basis of the time value of money principle?
A. Inflation only
B. Risk–return trade-off
C. Opportunity cost of capital
D. Law of diminishing returns (2 marks)

43. Which one of the following scenarios **BEST** demonstrates the relevance of discounting in finance?
A. Deciding the proportion of debt and equity in the capital structure
B. Estimating the break-even point of a project
C. Computing the net present value of an investment project
D. Recording depreciation in financial statements (2 marks)

44. A company issued a 10-year debenture of face value Sh.1,000,000 at Sh.950,000. The coupon rate is 12% annually. The flotation cost is Sh.20,000 per debenture. The tax rate is 30%. What is the after-tax cost of debt?

A. 8.95%
B. 9.48%
C. 10.26%
D. 9.21% (2 marks)

Use the following information to answer Question 45 and Question 46.

Assets A and B have returns (joint outcomes) with probabilities below:
The returns on Asset A and Asset B and their associated probabilities are shown below:

State	Probabilities	Return on Asset A	Return on Asset B
1	0.4	6%	2%
2	0.6	14%	20%

45. Calculate expected returns of Asset A and B.

A. E[RA]=10.8%, E[RB]=12.8%
B. E[RA]=9.6%, E[RB]=14.0%
C. E[RA]=12.0%, E[RB]=10.8%
D. E[RA]=8.0%, E[RB]=20.0% (2 marks)

46. Calculate standard deviation of asset A and B.

A. σA=3.92%, σB=8.82%
B. σA=4.50%, σB=9.60%
C. σA=6.00%, σB=12.00%
D. σA=3.20%, σB=7.20% (2 marks)

47. The following information relates to Dollar Ltd.:

(i) Raw material storage period = 30 days
(ii) Work-in-progress (WIP) conversion period = 20 days
(iii) Finished goods storage period = 15 days
(iv) Average collection period = 40 days
(v) Average payment period = 25 days

Determine the operating cycle (OC) in days.

A. 80 days
B. 105 days
C. 55 days
D. 125 days (2 marks)

48. Pauline Njoki wants to buy an ordinary annuity that will pay Sh.4,000,000 a year for the next 20 years. She expects an annual interest rate will be 8% over that time period. Determine the maximum amount Pauline Njoki would be willing to pay for the annuity.

A. Sh.32,000,000
B. Sh.39,272,000
C. Sh.40,000,000
D. Sh.80,000,000 (2 marks)

49. The market price of Asai Ltd.'s share is Sh.60 per share and each share gives its owner one subscription right. Four rights are required to purchase an additional share at the subscription price of Sh.54 per share. If the share is currently selling "right on", determine the theoretical value of one right.

A. Sh.0.96
B. Sh.1.20
C. Sh.1.50
D. Sh.6.00

(2 marks)

50. Which one of the following statements illustrates the use of a hedging approach to financing?

A. Short term assets financed with long term liabilities
B. Permanent working capital financed with long term liabilities
C. Short term assets financed with equity
D. All assets financed with 50% equity, 50% long term debt mixture (2 marks)

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ATD LEVEL III

FUNDAMENTALS OF FINANCE

THURSDAY: 21 August 2025. Morning Paper. **Time Allowed: 3 hours.**

This paper consists of fifty (50) Multiple Choice Questions. Answer ALL questions by indicating the letter (A, B, C or D) that represents the correct answer. Each question is allocated two (2) marks. Do NOT write anything on this paper.

1. Which one of the following statements is **CORRECT** regarding the profit maximisation as a primary goal of the firm.?
   A. Profit maximisation considers the firms' risk level
   B. Profit maximisation leads to increased short-term profits at the expense of lowering expected future profit
   C. Profit maximisation considers the impact on individual shareholder's Earning Per Share (EPS)
   D. Profit maximisation is considered more with maximising income than the share price (2 marks)

2. Which one of the following is the focal point of financial management in a firm?
   A. The number and types of products or services provided by the firm
   B. The minimisation of the amount of taxes to be paid by the firm
   C. The creation of value to shareholders
   D. The amount of profit earned by the firm (2 marks)

3. In relation to agency theory, a(n) _____ would be an example of a principal while a(n) _____ would be an example of an agent.
   A. shareholder, manager
   B. manager, owner
   C. accountant, bond holder
   D. shareholder, bondholder (2 marks)

4. An investment project has net present value as follows:
   Discount rate 10% per annum, net present value Sh.24,760 positive
   Discount rate 20% per annum, net present value Sh.16,110 negative

   What is the internal rate of return (IRR)
   A. 10.6%
   B. 12.9%
   C. 16.1%
   D. 28.6% (2 marks)

5. Multiplex Ltd. is considering a project requiring an investment of Sh.200,000 now and with estimated cash inflows of Sh.23,000 per annum in perpetuity. The first cash inflow would be received in one year's time. The cost of capital is 10% per annum. What is the net present value of the investment?
   A. Sh.2,300
   B. Sh.3,000
   C. Sh.20,000
   D. Sh.30,000 (2 marks)

6. What is the effective annual rate of interest of 4.3% compounded every six-months?
   A. 5.3%
   B. 4.38%
   C. 5.35%
   D. 4.35% (2 marks)

7. Project A involves, investing in new machinery which has an estimated five-year useful life. The cost of capital is 10% per annum. The estimated cash flows are as follows:

Time	**Cash flows**
0 (cost)	(Sh.186,000)
1 to 5 (inflows)	Sh.56,000 per annum
5 (residual value)	Shs.10,000

What is the net present value of the project?

A. Sh.16,240
B. Sh.20,040
C. Sh.32,440
D. Sh.36,240 (2 marks)

8. A capital investment project requires an initial investment sum. The investment returns are expected to be a constant amount each year of the life of the investment. Which one of the following formulas shows how the payback period for the investment is calculated?

A. Investment sum / net cash inflow per annum
B. Investment sum/ net profit per annum
C. (Investment sum + residual) / net inflow per annum
D. (Investment sum + residual) / net profit per annum (2 marks)

9. Which one of the following explains working capital in finance?

A. Total assets minus shareholders' equity
B. Current assets plus current liabilities
C. Total assets plus shareholders' equity
D. Current assets minus current liabilities (2 marks)

10. Which one of the following illustrates the use of a hedging or matching approach to financing?

A. Short term assets financed with long term liabilities
B. Permanent working capital financed with long term liabilities
C. Short term assets financed with equity
D. All assets financed with 50% equity, 50% long term debt mixture (2 marks)

11. Which one of the following principles of Islamic finance dictates that profits must be derived from ethical activities and prohibits income from gambling and speculative transactions?

A. Al-wadiah
B. Takaful
C. Maslahah
D. Halal and Haram (2 marks)

12. In Takaful, how is the risk-sharing arrangement structured among participants? The risk is _____.

A. transferred from participants to the Takaful operator
B. shared among participants with the Takaful operator acting as an intermediary
C. transferred to a third-party reinsurer
D. eliminated entirely through the concept of profit-sharing (2 marks)

13. Which one of the following **BEST** represents the primary challenge in making capital budgeting decisions?

A. Determining the optimal dividend payout ratio
B. Accurately forecasting the cash flows and determining the appropriate discount rate to evaluate projects
C. Deciding on the proportion of debt versus equity to finance the investment
D. Ensuring the company has sufficient liquidity for day-to-day operations (2 marks)

14. Which one of the following mechanisms is **MOST** commonly used to mitigate agency problems between shareholders and managers?

A. Increasing the firm's market share
B. Establishing long-term employment contracts for managers
C. Implementing executive compensation plans that are tied to the firm's performance such as stock options
D. Limiting managerial control through board oversight only (2 marks)

15. Which one of the following financing options is considered the **MOST** suitable for Small and Medium Enterprises (SMEs) which are looking into maintaining ownership and control while obtaining necessary capital?
    A. Equity financing through venture capital
    B. Bank loans with fixed repayment schedules
    C. Crowdfunding via online platforms
    D. Government grants and subsidies (2 marks)

16. Which one of the following is a significant drawback of relying solely on trade credit as a source of finance for Small and Medium Enterprises (SMEs)?
    A. It provides immediate cash flow
    B. It can affect relationships with suppliers
    C. It does not require collateral
    D. It is a low-cost form of financing (2 marks)

17. A stock is expected to pay a dividend of Sh.2 per share next year. Dividends are expected to grow at a constant rate of 5% per year indefinitely. If the required rate of return is 12%, what is the fair value of the stock using the Dividend Discount Model (DDM)?
    A. Sh.28.57
    B. Sh.33.33
    C. Sh.40.00
    D. Sh.35.00 (2 marks)

Use the following information to answer Question 18 to Question 21.

Sukuma Ltd., is contemplating to issue 10% bonds redeemable at Sh.100 par value in three years' time. Alternatively, each bond may be converted on that date into 25 ordinary shares of the company. The current market price per share is Sh.4.60 and this is expected to grow at 8% per annum into perpetuity. The company's cost of debt is 12% per annum.

18. What will be the market price per share at the end of the three years?
    A. Sh.4.60
    B. Sh.5.79
    C. Sh.6.46
    D. Sh.6.12 (2 marks)

19. What will be the conversion value at the end of three years?
    A. Sh.144.75
    B. Sh.115.50
    C. Sh.153.75
    D. Sh.161.50 (2 marks)

20. What will the market value of the bond be at the end of three years?
    A. Sh.127.05
    B. Sh.95.20
    C. Sh.100.05
    D. Sh.110.20 (2 marks)

21. What will be the floor value of the bond?
    A. Sh.127.05
    B. Sh.95.20
    C. Sh.100.05
    D. Sh.110.20 (2 marks)

22. When faced with a conflict between the Net Present Value (NPV) and Internal Rate of Return (IRR) methods in ranking mutually exclusive projects, which one of the following statements is **MOST** accurate?
    A. NPV should always be prioritised over IRR when both methods suggest different rankings due to its focus on maximising shareholders' wealth
    B. IRR should be used exclusively when the projects have different scales of investment
    C. The conflict between the NPV and IRR only occurs in projects with uniform cash flows over time
    D. Both NPV and IRR are equally effective in ranking projects without consideration of the project's scale or cash flow timing (2 marks)

23. How does the stability of cash flows influence the choice of medium-term financing?
    A. Stable cash flows reduce the need for any financing
    B. Stable cash flows allow for more flexible repayment schedules
    C. Unstable cash flows make medium-term financing unavailable
    D. Cash flow stability only affects long-term financing (2 marks)

24. Which one of the following is the primary reason for choosing internal financing over external financing?
    A. To increase leverage
    B. To avoid interest costs
    C. To dilute ownership
    D. To expand market share (2 marks)

25. Which one of the following characteristics enhances the reliability and effectiveness of a capital budgeting technique in assessing investment projects?
    A. Simplicity in calculations at the expense of accuracy
    B. Ability to evaluate projects with differing cash flow patterns and durations
    C. Dependence on subjective opinions rather than objective data
    D. Focus exclusively on historical financial performance (2 marks)

26. Which one of the following is **NOT** a typical characteristic of capital investment decisions?
    A. They require large financial outlays and long-term commitments
    B. The returns are usually uncertain and spread over multiple years
    C. They are highly reversible and can be easily altered if conditions change
    D. They often involve assessing both quantitative and qualitative factors (2 marks)

27. Determine the future value of Sh.80,000 compounded annually for 15 years at an interest rate of 14%.
    A. Sh.571,035.00
    B. Sh.592,004.10
    C. Sh.610,002.50
    D. Sh.564,550.00 (2 marks)

28. Mary Jesang would like to have an annual annuity of Sh.400,000 for 20 years when she retires in 25 years. How much would Mary Jesang need to invest at the end of each year to achieve her goal? Assume an 8% rate of return.
    A. Sh.64,910
    B. Sh.53,720
    C. Sh.72,190
    D. Sh.62,040 (2 marks)

Use the following information to answer Question 29 to Question 31.

Brenda Thachi has invested 75%of her funds in shares of company A and 25% in shares of company B. The following probability distributions relates to shares of the two companies.

State of economy	Probability	Return on company A shares	Return on company B shares
Boom	0.2	24%	5%
Steady growth	0.6	12%	30%
Slump	0.2	0 %	-5%

29. Calculate the expected returns on shares of companies A and B respectively.
    A. 18% and 16%
    B. 24% and 12%
    C. 12% and 18%
    D. 16% and 24% (2 marks)

30. Calculate the standard deviation on shares of company A.
    A. 7.59%
    B. 7.60%
    C. 8.00%
    D. 5.97 (2 marks)

31. Calculate the standard deviation on shares of company B.
    A. 15.00
    B. 15.03
    C. 14.90%
    D. 14.00% (2 marks)

Use the following information to answer Question 31 to Question 35.

Hills Top Ltd. has the following capital structure:

	Sh."000"		**Sh."000"**
Assets	400,000	Debt	140,000
		Preferred shares	20,000
		Ordinary shares	240,000
	400,000		400,000

The ordinary shares is currently selling for Sh.15 per share, pays a cash dividend of Sh.0.75 per share and is growing annually at 6%. The preferred shares pays Sh.9 cash dividend and currently sells for Sh.91 per share. The debt pays interest of 8.5% annually and the firm is in the 30% marginal tax bracket.

32. What is the after-tax cost of debt?
    A. 5.95%
    B. 6.00%
    C. 8.00%
    D. 6.95% (2 marks)

33. What is the cost of preferred shares
    A. 8.95%
    B. 9.00%
    C. 9.90%
    D. 8.00% (2 marks)

34. What is the cost of ordinary shares?
    A. 9.95%
    B. 10.90%
    C. 11.00%
    D. 11.30 (2 marks)

35. What is the firm's weighted-average cost of capital?
    A. 9.95%
    B. 9.3575%
    C. 10.0004%
    D. 12.1230% (2 marks)

36. Which one of the following risks is specifically associated with capital investment decisions?
    A. Systematic risk
    B. Default risk
    C. Business risk
    D. Project risk (2 marks)

37. What is the primary limitation of the payback period method?
    A. Complexity of calculation
    B. Focus on cash flows instead of accounting profits
    C. Ignoring cash flows after the payback period
    D. Over-emphasis on the time value of money (2 marks)

38. Which one of the following is **NOT** a step in the capital investment decision-making process?
    A. Identifying investment opportunities
    B. Evaluating investment opportunities
    C. Monitoring and reviewing investment performance
    D. Ignoring the risk factor (2 marks)

39. Which one of the following explains the operating cycle of a business?
    A. The time taken to convert raw materials into cash
    B. The time taken to repay long-term loans
    C. The time required to achieve profitability
    D. The time taken to purchase fixed assets (2 marks)

40. What does a shorter operating cycle indicate?
    A. The company needs more working capital
    B. The company has faster cash conversion
    C. The company is operating at a loss
    D. The company is reducing liabilities (2 marks)

41. Carol Lethabo is considering investing Sh.400,000 in an entertainment joint. She is expecting to generate cash inflows of Sh.120,000 per year for 6 years from the venture. Additionally, she estimates a discount rate of 10% to be appropriate for this venture. Calculate the Profitability Index (PI) of the project.
    A. 1.29
    B. 1.22
    C. 1.35
    D. 1.50 (2 marks)

42. A salon and spa are estimated to cost Sh.250,000 and are expected to generate net cash inflows of Sh.75,000 annually for 5 years. The discount rate is 9%. Calculate the discounted payback period.
    A. 3.33 years
    B. 1.20 years
    C. 4.00 years
    D. 4.14 years (2 marks)

43. An ordinary share of Wafana Limited is expected to pay a dividend of Sh.20 next year and the dividend is expected to grow at a rate of 5% per year indefinitely. If the required rate of return is 10%, what is the intrinsic value of the share according to the Gordon Growth Model?
    A. Sh.200
    B. Sh.250
    C. Sh.420
    D. Sh.400 (2 marks)

44. A preference share with a par value of Sh.100 pays an annual dividend of Sh.7.50 and is currently trading at Sh.90. What is the dividend yield of the preference share?
    A. 8.00%
    B. 8.33%
    C. 8.50%
    D. 8.75% (2 marks)

Use the following information to answer Question 45 to Question 50.

The following information relates to Nilembo Limited:

	Sh."000"
Purchase of raw materials	13,400
Usage of raw materials	13,000
Sale of finished goods (all on credit)	50,000
Cost of sales (finished goods)	36,000
Average creditors	2,800
Average raw materials stock	2,400
Average work in progress	2,000
Average finished good stock	4,200
Average debtors	9,400

Assume a 365 days year.

45. Calculate the average raw material turnover in days.
A. 67
B. 69
C. 70
D. 80 (2 marks)

46. Calculate the average work-in-progress turnover in days.
A. 10
B. 15
C. 20
D. 25 (2 marks)

47. Calculate the average stock of finished goods in days.
A. 40
B. 43
C. 46
D. 49 (2 marks)

48. Calculate the average debtors' collection period in days.
A. 58
B. 62
C. 66
D. 69 (2 marks)

49. Calculate the average creditors payment period in days.
A. 70
B. 73
C. 76
D. 79 (2 marks)

50. Determine the length of the operating cash cycle in days.
A. 132
B. 123
C. 130
D. 199 (2 marks)

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ATD LEVEL III

FUNDAMENTALS OF FINANCE

FRIDAY: 25 April 2025. Morning Paper. **Time Allowed: 3 hours.**

This paper consists of fifty (50) Multiple Choice Questions. Answer ALL questions by indicating the letter (A, B, C or D) that represents the correct answer. Each question is allocated two (2) marks. Do NOT write anything on this paper.

1. Which one of the following is **NOT** a difference between ordinary shares and preference shares?
   A. Preference shareholders receive priority of payment above ordinary shareholders on winding up of the company
   B. Preference shares offer investors a lower level of risk than ordinary shares
   C. Preference dividends are paid before ordinary dividends
   D. Preference shares price is usually lower than ordinary shares (2 marks)

2. The use of debt finance can result in _____ return and _____ risk to a business.
   A. higher; higher
   B. lower; lower
   C. higher; lower
   D. None of the answers given is correct (2 marks)

3. Which one of the following is **NOT** an argument for the relevance of dividends?
   A. Informational content
   B. Reduction of uncertainty
   C. Some investors' preference for current income
   D. Clientele effect (2 marks)

4. Money market mutual funds _____.
   A. enable individuals and small businesses to invest indirectly in money markets instruments
   B. are available only to high net-worth individuals
   C. are involved in acquiring and placing mortgages
   D. are also known as finance companies (2 marks)

5. Interest rates and bond prices _____.
   A. move in the same direction
   B. move in opposite directions
   C. sometimes move in the same direction, sometimes in opposite directions
   D. have no relationship with each other and are therefore, independent (2 marks)

6. The expected rate of return on a bond if bought at its current market price and held to maturity is known as _____.
   A. current yield
   B. yield to maturity
   C. coupon yield
   D. capital gain yield (2 marks)

7. Estimating the fair value of a business is an art and a science. Which one of the following methods of valuation is the **MOST** appropriate and realistic?
   A. Market capitalisation
   B. Time revenue method
   C. Earning multiplier
   D. Book value method (2 marks)

8. In relation to the cost of raising capital in the securities market, which one of the following methods is **MOST** costly?
   A. Private Offers
   B. Offer by tender
   C. Public Offers
   D. Introduction (2 marks)

9. Trend analysis helps in the comparison of performance of a firm _____.
   A. over a period of a firm
   B. with other firms
   C. with other industries
   D. None of the answers provided is correct (2 marks)

10. Suppliers and creditors are interested in the _____ of a firm.
   A. profitability position
   B. liquidity position
   C. market share position
   D. debt position (2 marks)

11. Which one of the following is a measure of debt service capacity of a firm?
   A. Current ratio
   B. Acid test ratio
   C. Interest coverage ratio
   D. Debtors turnover (2 marks)

12. Which one of the following statements is **CORRECT**?
   A. A higher receivable turnover is not desirable
   B. Interest cover ratio depends on the tax rate
   C. Increase in net profit ratio means increase in sales
   D. Lower debt-equity ratio means lower financial risk (2 marks)

13. Financial intermediaries _____.
   A. do not invest in new long-term securities
   B. include insurance companies and pension funds
   C. include the national and regional securities exchanges
   D. are usually underwriting syndicates (2 marks)

14. Kitenge Ltd. is considering borrowing Sh.10 million for three (3) years at an annual interest rate of 6%. The loan agreement calls for 3 years equal payments to be paid at the end of each year of the 3 years. (The payment will include both principal and interest). What is the annual payment that will fully pay off (amortise) the loan?
   A. Sh.3,741,000
   B. Sh.2,674,000
   C. Sh.2,890,000
   D. Sh.4,020,000 (2 marks)

15. The present value of a five-year annuity which begins in one year's time is Sh.60,000 at a cost of capital of 5% per annum. What is the amount of the annuity?
   A. Sh.12,000
   B. Sh.13,198
   C. Sh.13,860
   D. Sh.29,769 (2 marks)

16. Which one of the following statements is a reasonable conclusion if the intrinsic value of a stock is greater than its market value?
   A. The stock has a low level of risk
   B. The stock offers a high dividend payout ratio
   C. The market is undervaluing the stock
   D. The market is overvaluing the stock (2 marks)

17. When the required rate of return of the market of bond X is much less than its coupon rate, bond X is said to be selling at _____.
    A. a discount
    B. a premium
    C. face value
    D. a price that cannot be determined without more information (2 marks)

18. The cost of equity (ke) is given by $(D_1/P_0) + g$. What does "g" represent in this equation?
    A. The expected price appreciation yield from ordinary shares
    B. The expected dividend yield from ordinary shares
    C. The dividend yield from a preferred share
    D. The interest payment from a bond (2 marks)

19. Which one of the following types of risk is avoidable through proper diversification?
    A. Portfolio risk
    B. Systematic risk
    C. Unsystematic risk
    D. Total risk (2 marks)

20. Which one of the following is a statistical measure of the degree to which two variables (such as securities return) move together?
    A. Variance
    B. Covariance
    C. Coefficient of variation
    D. Certainty equivalent (2 marks)

Use the following information to answer Question 21 to Question 25.

A company whose capitalisation rate is 10% has outstanding shares of 25,000 selling at Sh.100 each. The firm is expecting to pay a dividend of Sh.5 per share at the end of the current financial year. The company's expected net earnings are Sh.250,000 and the new proposed investment requires Sh.500,000.

21. Calculate the price of the share at the end of the year if dividend is **NOT** declared.
    A. Sh.110
    B. Sh.105
    C. Sh.120
    D. Sh.100 (2 marks)

22. Calculate the price of the share at the end of the year if dividend is declared.
    A. Sh.120
    B. Sh.100
    C. Sh.105
    D. Sh.110 (2 marks)

23. Determine the number of new shares to be issued if dividend is **NOT** declared.
    A. 2,273
    B. 2,500
    C. 3,571
    D. 5,000 (2 marks)

24. Determine the number of new shares to be issued if dividend is declared.
    A. 5,000
    B. 2,500
    C. 3,571
    D. 2,273 (2 marks)

25. Calculate the value of the firm at the end of the year if dividend is declared.
    A. Sh. 2,750,000
    B. Sh. 2,500,000
    C. Sh. 2,625,000
    D. Sh. 2,375,000 (2 marks)

Use the following information to answer Question 26 to Question 29.

Suma Ltd. maintains a minimum cash balance of Sh.1,000,000. The standard deviation of the daily cash is Sh.600,000. The annual interest rate is 12%. The transaction cost of buying and selling marketable securities is Sh.150 per transaction. Assume that an year has 360 days.

Using the Miller-Orr cash management model:

26. Calculate the return point.
    A. Sh.2,495,289
    B. Sh.2,432,675
    C. Sh.1,495,289
    D. Sh.1,432,675 (2 marks)

27. Calculate the average cash balance.
    A. Sh.1,576,900
    B. Sh.1,243,567
    C. Sh.1,660,385
    D. Sh.1,327,052 (2 marks)

28. Calculate the upper cash limit.
    A. Sh.1,514,133
    B. Sh.2,4852,867
    C. Sh.1,701,975
    D. Sh.2,298,025 (2 marks)

29. Calculate the spread.
    A. Sh.1,514,133
    B. Sh.1,485,867
    C. Sh.1,701,975
    D. Sh.1,298,025 (2 marks)

Use the following information to answer Question 30 to Question 35.

Ricky Ltd. is planning to issue 10 million shares of Sh.0.5 par value with a current market price of Sh.2.25 cum-dividend. An annual dividend of Sh.0.25 has been proposed. The company earns an accounting rate of return on equity (ROE) of 10% and a dividend payout of 40%. The company also has 12% Sh.1,000 redeemable debentures with a nominal value of Sh.9 million, trading at Sh.1,200. The debentures are due to be redeemed at par in ten years' time.

Assume a corporation tax rate of 30%.

30. Calculate the growth rate in dividends.
    A. 10%
    B. 4%
    C. 6%
    D. 8% (2 marks)

31. Calculate the cost of ordinary shares.
    A. 18.5%
    B. 19.25%
    C. 17.11%
    D. 17.78% (2 marks)

32. Calculate the cost of 12% redeemable debentures.
    A. 9.09%
    B. 12%
    C. 8.4%
    D. 6.36% (2 marks)

33. Calculate the market value of equity.
    A. Sh.10 million
    B. Sh.20 million
    C. Sh.22.5 million
    D. Sh.5 million (2 marks)

34. Calculate the market value of debentures.
A. Sh.10.8 million
B. Sh.9 million
C. Sh.12 million
D. Sh.10 million (2 marks)

35. Calculate the weighted average cost of capital using market values.
A. 10.61%
B. 12.12%
C. 13.65%
D. 14.25% (2 marks)

36. A company is deciding on whether to invest in a project that promises to pay Sh.500,000 in 5 years. The company's required rate of return is 10% per annum. What is the present value of this future cash flow.
A. Sh.310,461
B. Sh.341,507
C. Sh.500,000
D. Sh.805,255 (2 marks)

37. Victoria Wanyala is comparing two investment options. Option A offers Sh.10,000 in 3 years, while Option B offers Sh.8,500 today. If the investor's discount rate is 7% per year, which option should the investor choose based on the time value of money concept?
A. Option A, because Sh.10,000 in 3 years is a higher nominal value than Sh.8,500 today
B. Option B, because the present value of Sh.10,000 in 3 years is lower than Sh.8,500 today
C. Option A, because the present value of Sh.10,000 in 3 years is higher than Sh.8,500 today
D. Both options are equivalent because Sh.10,000 and Sh.8,500 are similar in value when discounted at 7% (2 marks)

38. Peter Kamati has deposited Sh.50,000 in a savings account that offers an annual interest rate of 6%, compounded quarterly. What will be the balance in the account after 8 years?
A. Sh.81,689.73
B. Sh.80,000.00
C. Sh.81,413.48
D. Sh.79,942.56 (2 marks)

39. Sifa Ltd. is evaluating two potential projects. Project X will generate Sh.2,000,000 per year for the next 5 years, while Project Y will generate Sh.2,500,000 per year for the next 3 years. The company uses a discount rate of 8%. Based on the present value (PV) of the cash flows, which project should the company choose?
A. Project X, because the total cash flows over 5 years are higher even when discounted
B. Project Y, because the present value of Sh.2,500,000 for 3 years at 8% is higher than the present value of Sh.2,000,000 for 5 years at the same rate
C. Project X, because the present value of Sh.2,000,000 per year for 5 years is higher than the present value of Project Y, even though its annual cash flows are lower
D. Both projects have an equal present value, so the company should choose based on non-financial factors (2 marks)

40. An unexpected change in a company's dividend policy is likely to _____.
A. have no impact on the stock price
B. have a positive impact on the stock price regardless of the change
C. be interpreted as a signal by investors about the company's future performance
D. lead to immediate selling of the stock (2 marks)

41. Which one of the following factors could cause a company to reduce its dividends?
A. Increased profitability
B. Rising leverage
C. Increased liquidity
D. High cash reserve (2 marks)

42. Which one of the following statements is the bank's role in a Murabaha contract?
A. Act as an investor in a business venture
B. Lease an asset to the customer
C. Buy goods and sell them to the customer at a profit
D. Lend money to the customer (2 marks)

43. What does Gharar refer to in Islamic finance?
A. Interest-based loans
B. Excessive uncertainty or ambiguity in contracts
C. Profit-sharing agreements
D. A fixed return on investments (2 marks)

44. Which of the following contracts involves a partnership where profits are shared but losses are borne only by the capital provider?
A. Murabaha
B. Mudarabah
C. Ijarah
D. Salam (2 marks)

45. Which one of the following is the **CORRECT** decision rule for Net Present Value (NPV)?
A. Accept the project if NPV > 0
B. Accept the project if NPV < 0
C. Accept the project if NPV = 0
D. Accept the project regardless of NPV (2 marks)

46. Which one of the following methods ignores the time value of money?
A. Net Present Value
B. Internal Rate of Return
C. Payback Period
D. Profitability Index (2 marks)

47. Which one of the following methods considers the time value of money?
A. Payback Period
B. Accounting Rate of Return
C. Net Present Value
D. Geometric Rate of Return (2 marks)

48. Which one of the following statements is **TRUE** regarding the payback period?
A. It accounts for the time value of money
B. It ignores cash flows after the payback period
C. It always leads to an optimal decision
D. It is calculated using present value (2 marks)

49. If a company's debt is tax-deductible, how does this affect the cost of debt in Weighted Average Cost of Capital (WACC)?
A. It increases the cost of debt
B. It decreases the cost of debt
C. It has no effect on the cost of debt
D. It eliminates the cost of debt (2 marks)

50. Which one of the following statements is the primary reason for using the cost of capital in investment decisions?
A. To estimate the potential revenue of a new project
B. To determine the break-even point of an investment
C. To assess the risk and ensure the return meets the required rate
D. To calculate the budget required for new projects (2 marks)

……

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

ATD LEVEL III

FUNDAMENTALS OF FINANCE

THURSDAY: 5 December 2024. Morning Paper. **Time Allowed: 3 hours.**

This paper consists of fifty (50) Multiple Choice Questions. Answer ALL questions by indicating the letter (A, B, C or D) that represents the correct answer. Each question is allocated two (2) marks. Do NOT write anything on this paper.

1. Which one of the following **BEST** describes the primary goal of investment decisions in corporate finance?
   A. Maximising short-term liquidity
   B. Minimising financial risk at all costs
   C. Maximising the long-term value of the firm
   D. Ensuring equal distribution of profits among all stakeholders (2 marks)

2. In the context of dividend decisions, which one of the following statements is **TRUE**?
   A. High dividend payout ratios always lead to higher security prices
   B. Companies with high growth opportunities generally pay lower dividends
   C. Dividends are irrelevant to the overall value of a firm according to the Modigliani-Miller theorem in perfect markets
   D. Dividend decisions have no impact on the company's cost of capital (2 marks)

3. Which one of the following factors is **LEAST** likely to affect a company's decision between debt financing and equity financing?
   A. Current interest rates
   B. Company's risk tolerance
   C. Historical security price volatility
   D. Expected future cash flows (2 marks)

4. Which one of the following mechanisms is **LEAST** effective in reducing agency conflicts between shareholders and management?
   A. Performance-based compensation
   B. Regular external audits
   C. Increasing executive salaries
   D. Active board oversight (2 marks)

5. Which one of the following is a point of conflict in the agency relationship between shareholders and debenture holders?
   A. The level of dividends paid to shareholders
   B. The risk profile of new investment projects
   C. The timing of executive compensation
   D. The frequency of board meetings (2 marks)

6. Maisha Bora Ltd. preferred shares pays an annual dividend of Sh.5. If the required rate of return is 7%. What is the value per share of the preferred share capital of Maisha Bora?
   A. Sh.71.43
   B. Sh.75.00
   C. Sh.85.71
   D. Sh.100.00 (2 marks)

7. A preference share with a par value of Sh.100 pays an annual dividend of Sh.7.50 and is currently trading at Sh.90. What is the dividend yield of the preference share?
   A. 8.00%
   B. 8.33%
   C. 8.50%
   D. 8.75% (2 marks)

8. A company is considering an investment that will pay Sh.10,000 at the end of each year for the next 5 years. If the required rate of return is 8%, what is the present value of this investment?
   A. Sh.39,927
   B. Sh.40,000
   C. Sh.45,000
   D. Sh.50,000 (2 marks)

9. Calculate the future value of Sh.5,000 invested today at an annual interest rate of 6% compounded quarterly for 3 years.
   A. Sh.5,955.08
   B. Sh.5,978.09
   C. Sh.5,957.20
   D. Sh.5,958.25 (2 marks)

10. Which one of the following is **NOT** a characteristic of short-term source of finance?
   A. Generally needed for up to one year in duration
   B. Higher interest rates compared to long-term financing
   C. Requires frequent repayments
   D. Used primarily for long-term capital investments (2 marks)

11. Bright Ltd. has a debt-to-equity ratio of 1.5. If the cost of debt is 5% and the cost of equity is 12%, what is the firm's weighted average cost of capital (WACC) assuming no taxes?
   A. 8.5%
   B. 9.0%
   C. 9.5%
   D. 7.8% (2 marks)

12. The dividend policy where a firm pay dividends according to a fixed percentage of its earnings, adjusting for fluctuations in profit is called _____.
   A. stable predictable policy
   B. constant pay-out ratio policy
   C. regular plus extra policy
   D. residual dividend policy (2 marks)

13. With reference to Islamic finance which one of the following statements **BEST** describes "Murabaha" transactions?
   A. Sale of goods at a price that includes a profit margin agreed upon by both parties, with payment usually made in instalments
   B. Form of Islamic finance where the buyer pays the full amount for the goods upfront and does not incur any additional costs
   C. A contract where the seller extends credit to the buyer with no additional charge beyond the original price of the goods
   D. A type of equity investment where the returns are based on the success of the underlying business venture (2 marks)

14. An investor is evaluating a project that requires an initial investment of Sh.50,000 and is expected to generate cash flows of Sh.15,000 per year for 5 years. If the discount rate is 10%, what is the net present value (NPV) of the project?
   A. Sh.2,749
   B. Sh.3,791
   C. Sh.6,862
   D. Sh.5,000 (2 marks)

15. Best Buy Ltd. is considering modernisation of its product lines project that requires an initial investment of Sh.500,000. The project is expected to earn Best Buy Ltd. additional annual net income of Sh.70,000 and will have a lifespan of 5 years. Calculate the accounting rate of return (ARR) for the project.
    A. 10%
    B. 14%
    C. 16%
    D. 20% (2 marks)

16. Which one of the following is a challenge faced by Small and Medium Enterprises (SMEs) when accessing traditional bank loans as a source of finance?
    A. High interest rates imposed by banks
    B. Lack of collateral or inadequate financial history
    C. The preference of banks to lend only to large corporations
    D. Regulatory restrictions that prevent banks from lending to SMEs (2 marks)

17. Which one of the following considerations is **MOST** critical for ensuring successful issuance of bonds as a source of external financing?
    A. The estimated maturity date of the bonds
    B. The credit rating of the issuing company
    C. The marketing strategy for bond promotion
    D. The type of underwriting used for the bond issuance (2 marks)

Use the following information to answer Question 18 to Question 22:

Simon Muya has invested 60% of his funds in shares of company X and 40% in shares of company Y. The following probability distribution relates to the shares of the two companies:

State of economy	Probability	Return on company X shares (%)	Return on company Y shares (%)
Boom	0.4	20	10
Normal	0.4	12	15
Recession	0.2	8	6

18. Determine the standard deviation on the shares of companies X.
    A. 4.8
    B. 3.43
    C. 23.04
    D. 11.76 (2 marks)

19. What is standard deviation on the shares of companies Y.
    A. 4.8
    B. 3.43
    C. 23.04
    D. 11.76 (2 marks)

20. The expected return of the portfolio.
    A. 14.4
    B. 11.2
    C. 13.12
    D. 12.48 (2 marks)

21. Assuming the returns on shares of company X and company Y are perfectly positive correlated, what will be the covariance?
    A. 16.46
    B. -16.46
    C. 23.04
    D. 11.76 (2 marks)

22. What will be the standard deviation of the portfolio?
    A. 4.8
    B. 3.43
    C. 3.98
    D. 4.25 (2 marks)

23. Which one of the following **BEST** describes the primary role of financial management within a company?
    A. Ensuring compliance with regulatory requirements
    B. Managing the daily operations of the business
    C. Maximising the wealth of shareholders
    D. Minimising the corporation's tax liabilities (2 marks)

Use the following information to answer Question 24 to Question 27:

The following information was extracted from the books of Samuel Porter a sole proprietor for the month of November 2024:

- Inventory period 45 days
- Accounts receivable period 30 days
- Accounts payable period 20 days
- Sales in the month of November 2024 Sh.1,200,000
- Cost of goods sold in the month of November 2024 Sh.800,000
- Average accounts receivable in the month of November 2024 Sh.100,000

24. Calculate the sole proprietorship's cash conversion cycle.
    A. 55 days
    B. 65 days
    C. 75 days
    D. 85 days (2 marks)

25. Calculate the accounts receivable turnover ratio in the month of November 2024.
    A. 12 times
    B. 10 times
    C. 8 times
    D. 6 times (2 marks)

26. Samuel Porter needs to understand how the length of the production cycle affects the working capital requirements of a firm. Which of the following **BEST** explains the effect of working capital on production cycle?
    A. A longer production cycle decreases the need for working capital
    B. A longer production cycle increases the need for working capital
    C. The length of the production cycle has no impact on working capital requirements
    D. A shorter production cycle increases the need for working capital (2 marks)

27. Samuel Porter seeks to understand how the size of a business influences its working capital requirements. Which of the following **BEST** explains how the size of a business influence its working capital requirements?
    A. Larger businesses generally require less working capital due to economies of scale and better access to financing
    B. Smaller businesses typically have higher working capital needs due to their limited access to credit and higher operational costs
    C. The size of a business does not affect its working capital requirements as it is determined solely by the industry norms
    D. Working capital needs are unaffected by the size of the business, as all companies require the same amount of working capital relative to their sales (2 marks)

28. The Islamic bond that is structured to generate returns without interest is called _____.
    A. Sukuk
    B. Ijarah
    C. Riba
    D. Takaful (2 marks)

29. Which one of the following is a risk-sharing partnership in Islamic finance where all partners contribute capital and share profits and losses?
    A. Ijarah
    B. Salam
    C. Mudarabah
    D. Musharakah (2 marks)

30. A company has an accounts receivable turnover ratio of 6. What is the average collection period?

Assuming a year has 365days.

A. 60.83 days
B. 61.75 days
C. 50.5 days
D. 45.83 days (2 marks)

31. A project requires an initial investment of Sh.1,200,000 and is expected to generate future cash inflows with a present value of Sh.1,500,000. What is the Profitability Index (PI)?

A. 0.8
B. 1.25
C. 1.5
D. 2.0 (2 marks)

32. "Shareholder wealth" in a firm is represented by _____.

A. number of people employed in the firm
B. book value of the firm's assets less the book value of its liabilities
C. market price per share of the firm's shares
D. amount of salary paid to the employees (2 marks)

33. The type of secondary capital market that does **NOT** involve direct contact between the buyers and the sellers and primarily operates through centralised platform is called _____.

A. over the counter market
B. exchange traded market
C. commodity market
D. stock exchange (2 marks)

34. Which one of the following is **NOT** a source of working capital?

A. Commercial paper
B. Discounting bills
C. Unsecured term loans
D. Bank overdraft (2 marks)

35. The debt ratio is a measure of a firm's _____.

A. leverage
B. profitability
C. liquidity
D. efficiency (2 marks)

36. Which one of the following is a major limitation related to usage of ratios when reviewing a firms' performance?

A. Ratio reveals difference in policy and performance between years
B. Ratio can be used to compare firms that are in the same industry if one sales firm's are higher than another firm
C. Financial ratios are designed for use by creditors, and not for managers
D. Different accounting practices between firms can distort comparison (2 marks)

37. Moonlight Ltd offers its customers 3/5 net 25. What is the cost of trade credit to a customer who chooses to pay on 25th day? Assume 365 days in a year.

A. 68.4%
B. 32.3%
C. 65.5%
D. 56.5 % (2 marks)

38. A loan of Sh.20,000 is to be repaid in equal annual instalments over 4 years at an interest rate of 5%. What is the annual payment?

A. Sh.5,000.00
B. Sh.5,512.50
C. Sh.5,640.24
D. Sh.5,820.50 (2 marks)

39. What is the effective annual rate (EAR) if the nominal interest rate is 12% compounded monthly?
A. 12.36%
B. 12.68%
C. 12.75%
D. 12.89% (2 marks)

40. Dreams Limited issued a debenture with a face value of Sh.1,000, a coupon rate of 8% and a maturity of 10 years. If the required rate of return is 6%, what is the present value of this debenture?
A. Sh.1,147.05
B. Sh.1,085.30
C. Sh.1,050.00
D. Sh.1,000.00 (2 marks)

41. Maisha Bora preferred shares pay an annual dividend of Sh.5. If the required rate of return is 7%. What is the value per share of the preferred share capital of Maisha Bora?
A. Sh.71.43
B. Sh.75.00
C. Sh.85.71
D. Sh.100.00 (2 marks)

42. Janeth Ltd. is a start-up company that is valued as a going concern. It is expected to generate free cash flows after a breaking even of Sh.100,000 per year indefinitely. If the discount rate is 8%, what is the going concern value of Janeth Ltd?
A. Sh.1,000,000
B. Sh.1,250,000
C. Sh.1,500,000
D. Sh.1,750,000 (2 marks)

43. In a firm that follows the residual dividend policy, which of the following statements is true regarding the dividend payment?
A. Dividends are set at a constant amount and adjusted periodically based on the firm's performance
B. Dividends are paid out after all profitable investment opportunities have been financed, reflecting the firm's earnings variability
C. Dividends are predetermined and maintained consistently, regardless of the firm's earnings
D. Dividends are paid out based on a fixed percentage of the firm's earnings before any investment decisions (2 marks)

44. Paula Jones is considering investing in a second hand matatu of Sh.300,000 and is expected to generate annual net cash inflows of Sh.80,000. Calculate the payback period for this matatu investment.
A. 3.25 years
B. 3.75 years
C. 4.00 years
D. 4.25 years (2 marks)

45. John Warecha has a portfolio consisting of two assets. Asset A has an expected return of 12% and constitutes 60% of the portfolio. Asset B has an expected return of 8% and constitutes 40% of the portfolio. What is the expected return of the portfolio?
A. 9.6%
B. 10.0%
C. 10.4%
D. 11.2% (2 marks)

46. Which one of the following statements **BEST** describes the impact of a stable predictable dividend policy on a firm's stock price and investor behavior?
A. A stable predictable dividend policy tends to increase stock price volatility as investors expect significant changes in dividends over time
B. A stable predictable dividend policy usually results in a lower stock price because investors perceive less flexibility in the firm's financial management
C. A stable predictable dividend policy tends to reduce stock price volatility and attract investors seeking steady income, leading to a more stable stock price
D. A stable predictable dividend policy leads to increased stock price volatility, as investors are uncertain about the firm's future dividend payments (2 marks)

47. According to the bird-in-the-hand theory, why do investors prefer dividends over potential future capital gains?
    A. Dividends are taxed at a lower rate than capital gains
    B. Dividends provide immediate returns and reduce uncertainty
    C. Dividends are always higher than capital gains
    D. Dividends are reinvested automatically (2 marks)

48. Brook Wairimu plans to save Sh.2,000 at the end of each year for the next 10 years to fund a future project. If the interest rate is 7%, what will be the future value of these savings?
    A. Sh.27,533
    B. Sh.27,800
    C. Sh.27,633
    D. Sh.28,000 (2 marks)

49. Shamba Sharp is a group of young entrepreneurs who are considering a purchase of land for poultry farming at Sh.200,000. The poultry farming project is expected to generate net cash inflows of Sh.60,000 annually for 5 years. The discount rate is 8%. Calculate the net present value (NPV) of the project.
    A. Sh.24,832
    B. Sh.41,444
    C. Sh.39,562
    D. Sh.45,156 (2 marks)

50. Which statement **CORRECTLY** describes "Zakat" in the framework of Islamic finance?
    A. Voluntary charitable donation made by individuals to support Islamic institutions
    B. Mandatory almsgiving or wealth tax that muslims are required to give annually to support the less fortunate and needy
    C. Form of Islamic insurance that provides financial protection against unforeseen circumstances
    D. An investment in Islamic projects with the expectation of receiving a return on investment (2 marks)

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ATD LEVEL III

FUNDAMENTALS OF FINANCE

THURSDAY: 22 August 2024. Morning Paper. **Time Allowed: 2 hours.**

This paper consists of fifty (50) Multiple Choice Questions. Answer ALL questions by indicating the letter (A, B, C or D) that represents the correct answer. Each question is allocated two (2) marks. Do NOT write anything on this paper.

1. Which of the following factors is **LEAST** likely to influence the investment decisions of a firm?
   A. Market trends
   B. Cost of capital
   C. Regulatory requirements
   D. Employee salaries (2 marks)

2. Core Capital Agribusiness, a recently incorporated Small and Medium Enterprise (SME), is looking for ways to improve its access to finance. Which one of the following statements is **NOT** a potential benefit of diversifying their financing channels?
   A. Reducing dependence on any single source of funding
   B. Accessing different types of financing with varying terms and conditions
   C. Lowering overall financing costs
   D. Increased administrative burden due to managing multiple financing sources (2 marks)

3. Farmers Ltd. is considering a project that requires an initial investment of Sh.100,000,000 and is expected to generate cash flows of Sh.40,000,000 per year for 5 years. The cost of capital for the company is 8%. What is the net present value (NPV) of the project?
   A. Sh.15,443,500
   B. Sh.21,543,500
   C. Sh.59,708,500
   D. Sh.41,543,500 (2 marks)

4. You need to accumulate Sh.15,000,000 in 5 years for a down payment on a house. How much should you invest today at an annual interest rate of 7%, compounded annually, to reach your goal? (Rounding off to the nearest 2 decimal places)
   A. Sh.10,461,460
   B. Sh.10,694,800
   C. Sh.11,055,640
   D. Sh.11,365,680 (2 marks)

5. Jason Ireri has a loan with an outstanding balance of Sh.12,000,000, an annual interest rate of 9% and monthly payments of Sh.250,000. How long will it take to fully repay the loan?
   A. 54 months
   B. 60 months
   C. 62 months
   D. 66 months (2 marks)

6. Aisha Mbeleva invests Sh.50,000 today in a savings account with an annual interest rate of 6%, compounded monthly. She plans to withdraw the entire amount five years from now and use it to invest in agricultural processing units. After five years, what will be the purchasing power of her savings considering an expected inflation rate of 3% per year?
   A. Sh.63,872.15
   B. Sh.66,090.00
   C. Sh.59,106.46
   D. Sh.56,459.89 (2 marks)

Use the following information to answer question 7, question 8 and question 9.

Alice Gikenye invests Sh.500,000 in a saving account that offers 7% annual interest compounded quarterly. She intends to withdraw the entire amount after 5 years.

7. What will be the total amount that Alice Gikenye will receive at the end of 5 years?
   A. Sh.707,389
   B. Sh.741,375
   C. Sh.750,250
   D. Sh.759,516 (2 marks)

8. If Alice Gikenye needs Sh.1,000,000 in 3 years, how much additional money should she invest today?
   A. Sh.264,900
   B. Sh.285,347
   C. Sh.312,083
   D. Sh.337,482 (2 marks)

9. Alice Gikenye is considering two options for her additional investment: a lump sum deposit today or monthly contributions for 3 years. If the monthly interest rate remains 1.75% (quarterly compounding), which one of the following options would be more beneficial and why?
   A. Lump sum deposit since it benefits from longer compounding over 3 years
   B. Monthly contributions as they allow flexibility and avoid risking a large sum upfront
   C. There is no difference in total value for either option at the same interest rate
   D. It depends on Alice Gikenye's financial situation and risk tolerance (2 marks)

10. The following information has been extracted from the books of Bidii Company as at 31 December 2023
   - Receivable days: 58
   - Inventory turnover: 10 times per annum
   - Payable days: 45
   - Non-current asset days: 36

   What is the length of the cash operating cycle of Bidii Company as at 31 December 2023?
   A. 23 days
   B. 49.5 days
   C. 85.5 days
   D. 139.5 days (2 marks)

11. Deral Limited is deciding on whether to offer a 2% early settlement discount that half of all customers take up. This will encourage the customers to pay in 1 month instead of the usual 2 months. Deral Limited pays 10% per annum for its overdraft facility.
   What will be the impact of the 2% early settlement discount on the cash operating cycle and reported profits?

	Cash operating cycle	**Reported profits**
A.	Reduce	increase
B.	Unaffected	increase
C.	Reduce	reduce
D.	Unaffected	reduce

(2 marks)

12. Wema Investments Company has a current ratio of 2. Outstanding trade receivables of Sh.3,000,000 and current liabilities amounting to Sh.2,000,000. Assume a year has 365 days.
   Determine inventory days for Wema Investments Company if cost of sales is Sh.10,000,000 per annum?
   A. 36.5 days
   B. 91.25 days
   C. 14.6 days
   D. 243.3 days (2 marks)

13. Zion Traders has annual credit sales of Sh.20 million and accounts receivable of Sh.4 million. Working capital is financed by an overdraft at 12% interest per year. Assume a year has 365 days. What is the annual financial effect if management reduces the collection period to 60 days by offering an early settlement discount of 1% that all customers adopt?

A. Sh.85,479 benefit
B. Sh.114,521 cost
C. Sh.85,479 cost
D. Sh.285,479 benefit (2 marks)

14. Four mutually exclusive projects; K,L,M and N, have been appraised by Ann Njoka, a financial manager with Kevote Investments using net present value (NPV), internal rate of return (IRR), return on capital employed (ROCE) and payback period (PP). Kevote Investments' objective is to maximise shareholder wealth. Which of the following projects should be chosen by Ann Njoka?

	NPV	IRR	ROCE	PP
A.	Project K Sh. 1 million	40%	34%	4 years
B.	Project L Sh. 1.1 million	24%	35%	2.5 years
C.	Project M Sh. 0.9 million	18%	25%	3 years
D.	Project N Sh. 1.5 million	12%	18%	7 years (2 marks)

15. Afya Inc., a pharmaceutical company, experiences delays in clinical trials due to unexpected regulatory changes by health authorities. This primarily represents which type of risk?

A. Operational risk
B. Technology risk
C. Political and economic risk
D. Environmental risk (2 marks)

16. What is the primary goal of a dividend policy for a company?

A. Maximising share price
B. Maximising dividends
C. Minimising taxes
D. Minimising debt (2 marks)

17. Which of the following terms is **NOT** a type of dividend payment?

A. Cash dividend
B. Stock dividend
C. Bond dividend
D. Property dividend (2 marks)

18. Securities dividend is a payment made _____.

A. in the form of additional company shares
B. in cash to shareholders
C. in the form of company bonds
D. in kind, such as assets or products (2 marks)

19. Which one of the following dividend policy emphasises on a steady and predictable payout ratio?

A. Constant dividend pay-out policy
B. Residual dividend policy
C. Stable dividend policy
D. Irregular dividend policy (2 marks)

20. Which one of the following statements refers to the primary advantage of a stock repurchase programme for a company?

A. Increased leverage
B. Tax advantage for shareholders
C. Enhancement of earnings per share
D. Reduced volatility in stock prices (2 marks)

21. The primary purpose of working capital management is _____.

A. managing long-term investment
B. maximising shareholder wealth
C. managing short-term assets and liabilities
D. minimising tax liabilities (2 marks)

22. Which one of the following channels of financing is considered a remedy for Small and Medium Enterprise (SME) challenges?
    A. It limits the options available to SMEs
    B. It reduces the complexity of financial management
    C. It increases dependence on a single source
    D. It provides alternative sources in case of one source failure (2 marks)

23. The cash conversion cycle measures the time it takes for _____.
    A. collecting accounts payable
    B. paying accounts receivable
    C. converting cash into inventory
    D. collecting accounts receivable (2 marks)

24. Factoring contributes to working capital management by _____.
    A. increasing inventory turnover
    B. accelerating cash inflows from receivables
    C. delaying payments to creditors
    D. reducing short-term borrowing (2 marks)

25. In Islamic finance, which one of the following terminologies is used instead of interest on loans?
    A. Profit-sharing
    B. Riba
    C. Dividends
    D. Zakat (2 marks)

26. The primary driver behind the development of Islamic finance is _____.
    A. profit maximisation
    B. social justice and ethical principles
    C. technological advancement
    D. political influence (2 marks)

27. Which one of the following crowdfunding model allows investors backers to receive a share of the profits or revenue generated by the project they support?
    A. Reward-based crowdfunding
    B. Equity crowdfunding
    C. Donation-based crowdfunding
    D. Debt-based crowdfunding (2 marks)

28. Which one of the following statements explains the primary purpose of a smart contract in the context of blockchain technology?
    A. Exchanging physical goods
    B. Automating contract execution
    C. Enhancing cybersecurity
    D. Generating new cryptocurrencies (2 marks)

29. The long-run objective of financial management is to maximise _____.
    A. earnings per share
    B. the value of the firm's securities
    C. return on investment
    D. market share (2 marks)

30. What is the earnings per share (EPS) for a company that earned Sh.100,000 last year in after tax profit, has 200,000 common shares outstanding and Sh.1,200,000 in retained earnings at the end of the year?
    A. Sh.100,000
    B. Sh.6.0
    C. Sh.0.50
    D. Sh.6.50 (2 marks)

31. Baramwezi Industries is a company specialising in manufacturing sustainable clothing and is currently facing a sudden drop in consumer demand due to a competitor launching a similar line at a cheaper price. Which one of the following types of risk is highlighted in this scenario?
A. Financial risk
B. Competitive risk
C. Market and opportunity risk
D. Political and economic risk (2 marks)

32. The decision function of financial management can be broken down into the _____ decisions.
A. financing and investment
B. investment, financing and asset management
C. financing and dividend
D. capital budgeting, cash management and credit management (2 marks)

33. An examination of the sources and application of funds statement is part of _____.
A. forecasting technique
B. fund flow analysis
C. a ratio analysis
D. calculations for preparing of financial statements (2 marks)

34. In proper capital budgeting analysis, we evaluate incremental _____.
A. accounting income
B. cash flows
C. earnings
D. operating profits (2 marks)

35. Tax authorities allow the full installed cost of an asset to be written off for tax purposes. This amount is called assets'_____.
A. depreciable basis
B. initial cash outlay
C. cost of capital
D. sunk cost (2 marks)

36. Baraka Limited is considering automation of its production processes. The following information relates to purchase of proposed machine:
1. The purchase of the machine will cost Sh.950,000.
2. Shipping and installation would cost Sh.10,000.
3. The automation would result in savings of Sh.90,000 a year due to reduced scrap and Sh.130,000 a year due to reduced labor costs.
4. The machine has useful life of 4 years.
5. The estimated final salvage value of the machine is Sh.240,000.
6. The firms' marginal tax rate is 34%.

Determine the incremental cash flow at time period.
A. Sh.560,000
B. Sh.760,000
C. Sh.960,000
D. Sh.1,060,000 (2 marks)

37. Profitability Index (PI) of 0.70 means that the _____.
A. project return 70 cents in present value for each current shilling invested
B. payback period is less than one year
C. project's Net Present Value (NPV) is greater than 0
D. present value of benefits is 70% greater than the project cost (2 marks)

38. Jitegemee Ltd. is considering a project that calls for an initial outlay of Sh.50,000,000. The expected net cash flows from the project are Sh.7,791,000 for each of the 10 years. What is the internal rate of return (IRR) of the project?
A. 9%
B. 8%
C. 7%
D. 6% (2 marks)

39. Which one of the following statements is **CORRECT** in relation to project evaluation?
    A. If the Net Present Value of a project is greater than 0, its Profitability Index would be 0
    B. If the Internal Rate of Return of a project is 0%, its Net Present Value using a discount rate k, greater than 0 would be 0
    C. If the Profitability Index of a project is less than 1, its Net Present Value should be less than 0
    D. If the Internal Rate of Return of a project is greater than the discount rate, k, Profitability Index will be less than 1 and its Net Present Value will be greater than 0 (2 marks)

40. A project's profitability Index (PI) is equal to the ratio of the _____ of a project's future cash flows to the project's _____.
    A. net present value, initial cash outlay
    B. present value, initial cash outlay
    C. present value, depreciable basis
    D. net present value, depreciable basis (2 marks)

41. Two mutually exclusive investment proposals have a 'scale difference' that is the cost of the project differs. Ranking these projects on the basis of the Internal Rate of Return, Net Present value and Profitability Index methods _____ give contradictory result.
    A. may
    B. will always
    C. will never
    D. will generally (2 marks)

42. The _____ method provides correct ranking of mutually exclusive projects when the firm is not subject to capital rationing
    A. net present value
    B. internal rate of return
    C. payback period
    D. profitability index (2 marks)

43. The actual market value of a right's issue will differ from its theoretical value for all of the following reasons **EXCEPT** for the _____.
    A. size of the firm's marginal tax rate
    B. amount of transaction costs incurred
    C. investor's speculation
    D. irregular exercise and sale of rights over the subscription period (2 marks)

44. What is the term used to describe a situation where the investment banker bears the risk of not being able to sell a new security at the established price?
    A. A best effort offering
    B. Underwriting
    C. Shelf registration
    D. Making a market (2 marks)

45. To say that there is "asymmetric information" in issuing of securities or debt means that the _____.
    A. investor has nearly perfect information
    B. market has nearly perfect information
    C. investor has more accurate information than the management
    D. management has more accurate information than the investor (2 marks)

46. The market price of JKL Ltd. share is Sh.60 per share and each share gives its owner one subscription right. Four rights are required to purchase an additional share at the subscription price of Sh.54 per share. What would be the theoretical value of a right if the share is currently selling "right on''?
    A. Sh.0.96
    B. Sh.1.20
    C. Sh.1.50
    D. Sh.6.00 (2 marks)

47. Which of the following statements **BEST** describes financial intermediaries?
A. They do not invest in new long-term securities
B. They include insurance companies and pension funds
C. They include the national and regional stock exchanges
D. They are usually underwriting syndicates (2 marks)

48. Kameni Paul wants to buy an ordinary annuity that will pay Sh.4,000,000 a year for the next 20 years. He expects that the annual interest rate will be 8% over that time period. What is the maximum price that Kameni Paul would be willing to pay for the annuity?
A. Sh.32,000,000
B. Sh.39,272,400
C. Sh.40,674,000
D. Sh.80,000,000 (2 marks)

49. Patel Shah is considering investing a zero- coupon bond that sells for Sh.500. At maturity in 16 years, it will be redeemed for Sh.2,000. What approximate annual rate of growth would this represent?
A. 8%
B. 9%
C. 12%
D. 25% (2 marks)

50. In estimating after tax incremental cash flows for a project, you should include all of the following **EXCEPT_____**.
A. sunk costs
B. opportunity costs
C. changes in working capital resulting from the project, net of spontaneous change in current liabilities
D. effects of inflation (2 marks)

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ATD LEVEL III

FUNDAMENTALS OF FINANCE

THURSDAY: 25 April 2024. Morning Paper. **Time Allowed: 2 hours.**

This paper is made up of fifty (50) Multiple Choice Questions. Answer ALL questions by indicating the letter (A, B, C or D) that represents the correct answer. Each question is allocated two (2) marks. Do NOT write anything on this paper.

1. In the context of finance functions, which one of the following **BEST** describes the routine role of finance functions?
   A. Addressing one-time financial issues
   B. Day-to-day financial operations
   C. Strategic financial planning
   D. Financial decision making for major projects (2 marks)

2. Which one of the following is a non-financial goal of a firm?
   A. Maximising shareholder wealth
   B. Achieving sustainable growth
   C. Maximising profits
   D. Increasing market share (2 marks)

3. In agency theory, who is typically considered the "**PRINCIPAL**"?
   A. External auditors
   B. Government regulators
   C. Shareholders
   D. Management (2 marks)

4. Which agency relationship involves conflicts related to the risk-return trade-off in investment decisions?
   A. Ordinary shareholders and management
   B. Shareholders and debenture holders
   C. Shareholders and external auditors
   D. Shareholders and government (2 marks)

5. What is the key difference between financial accounting and management accounting?
   A. Both focus on internal decision-making
   B. Financial accounting is more future-oriented
   C. Financial accounting is primarily for external reporting
   D. Both use the same set of accounting principles (2 marks)

6. What is the common cause of conflict between shareholders and debenture holders?
   A. Dividend distribution
   B. Voting rights
   C. Capital structure decisions
   D. Strategic business planning (2 marks)

7. How does an increase in the current ratio (current assets/current liabilities) affect liquidity?
   A. Improves liquidity
   B. Reduces liquidity
   C. No impact on liquidity
   D. Increases profitability (2 marks)

8. A small business needs funds for a project with a relatively short duration. Which source of finance is the **MOST** suitable in this situation?
   A. Long-term bank loan
   B. Trade credit
   C. Factoring
   D. Venture capital (2 marks)

9. Which of the following is an example of internally generated funds?
   A. Bank loan
   B. Sale of stocks
   C. Retained earnings
   D. Trade credit (2 marks)

10. Which one of the following is **NOT** a typical source of financing for a new small and medium sized enterprises (SME) owner?
   A. Personal savings and assets
   B. Loans from family and friends
   C. Bank loans
   D. Venture capital investment (2 marks)

11. A business angel investor primarily seeks _____.
   A. High security over their investment
   B. Regular dividends from the invested company
   C. Long-term capital appreciation through an exit strategy
   D. Direct involvement in the daily operations of the company (2 marks)

12. Trade credit allows small and medium enterprises (SMEs) to _____.
   A. Borrow money from a bank
   B. Delay payment to suppliers for goods or services
   C. Sell assets to raise capital
   D. Issue bonds to investors (2 marks)

13. Leasing equipment instead of buying it has an advantage of _____.
   A. Higher depreciation tax deduction
   B. Increased ownership of assets
   C. Reduced upfront capital investment
   D. Greater flexibility in upgrading equipment (2 marks)

14. Marcos Kiraithe, an SME proprietor, is considering factoring their outstanding invoices to improve cash flow. However, they are concerned about the potential fees and loss of control over their receivables.

    Which of the following options would be the **MOST** attractive to them?
   A. Full recourse factoring with a high discount rate
   B. Non-recourse factoring with a low discount rate
   C. Invoice discounting with immediate access to funds
   D. Supply chain financing with extended payment terms (2 marks)

15. Which one of the following challenges is **NOT** typically faced by small and medium sized enterprises (SMEs) in accessing finance?
   A. Complex and lengthy loan application processes
   B. High risk perception by lenders due to limited operational history
   C. Lack of adequate financial information and documentation
   D. Stringent regulatory requirements imposed by financial institutions (2 marks)

16. Karibu Digital Ventures, an SME in the technology sector, is struggling to attract venture capital due to its lack of a proven track record. Which of the following strategies could improve their chances of securing venture capital (VC) funding?
   A. Focus on increasing profitability in the short term
   B. Develop a strong business plan with clear exit strategies for investors
   C. Reduce research and development (R&D) spending
   D. Increase reliance on bank loans (2 marks)

17. John Abdul, an SME owner, is concerned about their reliance on trade credit from suppliers. Which of the following potential drawbacks of trade credit should be of **MOST** concern?
A. Early payment discounts offered by suppliers
B. Increased dependence on suppliers for financing
C. Improved relationship with suppliers
D. Simplified accounting processes (2 marks)

18. Determine the present value of the following cash flows, given a discount rate of 14%.

Year:	0	1	2	3	4
Sh:	0	Sh.1,000,000	Sh.-500,000	Sh.2,000,000	Sh.-600,000

A. Sh.1,214.850
B. Sh.1,487,150
C. Sh.1,601,850
D. Sh.1,710,150 (2 marks)

19. Duncan Korir is planning to make an additional investment at the end of each year for his retirement in 20years. He will invest Sh.50,000 each for the next five years, there after Sh.80,000 each year for the next 5 years and Sh.120,000 each year for the remaining 10 years. The rate of return is 9 percent. How much will Duncan Korir have at the end of 20 years?
A. Sh.3,790,000
B. Sh.4,556,760
C. Sh.4,046,550
D. Sh.4,752,550 (2 marks)

20. Chelagat Wamai would like to have an annuity of Sh.400,000 for 20 years when she retires in 25 years. She expects a return on investment of 8%. How much will Chelagat Wamai need to invest at the end of each year to achieve her goal.
A. Sh.64,910
B. Sh.53,720
C. Sh.72,190
D. Sh.62,040 (2 marks)

21. Risk is best described by which of the following statements?
A. The phrase total risk is synonymous with variability of return from an asset
B. Risk can be reduced by investing in one class of securities
C. Bond quality ratings do not show the probability that an issue of bonds falls into default
D. Treasury bonds are free from default risk (2 marks)

22. The Uzuri Corporation had the following returns on its ordinary shares over the past 5 years: -7,10, -6, 25 and 18.

Determine Uzuri Corporation average return and standard deviation of returns over the past 5 years.
A. 8.0% and 11.44%
B. 8.2% and 12.76%
C. 8.0% and 12.76%
D. 7.9% and 12.1% (2 marks)

23. Which of the following risks are common internal risks of a company?
A. Operational risks, financial risks and economic risks
B. Operational risks, financial risks and human resource risks
C. Financial risks, human resource risks and market risks
D. Financial risks, economic risks and social and cultural risks (2 marks)

24. Which one of the following statements **BEST** explains the going concern concept of valuation?
A. It considers the long-term potential of the business, taking into account its ability to generate future cash flows, maintain profitability and sustain operations
B. This concept is relevant in situations where the business is facing financial distress or is at risk of closure. It provides an estimate of the minimum value that could be realised from selling off the company's assets
C. It is used by value investors to identify opportunities where the market price of an asset is lower than its intrinsic value, suggesting a potential investment opportunity
D. It reflects the price at which an asset or liability could be exchanged between knowledgeable and willing parties (2 marks)

25. Which one of the following statements is **NOT** an assumption of the constant perpetual growth valuation model?
   A. The required return must be greater than the dividend growth rate
   B. Dividends grow at a constant rate forever
   C. The required rate of return can vary
   D. The firm's risk and its cost of capital remain constant (2 marks)

Use the following information to answer question 26 and question 27.

The Kirui Wanyoike corporation's dividends have been growing at a rate of 7 percent per year over the last 10 years, and this rate is expected to continue in the future. Current dividends per share are Sh.3.85 and its required return is 14.5 percent.

26. What is the value of Kirui Wanyoike's share?
   A. Sh.52.48
   B. Sh.49.25
   C. Sh.54.93
   D. Sh.55.75 (2 marks)

27. If Kirui Wanyoike's price per share is Sh.40 and its current cash dividend is Sh.3.85 per share and it is growing at a rate of 7% per annum, determine its required return.
   A. 16.2%
   B. 15.1%
   C. 16.6%
   D. 17.3% (2 marks)

28. Determine the price of a Sh.1,000 face value zero coupon bond with a yield to maturity of 14 percent and 20 years until maturity if compounded annually.
   A. Sh.72.76
   B. Sh.89.08
   C. Sh.67.78
   D. Sh.112.67 (2 marks)

29. Kibet Wanjohi is holding a 5-year, 10% Sh.100,000 debenture. Determine the value of this debenture today if the cost of capital is 12%.
   A. Sh.36,048
   B. Sh.56,740
   C. Sh.92,788
   D. Sh.100,000 (2 marks)

30. Which of the following best describes the advantages of accounting rate of return (ARR).
   A. It is easy to calculate and understand
   B. The accounting profits used by ARR can be readily obtained from financial statements and it does not require a lot of details for example cost of capital
   C. ARR uses accounting profits instead of cash flows, yet accounting profits are affected by accounting estimates and conventions
   D. It ignores the concept of time value of money (2 marks)

31. Which of the following best describes the disadvantage of profitability index (P.I)
   A. It requires the estimation of the required rate of return or cost of capital which presents practical difficulties and uses cash flows to appraise the projects
   B. It recognises the concept of time value of money
   C. It requires the estimation of cash flows which is tedious and is sensitive to discounts rates
   D. It is not consistent with wealth maximisation principle (2 marks)

Use the following information to answer question 32 to question 34.

A Project with initial cash outlay of sh.340,000,000 promises the following cashflows:

Year	**1**	**2**	**3**	**4**
Cash inflows Annuity (Sh.000)	120,000	120,000	120,000	120,000

The cost of capital is 15%

32. Evaluate the project to establish its payback period using the payback method.
A. 2.83
B. 2.71
C. 2.67
D. 2.33 (2 marks)

33. Evaluate the above project to establish its worth using net present value (NPV) method.
A. Sh.2,600,000
B. Sh.-65,536,000
C. Sh.342,600,000
D. Sh.2,800,000 (2 marks)

34. Evaluate the above project to establish its worth using internal rate of return method.
A. 16.1%
B. 16%
C. 15%
D. 15.38% (2 marks)

35. A project with an initial outlay of Sh.30,000,000 promises annuity cashflows of Sh.8,141,760 for years.

Calculate the internal rate of return of the project.
A. 3.68%
B. 16%
C. 27.14%
D. 15% (2 marks)

36. Which one of the following statements is a capital budgeting challenge in the real world?
A. Optimal resource allocation
B. Uncertain cash flows
C. Enhanced decision making
D. Effective risk management (2 marks)

37. Which one of the following statements is a component of the cost of equity?
A. Coupon rate
B. Dividend yield
C. Risk-free rate
D. Debt-to-equity ratio (2 marks)

38. What is the cost of debt?
A. Market interest rate
B. Book value of debt
C. Face value of debt
D. Historical cost of debt (2 marks)

39. Biashara Ltd. total sales during the year was of Sh.600 million. 90% of total sales were on credit. If its year end receivables turnover is 5, determine the average collection period (based on a 365-day year) and the end year receivables respectively.
A. 365 days and Sh.108,000,000
B. 73 days and Sh.120,000,000
C. 73 days and Sh.108,000,000
D. 81 days and Sh.108,000,000 (2 marks)

40. If economic order quantity (EOQ) = 360 units, order costs are sh. 5.00 per order and the carrying costs are Sh. 0.20 per unit, what is the usage in units?
A. 2,592 units
B. 25,920 units
C. 129,600 units
D. 18,720 units (2 marks)

41. The credit policy of Kikwetu Ltd is "1.5/10, net 35". At present 30% of the customers take a discount, 62% pay within the net period, and the rest pay within 45 days of invoice. What would receivables be if all customers took the cash discount?
A. Lower than the present level
B. No change from the present level
C. Higher than the present level
D. Unable to determine without more information (2 marks)

42. When a firm needs a short term loan for a specific purpose, the bank loan will likely be a _____.
A. Compensating balance arrangement
B. Revolving credit agreement
C. Transaction loan
D. Line of credit (2 marks)

43. The cost of equity capital is all of the following **EXCEPT** _____.
A. The minimum rate that a firm should earn on the equity- financed part of the investment
B. A return on the equity–financed portion of an investment that, at worst, leaves the market price of the stock unchanged
C. By far the most component cost to estimate
D. Generally lower than the before tax cost of debt (2 marks)

44. In calculating the proportional amount of equity financing employed by a firm, we should use _____.
A. The common stock equity account on the firms' balance sheet
B. The book value of the firm
C. The current market prices per share of the common stock times the number of shares outstanding
D. The sum of common stock and preferred stock on the balance sheet (2 marks)

45. Market values are often used in computing the weighted average cost of capital (WACC) because _____.
A. This is the simplest way to do the calculation
B. This is consistent with the goal of maximising shareholders' value
C. This is a very common mistake
D. This is the only way of doing it (2 marks)

46. Kiwara Ltd. has paid Sh.10 per share annual dividend on Sh.100 par value preference shares. The preference share has a current market price of Sh.96 per share. The firms' marginal tax rate is 40%. The company plans to maintain its current capital structure.

The component cost of preference shares of Kiwara Ltd. would be _____.
A. 6%
B. 6.25%
C. 10%
D. 10.42% (2 marks)

47. A critical assumption of the net operating income (NOI) approach to valuation is_____.
A. That the debt and equity levels remain unchanged
B. The dividends increase at a constant rate
C. That cost of equity remains constant regardless of changes in leverage
D. That the interest expense and taxes are included in the calculation (2 marks)

48. Which one of the following statements is **NOT** an argument for the relevance of dividends?
A. Informational content
B. Reduction of uncertainty
C. Some investors' preference for current income
D. They are determined by the shareholders (2 marks)

49. The following statements are true in relation to stock split **EXCEPT** _____.
A. Market price per share is reduced after the split
B. The number of outstanding shares is increased
C. Retained earnings are changed
D. Proportional ownership is unchanged (2 marks)

50. The dividend-payout ratio is equal to _____.

A. The dividend yield plus the capital gain yield
B. Dividend per share divided by earnings per share
C. Dividend per share divided by par value per share
D. Dividend per share divided by current price per share (2 marks)

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ATD LEVEL III

FUNDAMENTALS OF FINANCE

TUESDAY: 5 December 2023. Morning Paper. **Time Allowed: 3 hours.**

Answer ALL questions. Marks allocated to each question are shown at the end of the question. Show ALL your workings. Do NOT write anything on this paper.

QUESTION ONE

(a) Enumerate **FIVE** factors to consider when choosing a source of finance. (5 marks)

(b) Highlight **SIX** similarities between preference share capital and debt capital. (6 marks)

(c) The following is the capital structure of Mugune Limited as at 31 December 2022.

	Sh.
Ordinary share capital	20,000,000
Retained earnings	5,000,000
12% loan note	10,000,000
	35,000,000

Additional information:

1. The company has issued 1,000,000 ordinary shares of Sh.20 par value each. The market value of the ordinary share is Sh.30.
2. The shareholders expect a dividend of Sh.5 per ordinary share with a growth rate of 10% per annum.
3. The corporation tax rate is 30%.

Required:

(i) The cost of equity. (2 marks)

(ii) The cost of the 12% loan note. (2 marks)

(iii) The weighted average cost of capital (WACC) for the company using the market value. (5 marks)

(Total: 20 marks)

QUESTION TWO

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

(b) Explain **THREE** regulatory measures that govern Islamic finance. (6 marks)

(c) Ubunifu company is considering an investment in a new project. The project requires an initial investment of Sh.10 million for equipment, Sh.5 million for inventory and Sh.2 million for installation costs. The equipment will be depreciated using straight line depreciation method over 5 years period with no salvage value. The project is expected to generate sales worth Sh.10 million and incur costs of Sh.3 million at the end of each year for the next 5 years. The corporation tax rate is 30%. Assume a discount rate of 10%.

Required:

(i) Total initial cash outlay. (1 mark)

(ii) Annual net operating cash flows for each year. (4 marks)

(iii) Total terminal cash flow at the end of the project. (2 marks)

(iv) Determine whether the project is worthwhile using the discounted payback period approach. (3 marks)

(Total: 20 marks)

QUESTION THREE

(a) Agency costs refer to the costs incurred to safeguard the shareholders' interest.

In relation to the above statement, describe **THREE** types of agency costs. (6 marks)

(b) Paul Mwangi has borrowed Sh.1,000,000 from a commercial bank at an interest rate of 12% per annum. The loan shall be repaid over a period of five (5) years. The interest on the loan shall be compounded at the end of each year over the five year period.

Required:

(i) Total amount payable after five years. (2 marks)

(ii) Total amount payable after five years assuming interest is compounded semi-annually. (2 marks)

(iii) Total amount payable after five years assuming interest is compounded continuously using the formula:

$$FV = PV \times e^{(i \times t)}$$

Where: $e = 2.7183$
i = interest rate per annum
t = period (2 marks)

(c) A manufacturing company, Zoe Limited, is seeking to assess its working capital operating cycle to improve its liquidity management. The following financial data is available for the company:

1. Average inventory Sh.150 million.
2. Average accounts receivable Sh.100 million.
3. Cost of goods sold (COGS) Sh.500 million.
4. Annual sales Sh.750 million.
5. Average accounts payable Sh.75 million.

Assume 365 days in a year.

Required:

(i) Explain the concept of working capital operating cycle. (2 marks)

(ii) Calculate the following components of working capital operating cycle for Zoe Limited.

I. Day sales of inventory (DSI). (1 mark)

II. Day sales outstanding (DSO). (1 mark)

III. Day payables outstanding (DPO). (1 mark)

(iii) Determine the overall working capital operating cycle (in days) for Zoe Limited. (3 marks)

(Total: 20 marks)

QUESTION FOUR

(a) Identify **FOUR** causes of business risk. (4 marks)

(b) Summarise **SIX** factors that could influence the dividend policy of a firm. (6 marks)

(c) The ordinary shares of Bidii Ltd. are currently selling at sh.100 each at the securities exchange. The company's price earnings (P/E) ratio is 10 times. Bidi Ltd. adopts a 60% payout ratio as its dividend policy. It is predicted that the company's earnings and dividends will grow at an annual rate of 15% for the first three years, 10% for the next two years and 6% thereafter in perpetuity. The investors minimum required rate of return is 12%.

Required:

(i) The initial dividend per share (DPS). (2 marks)

(ii) The current intrinsic value of the shares. (6 marks)

(iii) Advise the investors based on the results in (c) (ii) above on whether to buy or sell the shares of Bidii Ltd. (2 marks)

(Total: 20 marks)

QUESTION FIVE

(a) Highlight **FOUR** characteristics of capital investments decisions. (4 marks)

(b) Enumerate **THREE** similarities and **THREE** differences between "accounting" and "finance". (6 marks)

(c) Billy Lenz is considering buying shares of Kenfam Limited which are currently selling at the securities exchange for Sh.200 each.

The forecasted market price of each share at the end of one year's holding period and the corresponding probability of occurrence are given as follows:

Economic condition	**Probability occurrence**	**Forecasted market price per share after one year Sh.**
Poor	0.20	180
Moderate	0.50	220
Good	0.30	240

Required:

(i) The expected rate of returns for Kenfam Limited shares. (5 marks)

(ii) The standard deviation of the returns for Kenfam shares. (5 marks)

(Total: 20 marks)

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ATD LEVEL III

FUNDAMENTALS OF FINANCE

TUESDAY: 22 August 2023. Morning Paper. **Time Allowed: 3 hours.**

Answer ALL questions. Marks allocated to each question are shown at the end of the question. Show ALL your workings. Do NOT write anything on this paper.

QUESTION ONE

(a) Explain the following type of decisions made in finance:

(i) Liquidity decisions. (2 marks)

(ii) Investment decisions. (2 marks)

(b) In a finance and investment forum, one of the facilitators' noted that "as firms strive to achieve its objectives, at times the objectives may overlap with each other and this might cause conflict".

With reference to the above statement, describe **THREE** overlaps among objectives that could arise in the course of a firm's effort to achieve its objectives. (6 marks)

(c) The capital structure of Mandela Ltd. as at 30 June 2023 was as follows:

	Sh. "000"
Ordinary share capital (Sh.10 each)	186,500
Retained earnings	13,500
10% debenture	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 optimum.
2. The company can obtain additional debentures at an interest rate of 18% per annum.
3. The dividend for the year ended 30 June 2022 was Sh.2.40 per share.
4. Dividends are expected to grow at the rate of 8% each year for the foreseeable future.
5. Additional ordinary shares can be issued at the securities exchange at a price of Sh.54 per share net of floatation cost amounting to Sh.6 per share.
6. Corporations tax rate is 30%.

Required:

Calculate the following:

(i) Cost of additional 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. (1 mark)

(v) The amount of equity to be financed through issue of new ordinary shares if the company is to maintain the optional capital structure. (1 mark)

(vi) The amount to be raised through debentures. (1 mark)

(vii) The marginal cost of capital. (4 marks)

(Total: 20 marks)

QUESTION TWO

(a) With reference to long-term and short-term sources of finance:

(i) State **FOUR** advantages of bills of exchange. (4 marks)

(ii) Enumerate **SIX** features of ordinary share capital. (6 marks)

(b) Baraka Ltd. is considering the acquisition of a new machine estimated to cost Sh.6 million. An additional Sh.280,000 million would be incurred to install the machine.

1. The machine has an estimated economic life of five years with a residual value of Sh.2 million.
2. The projected profit before tax and depreciation is Sh.2.7 million per annum.
3. To support the increased sales, it is estimated that accounts receivable, inventory and accounts payable would increase by Sh.3 million, Sh.1.7 million and Sh.3.4 million respectively.
4. The company uses the straight-line method of depreciation and the cost of capital is 8%.
5. The corporate tax rate is 30% per annum.

Required:

Using net present value (NPV), advise Baraka Ltd. on whether the machine should be acquired. (10 marks)

(Total: 20 marks)

QUESTION THREE

(a) In relation to time value of money, distinguish between the following terms:

(i) "Ordinary annuity" and "annuity due". (2 marks)

(ii) "A growing annuity" and "a perpetual annuity". (2 marks)

(b) Maandani Ltd. is considering buying a machine which is expected to generate the following cash flows at the end of each year over the machine's economic life of 5 years:

Year	**Cash flows**
	Sh.
1	100,000
2	90,000
3	80,000
4	70,000
5	60,000

The cost of capital is 12%.

Required:

Compute the total present value of the cash flows. (4 marks)

(c) John Maneno has computed the profitability index (PI) for a new proposed project to be 1.12. The projects initial cash outlay is Sh.10 million. The project has a useful life of five years. The minimum required rate of return on the project is 16%.

Required:

Compute the following for the project:

(i) Annual cash inflows. (3 marks)

(ii) Payback period. (3 marks)

(iii) Net present value. (3 marks)

(iv) Internal rate of return. (3 marks)

(Total: 20 marks)

QUESTION FOUR

(a) Explain **THREE** benefits of block chain technology to an organisation. (6 marks)

(b) Describe **THREE** ways of resolving conflict between shareholders and debenture holders in an organisation. (6 marks)

(c) Nandwa Ltd. maintains a minimum cash balance of Sh.2,000,000. The variance of the daily cash flows is Sh.100 million. The transaction cost of each marketable security is Sh.80.

The interest rate of a marketable security is 12% per annum. Assume 365 days in a year.

Required:
Using the Miller-Orr model of cash management, determine:

(i) The return point. (2 marks)

(ii) The upper cash limit. (2 marks)

(iii) The average cash balance. (2 marks)

(iv) The spread. (2 marks)

(Total: 20 marks)

QUESTION FIVE

(a) Differentiate between "time value of money" and "time preference for money". (4 marks)

(b) Masii Ltd. has a cost of equity of 10%. Currently, it has 250,000 ordinary shares which are quoted at the securities exchange at Sh.60 per share. The company's earnings per share is Sh.10 and its expected dividend per share is Sh.5 at the end of the current financial year. The expected net income for the current year is Sh.3 million and the available investment proposals are estimated to cost Sh.6 million.

Using the Modigliani and Miller (MM) model determine:

(i) The price of a share at the end of the year if dividend is not paid. (2 marks)

(ii) The price of a share at the end of the year if dividend is paid. (2 marks)

(iii) The value of a firm at the end of the year if dividend is not paid. (3 marks)

(iv) The value of a firm at the end of the year if dividend is paid. (3 marks)

(c) In assessing the credit worthiness of customers, a company should obtain information from certain sources.

Required:
Examine **THREE** sources of credit information that a bank would rely on when assessing a customer for consideration for a loan facility. (6 marks)

(Total: 20 marks)

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ATD LEVEL III

FUNDAMENTALS OF FINANCE

TUESDAY: 25 April 2023. Morning Paper. **Time Allowed: 3 hours.**

Answer ALL questions. Marks allocated to each question are shown at the end of the question. Show ALL your workings. Do NOT write anything on this paper.

QUESTION ONE

(a) Highlight **FOUR** factors that may determine the amount of cash to be held by a firm. (4 marks)

(b) Outline **FOUR** underlying principles of Takaful (Islamic) insurance. (4 marks)

(c) The capital structure of Mapato Ltd. is as follows:

	Sh."000"
Ordinary share capital (par value of Sh.10 each.)	40,000
14% preference share capital (par value of Sh.10 each)	20,000
20% debentures	6,000
16% long-term loan	10,000
	76,000

Additional information:

1. Ordinary shares are currently trading at Sh.15 on the securities market.
2. The company has paid a dividend of Sh.2 per share from an earnings per share (EPS) of Sh.6. The dividends are expected to grow annually at the rate of 40% for the foreseeable future.
3. The 20% debentures have a par value of Sh.1,000. The market price of the debentures is currently at Sh.950. The debentures have a maturity of ten years.
4. The preference shares are currently trading at Sh.14 per share.
5. The company's tax rate is 30%.

Required:

Determine the following for Mapato Ltd.:

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

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

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

(iv) The cost of long-term loan (after tax). (2 marks)

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

(Total: 20 marks)

QUESTION TWO

(a) Explain **THREE** causes of conflict between the government and shareholders. (6 marks)

(b) Differentiate between "compounding techniques" and "discounting techniques" as used in time value of money. (4 marks)

(c) Josphat Mwanzia has invested in a portfolio that comprises two stocks; A and B as shown below:

	Stock A	**Stock B**
Amount invested	Sh.2,000,000	Sh.8,000,000
Expected return	11%	25%
Standard deviation	25%	30%

Correlation coefficient between the rates of return of stock "A" and stock "B" is 0.20.

Required:
Compute the following for Josphat Mwanzia:

(i) Expected return of the portfolio. (3 marks)

(ii) Covariance of the portfolio. (3 marks)

(iii) Standard deviation of the portfolio. (4 marks)

(Total: 20 marks)

QUESTION THREE

(a) Summarise **FOUR** advantages of scrip dividend instead of cash dividend. (4 marks)

(b) Explain the following terms as used in valuation:

(i) Going concern value. (2 marks)

(ii) Liquidation value. (2 marks)

(c) Maktaba Ltd. is considering its capital budget for the year 2024. The following information relates to four mutually exclusive projects that the management is contemplating to undertake:

The projects will generate the following cash inflows:

	PROJECT			
Year	**W**	**X**	**Y**	**Z**
	Sh."000"	**Sh."000"**	**Sh."000"**	**Sh."000"**
0	(8,000)	(10,000)	(20,000)	(16,000)
1	2,000	4,000	8,000	6,000
2	4,000	6,000	12,000	10,000
3	6,000	6,000	10,000	8,000

Additional information:
1. The company has a capital budget ceiling of Sh.20 million.
2. The cost of capital for Maktaba Ltd. is 10%.
3. The cash flows are assumed to occur at the end of the year.

Required:
Advise the management of Maktaba Ltd. on which project to undertake using the following investment appraisal methods:

(i) Net present value (NPV). (8 marks)

(ii) Profitability index (PI). (4 marks)

(Total: 20 marks)

QUESTION FOUR

(a) Explain **THREE** reasons why it is not advisable for a company to use a bank overdraft as a short-term source of finance. (6 marks)

(b) Karibu Ltd. has annual sales of Sh.12 million and all sales are on 30 days credit period although customers on average take 10 days more than the credit period to pay.

Additional information:
1. The company's gross margin on sales is 40%. The company currently has no bad debts.
2. Accounts receivable are financed using a bank overdraft at an annual interest rate of 7%.
3. The management has plans to offer an early settlement discount of 1.5% for payment within 15 days and to extend the maximum credit period offered to 60 days.
4. The management expects that these changes will increase annual credit sales by 5% while also leading to additional incremental costs equal to 0.5% of sales revenue.
5. The discount is expected to be taken by 30% of the customers with the remaining customers taking an average of 60 days to pay.
6. Assume 365 days in a year.

Required:
Evaluate whether Karibu Ltd. should adopt the proposed changes in credit policy. (8 marks)

(c) Modern Appliance Ltd. has recently issued a Sh.1,000, 10% convertible bond. The bond can be converted into 20 ordinary shares at the end of five years. The current market price of the shares of Modern Appliance Ltd. is Sh.30 per share. The price is expected to grow at the rate of 10% per annum. The investor's required rate of return is 14%.

Required:
Determine the current value of the bond. (6 marks)

(Total: 20 marks)

QUESTION FIVE

(a) Explain the term "bird in the hand dividend theory". (2 marks)

(b) Explain **TWO** reasons why the financing decisions of an organisation are important. (4 marks)

(c) (i) Outline **FOUR** challenges encountered by small and medium enterprises (SMEs) in raising capital. (4 marks)

(ii) Simon Kamala obtained a loan from ABC bank of Sh.2 million. The rate of interest was fixed at 12% per annum. The loan is to be repaid semi-annually over a period of 3 years.

Required:
Prepare a loan amortisation schedule over the three year period. (6 marks)

(d) Blades Ltd. issued 15% preference shares to raise funds. The shares have a par value of Sh.100 each and currently sell at Sh.140 each. The investor's minimum required rate of return is 10%.

Required:
(i) Determine the current intrinsic value of the share. (2 marks)

(ii) Advise the investor based on whether to buy or sell the share. (2 marks)

(Total: 20 marks)

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ATD LEVEL III

FUNDAMENTALS OF FINANCE

TUESDAY: 6 December 2022. Morning Paper. **Time Allowed: 3 hours.**

Answer ALL questions. Marks allocated to each question are shown at the end of the question. Show ALL your workings. Do NOT write anything on this paper.

QUESTION ONE

(a) Outline **THREE** limitations of retained earnings as a source of finance. (3 marks)

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

(c) Heko Ltd. has the following capital structure which is considered optimal:

	Sh."000"
Debt (par value Sh.1,000)	300,000
Preference shares (par value Sh.100)	180,000
Ordinary shares (par value Sh.100)	720,000

Additional information:

1. The investors of Heko Ltd. expect earnings and dividends to grow at a constant rate of 9% in the future.
2. The company has just paid ordinary shareholders dividend of Sh.4.2 per share.
3. The current market price of ordinary shares of Heko Ltd. is Sh.80 each.
4. The firm will incur a floatation cost of Sh.4 per share to issue new shares.
5. New preference shares can be sold at Sh.105 per share with a dividend of Sh.11 per share and floatation cost of Sh.10 per share.
6. The company will issue debenture under the following terms:
   - The coupon rate 12% per annum
   - Discount Sh.30 per debenture
   - Floatation cost Sh.20 per debenture
   - The par value is Sh.1,000
   - Maturity period of ten years
7. The corporate 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 debenture capital. (3 marks)

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

(Total: 20 marks)

QUESTION TWO

(a) Explain the term "venture capitalist" as used in finance. (2 marks)

(b) Identify **THREE** differences between "factoring" and "invoice discounting". (6 marks)

(c) Erick Nandwa borrowed Sh.250,000 from Pritt Sacco at a monthly interest rate of 3%. The loan is to be amortised using the reducing balance method and be repaid in 6 equal monthly instalments, payable at the end of each month.

Required:

Prepare a loan amortisation schedule. (6 marks)

(d) Paul Kalama is considering investing in a five-year Sh.1,000 par value bond bearing a coupon rate of 7%. Paul Kalama's required rate of return is 8%. The bond is quoted at Sh.950 in the bond market. The bond will be redeemed at par value.

Required:

(i) Compute the intrinsic value of the bond. (4 marks)

(ii) Advise Paul Kalama on whether he should purchase the bond based on your computation in (d) (i) above.
(2 marks)

(Total: 20 marks)

QUESTION THREE

(a) Outline **FOUR** functions of a finance manager. (4 marks)

(b) Explain **FOUR** chronological steps of dividend payment process. (4 marks)

(c) Makupa Limited intends to invest Sh.32,000,000 in a project which is expected to generate the following cash flows:

Year	**1**	**2**	**3**	**4**
	Sh.	**Sh.**	**Sh.**	**Sh.**
Cash flows	15,000,000	10,000,000	9,000,000	8,000,000

The expected scrap value at the end of year 4 is Sh.4,000,000.

The company's cost of capital is 14%.

Required:

(i) Calculate the internal rate of return of the project. (8 marks)

(ii) Advise the management on whether to invest in the project or not based on your results in (c) (i) above.
(2 marks)

(iii) Highlight **TWO** advantages of using internal rate of return (IRR) to appraise investment projects.
(2 marks)

(Total: 20 marks)

QUESTION FOUR

(a) Identify **FOUR** benefits that may accrue to a firm from business crowdfunding. (4 marks)

(b) Citing **THREE** reasons, justify why a company should endeavour to maintain a stable dividend payment policy.
(6 marks)

(c) The following balances were extracted from the books of Eaglite Manufacturing Company for the year 2021:

	Beginning of year 2021	**End of year 2021**
	Sh."000"	**Sh."000"**
Raw materials stock	72,000	96,000
Work-in-progress	32,000	44,000
Finished goods	126,000	138,000
Accounts receivable	218,000	254,000
Accounts payable	208,000	202,000

Additional information:

1. Annual sales amounted to Sh.4,748 million.
2. Cost of production during the year amounted to Sh.2,320 million.
3. Raw materials purchased during the year amounted to Sh.1,526 million.
4. Annual cost of sales amounted to Sh.2,862 million.
5. All sales and purchases made during the year were on credit terms.

Assume that a year has 365 days.

Required:

(i) Compute the working capital cycle for Eaglite Manufacturing Company. (8 marks)

(ii) The directors of Eaglite Manufacturing Company intend to negotiate for longer credit periods from suppliers of raw materials.

Explain the effect of this action on the working capital cycle. (2 marks)

(Total: 20 marks)

QUESTION FIVE

(a) Highlight **TWO** benefits and **TWO** limitations of Islamic finance. (4 marks)

(b) Identify **FOUR** ways in which technological risk may affect the operations of a business negatively. (4 marks)

(c) James mambo intends to purchase either security AX or security BY.

The following information relates to the two securities:

State of economy	**Probability**	**Returns**	
		AX	**BY**
		%	**%**
Boom	0.5	14	8
Stable	0.2	16	9
Recession	0.3	10	12

Required:

(i) Compute the expected return of securities AX and BY. (4 marks)

(ii) Compute the standard deviation of each of the securities AX and BY. (6 marks)

(iii) Advise James Mambo on the security to purchase based on the results obtained in (c) (ii) above. (2 marks)

(Total: 20 marks)

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KASNEB

ATD LEVEL II

FUNDAMENTALS OF FINANCE

PILOT PAPER

September 2015. **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) Explain three factors that a company could consider when formulating its dividend policy. (6 marks)

(b) Outline four advantages of paying scrip dividends by a company. (4 marks)

(c) The following information was extracted from the books of Kogello Limited as at 31 March 2015:

	Sh. '000'
Ordinary share capital (par value Sh.25)	8,000
8% preference share capital (par value Sh.24)	6,000
10% preference share capital (par value Sh.20)	4,000
10% Debentures	4,000

Additional information:

1. The market prices per share as at 31 March 2015 were as follows:

	Sh.
Ordinary shares	30
8% preference share	20
10% preference share	25

2. The market value of 10% debentures as at 31 March 2015 was Sh.5,000,000.
3. The corporation tax rate is 30%.
4. The company has maintained a payment of an ordinary dividend per share of Sh.3.80 over the past five years.

Required:

The weighted average cost of capital (WACC) using market weights. (10 marks)

(Total: 20 marks)

QUESTION TWO

(a) In relation to financing of firm's activities, explain the meaning and relevance of the following terms:

(i) Stock split. (3 marks)

(ii) Stock repurchase option. (3 marks)

(b) Umoja Ltd. is contemplating undertaking any of the following three mutually exclusive projects A, B and C. Each project requires an initial cash outlay of Sh.5 million. Details of each of the projects are given as follows:

Project A

This project is expected to generate an annual net operating cash flow of Sh.2,000,000 each year over its useful life of five years. Estimated re-sale value of the project after 5 years is Sh.500,000.

Project B

This project is expected to generate a net cash flow of Sh.650,000 each year in perpetuity.

Project C

This investment is expected to have a useful life of 3 years with no resale value at the end of this period. The annual contribution to be generated by the project each year are given as follows:

	Year		
	1	2	3
Contribution (Sh.'000')	2,500	3,000	3,500

The annual fixed operating costs excluding depreciation are estimated at Sh.200,000 per annum. Provide for depreciation on a straight line basis and corporation tax is payable at the rate of 30%. The minimum required rate of return from this investment is 10%.

Required:
Using net present value, advise management of the company on the project to undertake. (14 marks)
(Total: 20 marks)

QUESTION THREE
Super Products Ltd. started operations on 1 April 2014. The company raised the required equity capital of Sh.260 million and debt at an annual rate of interest of 18% before commencing business.

Given below are some statistics extracted from the books of the company in respect of the financial statements prepared to 31 March 2015:

	Sh."000"
Total fixed assets (NBV)	300,000
Operating costs (excluding debt interest)	156,000
Dividend declared and paid	16,880
Cash and bank balances	12,500

80% of the sales are on credit. The current assets on 31 March 2015 consisted of only stock, debtors, cash and bank balances as given above while current liabilities consisted of only creditors and tax provided for in respect of the year ending 31 March 2015. Taxation was provided for at the rate of 30%.

You are provided with the following financial ratios which have been determined from the financial statements of Super Products Ltd:

Fixed assets turnover	1.8 times
Gross profit margin	45%
Stock turnover	4.4 times
Interest cover	4 times
Average debt collection (based on 360 days of the year)	84 days
Current ratio	2.5:1

Required:
(a) In respect of the year ended 31 March 2015, you are required to prepare the company's:

(i) Income statement. (8 marks)

(ii) Statement of financial position. (8 marks)

(b) The following statistics have been provided with respect to the industry in which the company operates:
- Acid test ratio 1.2:1
- Return on equity 21%
- Capital gearing ratio 35%

Required:
Comment on the performance of the company relative to these industry statistics. (4 marks)
(Total: 20 marks)

QUESTION FOUR

(a) ABC Ltd. earnings and dividends over the last five years have steadily increased as shown below:

Year	EPS Sh.	DPS Sh.
2010	6	2.5
2011	6.5	2.7
2012	7.0	2.8
2013	7.3	3.5
2014	7.5	4.0

Wambua, a prospective investor is considering buying shares of this company which are currently selling at Sh.120 each.

The investor's minimum required rate of return is 16%.

Required:
Advise the investor on whether he should buy the shares of the company or not. (10 marks)

(b) Firms strive to pursue objectives which at times overlap with each other and in some cases conflict with each other. Briefly explain overlaps and conflicts that may arise amongst objectives that firms strive to achieve. (10 marks)

(Total: 20 marks)

QUESTION FIVE

(a) AMR Ltd. makes cash payments of Sh.20,000 per week. The interest rates on marketable securities is 10% and every time the company sells marketable securities, it incurs a cost of Sh.30.

Required:
Using Baumol's model in cash management;

(i) Determine the optimal amount of marketable securities to be converted into cash every time the company makes the transfer. (4 marks)

(ii) Determine the total number of transfers from marketable securities to cash per year. (2 marks)

(iii) Determine the total cost of maintaining the cash balance per year. (2 marks)

(iv) Determine the firm's average cash balance. (2 marks)

(b) A company has invested in a project whose return distributions is given as follows:

Possible return (%)	Probability
0.10	0.05
0.02	0.10
0.04	0.20
0.09	0.30
0.14	0.20
0.20	0.10
0.28	0.05
	1.00

Required:

(i) The asset's risk using the standard deviation. (3 marks)

(ii) The expected return of the project. (2 marks)

(c) Outline five motives of leasing an asset from the point of new of a company. (5 marks)

(Total: 20 marks)

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kasneb

ATD LEVEL II

FUNDAMENTALS OF FINANCE

TUESDAY: 31 August 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) Distinguish between "agency cost" and "agency conflict". (4 marks)

(b) Describe four factors that might influence the working capital requirements of a firm. (8 marks)

(c) Akili Mingi will deposit Sh.500,000 in her savings account at the end of the year 2021. She will deposit an additional Sh.200,000 at the end of each subsequent year in that account, the sum deposited is expected to earn interest at the rate of 8% per annum, compounded annually.

Required:

(i) Determine the cumulative amount that is expected to be in her account at the end of the year 2025. (6 marks)

(ii) The rate of return expected to be earned over the projected period. (2 marks)

(Total: 20 marks)

QUESTION TWO

(a) Summarise two advantages of lease finance. (4 marks)

(b) Describe three business activities that are prohibited under Islamic finance. (6 marks)

(c) Perks Ltd. is considering acquisition of one of the following two equipment:

- Equipment A: Has a cost of Sh.750,000 and net cash flow of Sh.200,000 per year for six years.
- Equipment B: Has a cost of Sh.500,000 and net cash flow of Sh.140,000 per year for six years.

The required rate of return on both equipment is 10%.

Required:

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

(ii) The internal rate of return (IRR) of each equipment. (4 marks)

(iii) Advise the management of Perks Ltd. on which equipment should be accepted. (2 marks)

(Total: 20 marks)

QUESTION THREE

(a) Explain three functions of the securities market in your country. (6 marks)

(b) Melody Ltd. is considering raising an additional Sh.10,000,000 to finance an expansion programme.

The firm's existing capital structure which is considered to be optimal is given as follows:

	Sh."000"
Ordinary share capital	40,000
Reserves	20,000
16% debenture (Sh.100 par)	25,000
14% preference share capital (Sh.20 each)	15,000
	100,000

Additional information:

1. The firm expects to generate Sh.2,000,000 from retained earnings for this expansion programme.
2. Additional new ordinary shares will be issued at Sh.45 each subject to a floatation cost of Sh.5 per share. The most recent dividend paid by the company is Sh.2 per share. The firm's dividends are expected to grow at the rate of 5% per annum in perpetuity.
3. The company will issue new 16% debentures at a price of Sh.110.
4. New 14% preference shares will be issued at par.
5. 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 new 16% debentures. (2 marks)

(iv) The cost of new preference shares. (1 mark)

(v) The company's weighted marginal cost of capital (WMCC). (5 marks)

(vi) The number of new ordinary shares to be issued to raise desired external equity. (2 marks)

(Total: 20 marks)

QUESTION FOUR

(a) Explain the terms "discounted cash flow". (2 marks)

(b) Discuss three limitations of debentures as a source of finance. (6 marks)

(c) Benard Kiarie undertakes a contractual job for 5 years, in which his annual salary of Sh.1 million is payable at the end of each year. His salary has a provision of an annual increment of 8%. The required rate of return is 10% per annum.

Required:

The present value of his salary. (5 marks)

(d) Star Computer Ltd. has forecasted return on its share with the following probability distribution:

Return (%)	**Probability**
–20	0.05
–10	0.05
–5	0.10
5	0.10
10	0.15
18	0.25
20	0.25
30	0.05

Required:

(i) The expected return. (3 marks)

(ii) The standard deviation of return. (4 marks)

(Total: 20 marks)

QUESTION FIVE

(a) Summarise two disadvantages of the profit maximisation as an objective of a firm. (4 marks)

(b) Explain three factors that might influence the dividend policy of a firm. (6 marks)

(c) Bafana Ltd. currently operates with terms of net 72 days. The firm's current average investment in account receivables is Sh.4,800,000. 60% of the firm's sales are always on credit. The current total sales amount to Sh.38,400,000.

Additional information:

1. The company is considering introducing terms of 3/15 net 90 days.
2. The firm's total turnover is expected to increase by 30% as a result of relaxing the terms of sale.
3. All cash customers and 60% of the credit customers will take advantage of the cash discount offer.

4. The firm's average collection period will rise from current level 75 days to 80 days.
5. Bad debts are expected to remain at 5% of credit sales.
6. Inventory levels are estimated to be 5% of the firm's total turnover.
7. The gross margin on sales is 40%.
8. The cost of capital is 18%.
9. Corporation tax rate applicable is 30%.

(Assume that a year has 360 days).

Required:
Advise the management of Bafana Ltd. whether to adopt the new credit policy. (10 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

kasneb

ATD LEVEL II

FUNDAMENTALS OF FINANCE

TUESDAY: 18 May 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) Distinguish between the following sets of terms as used in financial markets:

(i) "Quoted companies" and "unquoted companies". (2 marks)

(ii) "Bonus issue" and "rights issue". (2 marks)

(b) Summarise two advantages of the internal rate of return (IRR) method used in evaluation of the viability of an investment project. (4 marks)

(c) Kopex Ltd.'s capital structure is as follows:

	Sh."million"
Ordinary share capital (Sh.20 each)	1,920
12% preference share capital (Sh.20 each)	1,440
9% debentures	960
	4,320

Additional information:

1. The ordinary shares are currently trading on the securities exchange at Sh.75 per share.
2. The ordinary dividend for the previous financial year was Sh.10.60 per share. The dividends are expected to grow at an annual growth rate of 8% for the foreseeable future.
3. The preference shares have a current market value of Sh.20 per share.
4. The debentures are irredeemable and have a current market value of Sh.1,080 per Sh.1,000 nominal value.
5. Corporation tax rate is 30%.

Required:

(i) Kopex Ltd.'s market weighted average cost of capital (MWACC). (8 marks)

(ii) Explain two reasons why Kopex Ltd. could prefer to use market weights instead of book value weights in the computation of the weighted average cost of capital. (4 marks)

(Total: 20 marks)

QUESTION TWO

(a) Describe four factors to be taken into account in the design of a firm's credit policy. (8 marks)

(b) The following balances were extracted from the books of Ushauri Ltd. for the year 2020:

	Balances as at	
	Beginning of year Sh."000"	End of year Sh."000"
Finished goods stock	1,000	4,000
Accounts receivable	1,500	4,500
Accounts payable	1,200	2,800

Additional information:

1. The firm's sales and cost of sales are Sh.20 million and Sh.15 million respectively. 80% of the firm's sales are credit sales.
2. All purchases of stock are on credit basis.
   (Assume that a year has 360 days).

Required:

The firm's working capital operating cycle for the year 2020. (6 marks)

(c) Kevin Machokah obtained a loan of Sh.1,200,000 from a commercial bank at an interest rate of 12.5% per annum. The loan is to be repaid in equal semi-annual installments over a period of 3 years. The loan interest is to be amortised on a reducing balance basis.

Required:

Loan amortisation schedule for Kevin Machokah. (6 marks)

(Total: 20 marks)

QUESTION THREE

(a) Explain three areas where the concept of time value of money might be applied. (6 marks)

(b) Explain three reasons why organisations prefer retained earnings as a source of finance. (6 marks)

(c) Maize Mills Ltd. expects to generate net income of Sh.10,000,000 in the current financial year.

Additional information:

1. The firm's management has established that acceptable investment proposals of Sh.6,000,000 require financing.
2. The firm currently adopts a residual dividend policy.
3. The number of issued ordinary shares is 10,000,000.

Required:

(i) The optimal total dividend payable and dividend per share assuming the firm adopts a residual dividend policy. (3 marks)

(ii) The optimal total dividend payable and dividend per share assuming the firm adopts a 50% payout ratio policy.

(3 marks)

(iii) Advise the company on the dividend policy to adopt based on your answer in (c) (i) and (c) (ii) above.

(2 marks)

(Total: 20 marks)

QUESTION FOUR

(a) Outline four differences between "Islamic banking" and "conventional banking". (8 marks)

(b) Kenvit Ltd. is considering investing in one of the following two projects X and Y, which require an initial cash outlay of Sh.2,200,000 each. Each of the projects has an estimated productive life of five years.

The following information relates to the two projects:

1. The projects will generate the following annual cash inflows:

Year	Project X Sh.	Project Y Sh.
1	200,000	400,000
2	600,000	900,000
3	1,200,000	800,000
4	900,000	700,000
5	500,000	600,000

2. The company's cost of capital is 10% per annum.

Required:
Advise the management of Kenvit Ltd. on the project to undertake based on the following investment evaluation methods:

(i) Net present value (NPV). (8 marks)

(ii) Profitability index (PI). (4 marks)
(Total: 20 marks)

QUESTION FIVE

(a) Explain four conflicts that could arise in the course of achieving a firm's objectives. (8 marks)

(b) Summarise four benefits of regulating financial markets in your country. (4 marks)

(c) Explain the term "unique risk" as used in finance. (2 marks)

(d) John Kim purchased shares of Barbex Ltd. at the beginning of the year at Sh.125 per share. The forecasted price per share at the end of the year and the probability of its occurrence in different economic conditions are given as follows:

Economic conditions	**Probability**	**Forecasted share price Sh.**
High growth	0.30	120
Low growth	0.40	130
Stagnation	0.20	140
Recession	0.10	160

Required:

(i) Expected rate of return of the company's shares. (2 marks)

(ii) The standard deviation of the return. (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	6.6030	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

kasneb

ATD LEVEL II

FUNDAMENTALS OF FINANCE

TUESDAY: 24 November 2020. **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) Highlight four applications of the cost of capital to a firm. (4 marks)

(b) Citing three reasons, justify why the accounting profit might not be the best measure of a company's performance. (6 marks)

(c) Riziki Ltd. borrowed Sh.15,000,000 from Zaidi Bank at an annual compound interest rate of 18% on the reducing balance. The loan was repayable in annual installments over a period of six years. The instaallments were payable at the end of each year.

Required:
A loan amortisation schedule for Riziki Ltd. (6 marks)

(d) At the beginning of year 2015, Chiaro Kwekwe deposited Sh.1,000,000 in an investment account which earned compound interest at the rate of 15% per annum. At the beginning of each subsequent year, Chiaro Kwekwe deposited a further Sh.500,000 in the same account.

Required:
The amount of money in the investment account by the end of the year 2019. (4 marks)
(Total: 20 marks)

QUESTION TWO

(a) Outline two advantages of bonus issue of shares from the viewpoint of the company. (2 marks)

(b) Discuss four dividend pay-out policies that could be adopted by different companies in your country. (8 marks)

(c) Explain the following types of risks:

(i) Market risk. (1 mark)

(ii) Interest rate risk. (1 mark)

(iii) Default risk. (1 mark)

(d) Barry Otipha plans to buy shares of Lightway Ltd. that are currently selling at Sh.20 each at the Securities Exchange. The forecasted price per share and probability of their occurrence in different states of nature are as follows:

State of nature	Probability	Forecasted share price Sh.
Excellent	0.30	25
Normal	0.20	22
Poor	0.35	21
Very poor	0.15	18

Required:

(i) Expected rate of return of the company's share. (3 marks)

(ii) The standard deviation of return. (4 marks)
(Total: 20 marks)

QUESTION THREE

(a) Explain four features of ordinary shares. (8 marks)

(b) Orbitech Ltd's capital structure which is considered to be optimal is given as follows:

	%
Equity	60
Debt	40
	100

The firm is planning to raise an additional Sh.5,000,000 to finance an expansion programme. This project is expected to generate additional net operating cash inflows of Sh.700,000 in each year in perpetuity.

Additional information:

1. New ordinary shares could be issued at Sh.40 each and incur a floatation cost of Sh.2 per share issued.
2. The firm's current earnings per share is Sh.5 and adopts a 50% payout ratio as its dividend policy. The firm's future dividend is expected to grow at a constant rate of 4% each year indefinitely.
3. New irredeemable 10% debentures can be issued at par at Sh.100 each. Floatation cost of Sh.3 per debenture issued will be incurred.
4. Corporation tax rate is 30%.
5. Retained earnings available to finance this activity are estimated at Sh.1,000,000.

Required:

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

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

(iii) Effective cost of 10% debenture capital. (2 marks)

(iv) Weighted marginal cost of capital (WMCC) of a firm. (4 marks)

(v) The number of ordinary shares to be issued to raise external equity. (2 marks)

(Total: 20 marks)

QUESTION FOUR

(a) Explain three approaches to financing working capital that could be adopted by different firms. (6 marks)

(b) Outline four features of a sound investment appraisal technique. (4 marks)

(c) Banita Ltd. is considering the selection of a project from two mutually exclusive projects with an estimated productive life of five years.

The following information relates to the two projects:

Project A: The project costs Sh.9,920,000 and is expected to generate annual cash flows of Sh.2,400,000 with an estimated residual value of Sh.1,180,000.

Project B: The project costs Sh.4,800,000 and is expected to generate annual cash flows of Sh.1,200,000 with an estimated residual value of Sh.405,000.

The company's cost of capital is 14% per annum.

Required:

(i) Payback period for each project. (4 marks)

(ii) Net present value (NPV) of each project. (4 marks)

(iii) Advise the management of Banita Limited on the project to undertake under each of the investment valuation methods in (c) (i) and (c) (ii) above. (2 marks)

(Total: 20 marks)

QUESTION FIVE

(a) In relation to Islamic Finance, distinguish between the following terminologies:

(i) Istna and salam. (2 marks)

(ii) Ijara and sukuk. (2 marks)

(iii) Mudhaaraba and mushaaraka. (2 marks)

(b) Explain three methods of listing a company at the Securities Exchange. (6 marks)

(c) Blaze Ltd. requires 20,000 units of a component "Y" in its manufacturing process in the coming year which costs Sh.50 each. The items are available locally and hence the lead time is one week. Each order costs Sh.20 to prepare and process while the holding cost is Sh.15 per unit per year for storage plus 10% of the purchase price as opportunity cost.

Required:

(i) Optimal quantity of the component "Y" to be ordered in each order. (4 marks)

(ii) The re-order level. (Assume 50 weeks in a year). (3 marks)

(iii) The number of orders to be placed per year. (1 mark)

(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

kasneb

ATD LEVEL II

FUNDAMENTALS OF FINANCE

WEDNESDAY: 27 November 2019. **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) Describe the functions of the following financial market participants:

(i) Brokers. (2 marks)

(ii) Investment banks. (2 marks)

(iii) Securitisers. (2 marks)

(b) Discuss four ways in which the potential agency problems between shareholders and the management could be resolved. (8 marks)

(c) Christopher Omondo borrowed Sh.2,500,000 from Betacom Bank Ltd. at an interest rate of 15% per annum. The loan is to be repaid semi-annually over a period of 3 years. The interest on the loan is to be paid on a reducing balance basis.

Required:

(i) The amount of each semi-annual instalment payable for the loan. (2 marks)

(ii) A loan amortisation schedule. (4 marks)

(Total: 20 marks)

QUESTION TWO

(a) (i) In relation to time value of money, describe three interpretations of interest rates. (3 marks)

(ii) In 1988, the average cost of an asset was Sh.1,800. Thirty years later, in 2018, the average cost of the same asset was Sh.13,700.

Required:

The growth rate in the asset value over the 30 year period. (2 marks)

(b) Propose four factors that could influence a firm's cost of capital. (8 marks)

(c) Juhudi Ltd. is considering investing in a new machine that will cost Sh.1,000,000 at time 0. The machine can be sold after three years for Sh.100,000. To operate the machine, Sh.200,000 must be invested at time 0 in inventories. These funds will be recovered when the machine is retired at the end of year 3. The machine will produce sales revenue of Sh.900,000 per year for 3 years. Variable operating costs excluding depreciation will be 50% of sales. Operating cash inflows will begin in year 1 from today (at time 1). The machine will have depreciation expenses of Sh.500,000, Sh.300,000 and Sh.200,000 in years 1, 2 and 3 respectively. The company has a 30% tax rate and a 10% cost of capital. Assume inflation is zero.

Required:

(i) The projects net present value (NPV). (6 marks)

(ii) Advise the management of Juhudi Ltd. on whether to undertake the project based on your result in (c) (i) above. (1 mark)

(Total: 20 marks)

QUESTION THREE

(a) Summarise five rights of equity shareholders of a company. (5 marks)

(b) Highlight four disadvantages of Islamic finance. (4 marks)

(c) Oak Ltd. is considering undertaking a project that has an upfront cost and a series of positive cash flows. The project's estimated cash flows are summarised below:

Year	Project cash flow Sh."000"
0	?
1	500
2	300
3	400
4	600

The project has a regular payback period of 2.25 years.

Required:
The project's internal rate of return (IRR). (5 marks)

(d) Explain three reasons why a company might prefer to issue bonus shares instead of paying cash dividend. (6 marks)
(Total: 20 marks)

QUESTION FOUR

(a) Suggest five reasons for prolonged working capital operating cycle. (5 marks)

(b) Lakers Ltd. has annual sales of Sh.50,735,000 and maintains an average inventory level of Sh.15,012,000. The average accounts receivable balance outstanding is Sh.10,008,000. The company makes all purchases on credit and has always paid on the 30th day. The company is now going to take full advantage of trade credit and pay its suppliers on the 40th day. Its sales can be maintained at existing levels but inventory can be reduced by Sh.1,946,000 and accounts receivable reduced by Sh.1,946,000. There are 365 days in a year.

Required:
Determine the net change in the cash conversion cycle. (6 marks)

(c) A prospective investor bought shares of Kenland Paints Ltd. at the start of the year for Sh.25 each. The forecasted price of each share at the end of the year and probability of their occurrence in different states of nature are given as follows:

State of nature	Probability	Forecasted share price Sh.
Good	0.20	30
Fair	0.40	27
Poor	0.40	24

Required:

(i) Expected rate of return. (3 marks)

(ii) The standard deviation of return. (4 marks)

(iii) The relative risk. (2 marks)
(Total: 20 marks)

QUESTION FIVE

(a) Distinguish between "systematic risk" and "unsystematic risk". (4 marks)

(b) Omena Ltd's capital structure which is considered to be optimal is given as follows:

	Sh. "000"
Ordinary share capital (Sh.10 each)	5,000
Reserves	1,000
14% Debenture (Sh.100 each)	3,000
12% Preference share capital (Sh.20 each)	1,000
	10,000

The firm is contemplating raising an additional Sh.5,000,000 to finance a capital investment which is expected to generate annual net cash flows of Sh.1,600,000 over its 5 years useful life. No resale value is expected at the end of its useful life.

The firm expects to generate Sh. 1,000,000 from internal sources to finance the investment activity.

Additional information:

1. New ordinary shares can be issued at Sh.50 each. A floatation cost of Sh.5 per share will be incurred. The most recent dividend paid was Sh.2 per share.
2. The firm's future dividends are expected to grow at a constant rate of 5% each year in perpetuity.
3. New 10%, redeemable debentures will be issued at Sh.105 per unit. The par value for each unit is Sh.100 and a floatation cost of 10% of par value will be incurred. The debenture will mature after 10 years.
4. New 12% irredeemable preference shares will be issued at Sh.28 each subject to a floatation cost of Sh.3 per share issued. The par value is Sh.20 per share.
5. Corporation tax rate is 30%.

Required:

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

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

(iii) The after tax cost of new 10% redeemable debentures. (3 marks)

(iv) The cost of new 12% irredeemable preference share capital. (2 marks)

(v) The firm's weighted marginal cost of capital (WMCC). (4 marks)

(vi) Using the Net Present Value (NPV) technique, advise on the suitability or otherwise of the proposed project (3 marks)

(Total: 20 marks)

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Present Value of 1 Received at the End of n Periods:

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

Period	1%	2%	3%	4%	5%	6%	7%	8%	9%	10%	12%	14%	15%	16%	18%	20%	24%	28%	32%	36%
1	.9901	.9804	.9709	.9615	.9524	.9434	.9346	.9259	.9174	.9091	.8929	.8772	.8696	.8621	.8475	.8333	.8065	.7813	.7576	.7353
2	.9803	.9612	.9426	.9246	.9070	.8900	.8734	.8573	.8417	.8264	.7972	.7695	.7561	.7432	.7182	.6944	.6504	.6104	.5739	.5407
3	.9706	.9423	.9151	.8890	.8638	.8396	.8163	.7938	.7722	.7513	.7118	.6750	.6575	.6407	.6086	.5787	.5245	.4768	.4348	.3975
4	.9610	.9238	.8885	.8548	.8227	.7921	.7629	.7350	.7084	.6830	.6355	.5921	.5718	.5523	.5158	.4823	.4230	.3725	.3294	.2923
5	.9515	.9057	.8626	.8219	.7835	.7473	.7130	.6806	.6499	.6209	.5674	.5194	.4972	.4761	.4371	.4019	.3411	.2910	.2495	.2149
6	.9420	.8880	.8375	.7903	.7462	.7050	.6663	.6302	.5963	.5645	.5066	.4556	.4323	.4104	.3704	.3349	.2751	.2274	.1890	.1580
7	.9327	.8706	.8131	.7599	.7107	.6651	.6227	.5835	.5470	.5132	.4523	.3996	.3759	.3538	.3139	.2791	.2218	.1776	.1432	.1162
8	.9235	.8535	.7894	.7307	.6768	.6274	.5820	.5403	.5019	.4665	.4039	.3506	.3269	.3050	.2660	.2326	.1789	.1388	.1085	.0854
9	.9143	.8368	.7664	.7026	.6446	.5919	.5439	.5002	.4604	.4241	.3606	.3075	.2843	.2630	.2255	.1938	.1443	.1084	.0822	.0628
10	.9053	.8203	.7441	.6756	.6139	.5584	.5083	.4632	.4224	.3855	.3220	.2697	.2472	.2267	.1911	.1615	.1164	.0847	.0623	.0462
11	.8963	.8043	.7224	.6496	.5847	.5268	.4751	.4289	.3875	.3505	.2875	.2366	.2149	.1954	.1619	.1346	.0938	.0662	.0472	.0340
12	.8874	.7885	.7014	.6246	.5568	.4970	.4440	.3971	.3555	.3186	.2567	.2076	.1869	.1685	.1372	.1122	.0757	.0517	.0357	.0250
13	.8787	.7730	.6810	.6006	.5303	.4688	.4150	.3677	.3262	.2897	.2292	.1821	.1625	.1452	.1163	.0935	.0610	.0404	.0271	.0184
14	.8700	.7579	.6611	.5775	.5051	.4423	.3878	.3405	.2992	.2633	.2046	.1597	.1413	.1252	.0985	.0779	.0492	.0316	.0205	.0135
15	.8613	.7430	.6419	.5553	.4810	.4173	.3624	.3152	.2745	.2394	.1827	.1401	.1229	.1079	.0835	.0649	.0397	.0247	.0155	.0099
16	.8528	.7284	.6232	.5339	.4581	.3936	.3387	.2919	.2519	.2176	.1631	.1229	.1069	.0930	.0708	.0541	.0320	.0193	.0118	.0073
17	.8444	.7142	.6050	.5134	.4363	.3714	.3166	.2703	.2311	.1978	.1456	.1078	.0929	.0802	.0600	.0451	.0258	.0150	.0089	.0054
18	.8360	.7002	.5874	.4936	.4155	.3503	.2959	.2502	.2120	.1799	.1300	.0946	.0808	.0691	.0508	.0376	.0208	.0118	.0068	.0039
19	.8277	.6864	.5703	.4746	.3957	.3305	.2765	.2317	.1945	.1635	.1161	.0829	.0703	.0596	.0431	.0313	.0168	.0092	.0051	.0029
20	.8195	.6730	.5537	.4564	.3769	.3118	.2584	.2145	.1784	.1486	.1037	.0728	.0611	.0514	.0365	.0261	.0135	.0072	.0039	.0021
25	.7798	.6095	.4776	.3751	.2953	.2330	.1842	.1460	.1160	.0923	.0588	.0378	.0304	.0245	.0160	.0105	.0046	.0021	.0010	.0005
30	.7419	.5521	.4120	.3083	.2314	.1741	.1314	.0994	.0754	.0573	.0334	.0196	.0151	.0116	.0070	.0042	.0016	.0006	.0002	.0001
40	.6717	.4529	.3066	.2083	.1420	.0972	.0668	.0460	.0318	.0221	.0107	.0053	.0037	.0026	.0013	.0007	.0002	.0001		
50	.6080	.3715	.2281	.1407	.0872	.0543	.0339	.0213	.0134	.0085	.0035	.0014	.0009	.0006	.0003	.0001				
60	.5504	.3048	.1697	.0951	.0535	.0303	.0173	.0099	.0057	.0033	.0011	.0004	.0002	.0001						

* The factor is zero to four decimal places

Present Value of an Annuity of 1 Per Period for n Periods:

$$PVIF_{r,n} = \sum_{i=1}^{n} \frac{1}{(1+r)^i} = \frac{1 - \frac{1}{(1+r)^n}}{r}$$

Number of Payments	1%	2%	3%	4%	5%	6%	7%	8%	9%	10%	12%	14%	15%	16%	18%	20%	24%	28%	32%
1	0.9901	0.9804	0.9709	0.9615	0.9524	0.9434	0.9346	0.9259	0.9174	0.9091	0.8929	0.8772	0.8696	0.8621	0.8475	0.8333	0.8065	0.7813	0.7576
2	1.9704	1.9416	1.9135	1.8861	1.8594	1.8334	1.8080	1.7833	1.7591	1.7355	1.6901	1.6467	1.6257	1.6052	1.5656	1.5278	1.4568	1.3916	1.3315
3	2.9410	2.8839	2.8286	2.7751	2.7232	2.6730	2.6243	2.5771	2.5313	2.4869	2.4018	2.3216	2.2832	2.2459	2.1743	2.1065	1.9813	1.8684	1.7663
4	3.9020	3.8077	3.7171	3.6299	3.5460	3.4651	3.3872	3.3121	3.2397	3.1699	3.0373	2.9137	2.8550	2.7982	2.6901	2.5887	2.4043	2.2410	2.0957
5	4.8534	4.7135	4.5797	4.4518	4.3295	4.2124	4.1002	3.9927	3.8897	3.7908	3.6048	3.4331	3.3522	3.2743	3.1272	2.9906	2.7454	2.5320	2.3452
6	5.7955	5.6014	5.4172	5.2421	5.0757	4.9173	4.7665	4.6229	4.4859	4.3553	4.1114	3.8887	3.7845	3.6847	3.4976	3.3255	3.0205	2.7594	2.5342
7	6.7282	6.4720	6.2303	6.0021	5.7864	5.5824	5.3893	5.2064	5.0330	4.8684	4.5638	4.2883	4.1604	4.0386	3.8115	3.6046	3.2423	2.9370	2.6775
8	7.6517	7.3255	7.0197	6.7327	6.4632	6.2098	5.9713	5.7466	5.5348	5.3349	4.9676	4.6389	4.4873	4.3436	4.0776	3.8372	3.4212	3.0758	2.7860
9	8.5660	8.1622	7.7861	7.4353	7.1078	6.8017	6.5152	6.2469	5.9952	5.7590	5.3282	4.9464	4.7716	4.6065	4.3030	4.0310	3.5655	3.1842	2.8681
10	9.4713	8.9826	8.5302	8.1109	7.7217	7.3601	7.0236	6.7101	6.4177	6.1446	5.6502	5.2161	5.0188	4.8332	4.4941	4.1925	3.6819	3.2689	2.9304
11	10.3676	9.7868	9.2526	8.7605	8.3064	7.8869	7.4987	7.1390	6.8052	6.4951	5.9377	5.4527	5.2337	5.0286	4.6560	4.3271	3.7757	3.3351	2.9776
12	11.2551	10.5753	9.9540	9.3851	8.8633	8.3838	7.9427	7.5361	7.1607	6.8137	6.1944	5.6603	5.4206	5.1971	4.7932	4.4392	3.8514	3.3868	3.0133
13	12.1337	11.3484	10.6350	9.9856	9.3936	8.8527	8.3577	7.9038	7.4869	7.1034	6.4235	5.8424	5.5831	5.3423	4.9095	4.5327	3.9124	3.4272	3.0404
14	13.0037	12.1062	11.2961	10.5631	9.8986	9.2950	8.7455	8.2442	7.7862	7.3667	6.6282	6.0021	5.7245	5.4675	5.0081	4.6106	3.9616	3.4587	3.0609
15	13.8651	12.8493	11.9379	11.1184	10.3797	9.7122	9.1079	8.5595	8.0607	7.6061	6.8109	6.1422	5.8474	5.5755	5.0916	4.6755	4.0013	3.4834	3.0764
16	14.7179	13.5777	12.5611	11.6523	10.8378	10.1059	9.4466	8.8514	8.3126	7.8237	6.9740	6.2651	5.9542	5.6685	5.1624	4.7296	4.0333	3.5026	3.0882
17	15.5623	14.2919	13.1661	12.1657	11.2741	10.4773	9.7632	9.1216	8.5436	8.0216	7.1196	6.3729	6.0472	5.7487	5.2223	4.7746	4.0591	3.5177	3.0971
18	16.3983	14.9920	13.7535	12.6593	11.6896	10.8276	10.0591	9.3719	8.7556	8.2014	7.2497	6.4674	6.1280	5.8178	5.2732	4.8122	4.0799	3.5294	3.1039
19	17.2260	15.6785	14.3238	13.1339	12.0853	11.1581	10.3356	9.6036	8.9501	8.3649	7.3658	6.5504	6.1982	5.8775	5.3162	4.8435	4.0967	3.5386	3.1090
20	18.0456	16.3514	14.8775	13.5903	12.4622	11.4699	10.5940	9.8181	9.1285	8.5136	7.4694	6.6231	6.2593	5.9288	5.3527	4.8696	4.1103	3.5458	3.1129
25	22.0232	19.5235	17.4131	15.6221	14.0939	12.7834	11.6536	10.6748	9.8226	9.0770	7.8431	6.8729	6.4641	6.0971	5.4669	4.9476	4.1474	3.5640	3.1220
30	25.8077	22.3965	19.6004	17.2920	15.3725	13.7648	12.4090	11.2578	10.2737	9.4269	8.0552	7.0027	6.5660	6.1772	5.5168	4.9789	4.1601	3.5693	3.1242
40	32.8347	27.3555	23.1148	19.7928	17.1591	15.0463	13.3317	11.9246	10.7574	9.7791	8.2438	7.1050	6.6418	6.2335	5.5482	4.9966	4.1659	3.5712	3.1250
50	39.1961	31.4236	25.7298	21.4822	18.2559	15.7619	13.8007	12.2335	10.9617	9.9148	8.3045	7.1327	6.6605	6.2463	5.5541	4.9995	4.1666	3.5714	3.1250
60	44.9550	34.7609	27.6756	22.6235	18.9293	16.1614	14.0392	12.3766	11.0480	9.9672	8.3240	7.1401	6.6651	6.2402	5.5553	4.9999	4.1667	3.5714	3.1250

kasneb

ATD LEVEL II

FUNDAMENTALS OF FINANCE

TUESDAY: 21 May 2019. **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) Explain the following terms as used in finance:

(i) Financial intermediaries. (2 marks)

(ii) Risk-return trade off. (2 marks)

(iii) Stakeholder management. (2 marks)

(b) Describe three motives of holding inventory. (6 marks)

(c) Zeltex Ltd.'s shares cost Sh.120 each and pay no dividends. The possible prices that the company's shares might sell for at the end of the year with the respective probabilities are provided below:

Price Sh.	Probability
115	0.10
120	0.10
125	0.20
130	0.30
135	0.20
140	0.10

Required:

(i) The expected return of the company's shares. (4 marks)

(ii) The standard deviation of return. (4 marks)

(Total: 20 marks)

QUESTION TWO

(a) Firms strive to achieve objectives which at times overlap with each other and in some cases conflict with each other.

With reference to the above statement, discuss four overlaps that could arise in the course of a firm's effort to achieve its objectives. (8 marks)

(b) Umbo Ltd. is evaluating two mutually exclusive projects, A and B. Both projects are expected to cost Sh.8 million. However, an additional Sh.1 million investment in working capital will be required if the firm were to invest in project A and Sh.1.5 million for Project B.

Project A has an estimated useful life of five years while Project B has an estimated useful life of 4 years. Estimated net operating cash flows (NOCF) from each investment in each year are given as follows:

Year	PROJECT	
	A	B
	Sh."000"	Sh."000"
1	2,500	3,500
2	3,000	3,500
3	3,500	3,500
4	2,800	3,500
5	2,000	-

Additional information:

1. The resale values for Project A and Project B at the end of their useful life are estimated at Sh.200,000 and Sh.300,000 respectively.
2. Cost of capital is projected at 14%.

Required:

(i) Net present value (NPV) for Project A and Project B. (10 marks)

(ii) Advise the company on which project to undertake. (2 marks)

(Total: 20 marks)

QUESTION THREE

(a) Describe four forms of dividend payments that a company could utilise to pay its shareholders. (8 marks)

(b) Mazeras Ltd. is considering an investment of Sh.20,000 that will generate a perpetual after tax annual cash flow of Sh.2,000. The required rate of return is 8%.

Required:

(i) The investment's profitability Index (PI). (3 marks)

(ii) Advise the company whether to undertake the investment, based on the profitability index obtained in (b) (i) above. (2 marks)

(c) Explain two advantages of using private placement when issuing long-term debt. (4 marks)

(d) John Malech deposits the following amounts at the end of each year in a savings account paying an annual interest rate of 4% compounded semi annually:

Year	End of year deposits (Sh.)
1	4,000
2	8,000
3	7,000
4	10,000

Required:

The value of the account at the end of year 4. (3 marks)

(Total: 20 marks)

QUESTION FOUR

(a) In relation to financial markets, outline four benefits that could accrue to investors from using the Central Depository System in securities trading. (4 marks)

(b) Kingstone Omondi plans to make a constant deposit into his savings account at the start of each year over a period of four years.

He expects the sum deposited to earn interest at the rate of 8% each year compounded annually. Omondi expects to raise Sh.1,500,000 after four years in order to finance a capital investment.

Required:

The annual deposit into his savings account. (4 marks)

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

	Sh."000"
Ordinary share capital (Sh.10 Par value)	40,000
Reserves	20,000
12% Debenture (Sh.100 Par value)	40,000
	100,000

The firm's management are considering raising an additional Sh.20 million to finance an expansion programme. The company expects to generate Sh.2 million from internal sources.

Additional information:

1. The firm will issue new ordinary shares at Sh.25 each to raise desired external equity. A floatation cost of Sh.2 per share will be incurred.
2. The company will issue new 14% redeemable debentures to raise desired debt capital. The issue price will be at Sh.90 subject to a floatation cost of Sh.10 per unit issued. The debentures will mature after 10 years. Par value of each unit is Sh.100.
3. Corporation tax rate applicable is 30%.
4. The most recent ordinary dividend paid is Sh.3.0 per share, while future dividends shall grow at the rate of 5% each year in perpetuity.

Required:

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

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

(iii) The cost of new 14% redeemable debt. (3 marks)

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

(Total: 20 marks)

QUESTION FIVE

(a) Explain the following principles of Islamic Banking and Finance:

(i) Paying or charging an interest (Riba). (2 marks)

(ii) Investing in businesses involved in prohibited activities (Haram). (2 marks)

(iii) Speculation (Maisir). (2 marks)

(iv) Uncertainty and risk (Gharar). (2 marks)

(b) Summarise four roles of the Capital Markets Authority (CMA) or similar authority in your country. (4 marks)

(c) Baraka Ltd. has provided the following forecasted financial information for the year ending 30 June 2019:

	Sh."000"
Sales – (all credit)	7,200
Average trade receivables	612
Finished goods	400
Work-in-progress (WIP)	700
Raw materials (balance held)	300
Trade payables	260

The gross profit margin is 25% on sales. Raw materials are 80% of the cost of sales. All purchases are also made on credit.

Assume that the calendar year has 365 days and that inventory levels are constant throughout the year.

Required:

Calculate the following:

(i) Raw material holding period. (2 marks)

(ii) Trade payable days. (1 mark)

(iii) Work-in-progress (WIP) period. (1 mark)

(iv) Finished goods holding period. (1 mark)

(v) Trade receivables collection period. (1 mark)

(vi) Cash operating cycle (2 marks)

(Total: 20 marks)

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Present Value of 1 Received at the End of n Periods:

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

Period	1%	2%	3%	4%	5%	6%	7%	8%	9%	10%	12%	14%	15%	16%	18%	20%	24%	28%	32%	36%
1	.9901	.9804	.9709	.9615	.9524	.9434	.9346	.9259	.9174	.9091	.8929	.8772	.8696	.8621	.8475	.8333	.8065	.7813	.7576	.7353
2	.9803	.9612	.9426	.9246	.9070	.8900	.8734	.8573	.8417	.8264	.7972	.7695	.7561	.7432	.7182	.6944	.6504	.6104	.5739	.5407
3	.9706	.9423	.9151	.8890	.8638	.8396	.8163	.7938	.7722	.7513	.7118	.6750	.6575	.6407	.6086	.5787	.5245	.4768	.4348	.3975
4	.9610	.9238	.8885	.8548	.8227	.7921	.7629	.7350	.7084	.6830	.6355	.5921	.5718	.5523	.5158	.4823	.4230	.3725	.3294	.2923
5	.9515	.9057	.8626	.8219	.7835	.7473	.7130	.6806	.6499	.6209	.5674	.5194	.4972	.4761	.4371	.4019	.3411	2910	.2495	.2149
6	.9420	.8880	.8375	.7903	.7462	.7050	.6663	.6302	.5963	.5645	.5066	.4556	.4323	.4104	.3704	.3349	.2751	.2274	.1890	.1580
7	.9327	.8706	.8131	.7599	.7107	.6651	.6227	.5835	.5470	.5132	.4523	.3996	.3759	.3538	.3139	.2791	.2218	.1776	.1432	.1162
8	.9235	.8535	.7894	.7307	.6768	.6274	.5820	.5403	.5019	.4665	.4039	.3506	.3269	.3050	.2660	.2326	.1789	.1388	.1085	.0854
9	.9143	.8368	.7664	.7026	.6446	.5919	.5439	.5002	.4604	.4241	.3606	3075	.2843	.2630	.2255	.1938	.1443	.1084	.0822	.0628
10	9053	.8203	.7441	.6756	.6139	.5584	.5083	.4632	.4224	.3855	.3220	.2697	.2472	.2267	.1911	.1615	.1164	.0847	.0623	.0462
11	.8963	.8043	.7224	.6496	.5847	.5268	.4751	4289	.3875	.3505	.2875	2366	.2149	.1954	.1619	.1346	.0938	.0662	.0472	.0340
12	.8874	.7885	.7014	.6246	.5568	.4970	.4440	.3971	.3555	.3186	.2567	.2076	.1869	1685	.1372	.1122	.0757	.0517	.0357	.0250
13	.8787	.7730	.6810	.6006	.5303	.4688	.4150	.3677	.3262	.2897	.2292	.1821	.1625	.1452	.1163	.0935	.0610	.0404	.0271	.0184
14	.8700	.7579	.6611	.5775	.5051	.4423	.3878	.3405	.2992	.2633	.2046	.1597	.1413	.1252	.0985	.0779	.0492	.0316	.0205	.0135
15	.8613	.7430	.6419	.5553	.4810	.4173	.3624	3152	.2745	.2394	.1827	1401	.1229	.1079	.0835	.0649	.0397	.0247	.0155	0099
16	.8528	.7284	.6232	.5339	.4581	.3936	.3387	.2919	.2519	.2176	.1631	.1229	.1069	.0930	.0708	.0541	.0320	.0193	.0118	.0073
17	8444	.7142	.6050	.5134	.4363	.3714	.3166	.2703	.2311	.1978	.1456	.1078	.0929	.0802	.0600	.0451	.0258	.0150	.0089	.0054
18	.8360	.7002	.5874	.4936	.4155	.3503	.2959	.2502	.2120	.1799	.1300	.0946	.0808	.0691	.0508	.0376	.0208	.0118	.0068	.0039
19	.8277	.6864	.5703	.4746	.3957	.3305	.2765	.2317	.1945	.1635	.1161	.0829	.0703	.0596	.0431	.0313	.0168	.0092	.0051	.0029
20	.8195	.6730	.5537	.4564	.3769	.3118	.2584	2145	.1784	.1486	1037	.0728	.0611	.0514	.0365	.0261	.0135	.0072	.0039	.0021
25	.7798	.6095	.4776	.3751	.2953	.2330	.1842	.1460	.1160	.0923	.0588	.0378	.0304	.0245	.0160	.0105	.0046	.0021	.0010	0005
30	.7419	.5521	.4120	.3083	.2314	.1741	.1314	.0994	.0754	.0573	.0334	0196	.0151	.0116	.0070	.0042	.0016	.0006	.0002	.0001
40	.6717	.4529	.3066	.2083	.1420	.0972	.0668	0460	.0318	.0221	.0107	.0053	.0037	.0026	.0013	.0007	.0002	.0001		
50	.6080	.3715	.2281	.1407	.0872	.0543	.0339	.0213	.0134	.0085	.0035	.0014	0009	.0006	.0003	.0001				
60	.5504	.3048	.1697	.0951	.0535	.0303	.0173	.0099	.0057	.0033	.0011	.0004	.0002	.0001						

* The factor is zero to four decimal places

Present Value of an Annuity of 1 Per Period for n Periods:

$$PVIF_{r,n} = \sum_{t=1}^{n} \frac{1}{(1+r)^t} = \frac{1 - \frac{1}{(1+r)^n}}{r}$$

Number of payments	1%	2%	3%	4%	5%	6%	7%	8%	9%	10%	12%	14%	15%	16%	18%	20%	24%	28%	32%
1	0.9901	0.9804	0.9709	0.9615	0.9524	0.9434	0.9346	0.9259	0.9174	0.9091	0.8929	0.8772	0.8696	0.8621	0.8475	0.8333	0.8065	0.7813	0.7576
2	1.9704	1.9416	1.9135	1.8861	1.8594	1.8334	1.8080	1.7833	1.7591	1.7355	1.6901	1.6467	1.6257	1.6052	1.5656	1.5278	1.4568	1.3916	1.3315
3	2.9410	2.8839	2.8286	2.7751	2.7232	2.6730	2.6243	2.5771	2.5313	2.4869	2.4018	2.3216	2.2832	2.2459	2.1743	2.1065	1.9813	1.8684	1.7663
4	3.9020	3.8077	3.7171	3.6299	3.5460	3.4651	3.3872	3.3121	3.2397	3.1699	3.0373	2.9137	2.8550	2.7982	2.6901	2.5887	2.4043	2.2410	2.0957
5	4.8534	4.7135	4.5797	4.4518	4.3295	4.2124	4.1002	3.9927	3.8897	3.7908	3.6048	3.4331	3.3522	3.2743	3.1272	2.9906	2.7454	2.5320	2.3452
6	5.7955	5.6014	5.4172	5.2421	5.0757	4.9173	4.7665	4.6229	4.4859	4.3553	4.1114	3.8887	3.7845	3.6847	3.4976	3.3255	3.0205	2.7594	2.5342
7	6.7282	6.4720	6.2303	6.0021	5.7864	5.5824	5.3893	5.2064	5.0330	4.8684	4.5638	4.2883	4.1604	4.0386	3.8115	3.6046	3.2423	2.9370	2.6775
8	7.6517	7.3255	7.0197	6.7327	6.4632	6.2098	5.9713	5.7466	5.5348	5.3349	4.9676	4.6389	4.4873	4.3436	4.0776	3.8372	3.4212	3.0758	2.7860
9	8.5660	8.1622	7.7861	7.4353	7.1078	6.8017	6.5152	6.2469	5.9952	5.7590	5.3282	4.9464	4.7716	4.6065	4.3030	4.0310	3.5655	3.1842	2.8681
10	9.4713	8.9826	8.5302	8.1109	7.7217	7.3601	7.0236	6.7101	6.4177	6.1446	5.6502	5.2161	5.0188	4.8332	4.4941	4.1925	3.6819	3.2689	2.9304
11	10.3676	9.7868	9.2526	8.7605	8.3064	7.8869	7.4987	7.1390	6.8052	6.4951	5.9377	5.4527	5.2337	5.0286	4.6560	4.3271	3.7757	3.3351	2.9776
12	11.2551	10.5753	9.9540	9.3851	8.8633	8.3838	7.9427	7.5361	7.1607	6.8137	6.1944	5.6603	5.4206	5.1971	4.7932	4.4392	3.8514	3.3868	3.0133
13	12.1337	11.3484	10.6350	9.9856	9.3936	8.8527	8.3577	7.9038	7.4869	7.1034	6.4235	5.8424	5.5831	5.3423	4.9095	4.5327	3.9124	3.4272	3.0404
14	13.0037	12.1062	11.2961	10.5631	9.8986	9.2950	8.7455	8.2442	7.7862	7.3667	6.6282	6.0021	5.7245	5.4675	5.0081	4.6106	3.9616	3.4587	3.0609
15	13.8651	12.8493	11.9379	11.1184	10.3797	9.7122	9.1079	8.5595	8.0607	7.6061	6.8109	6.1422	5.8474	5.5755	5.0916	4.6755	4.0013	3.4834	3.0764
16	14.7179	13.5777	12.5611	11.6523	10.8378	10.1059	9.4466	8.8514	8.3126	7.8237	6.9740	6.2651	5.9542	5.6685	5.1624	4.7296	4.0333	3.5026	3.0882
17	15.5623	14.2919	13.1661	12.1657	11.2741	10.4773	9.7632	9.1216	8.5436	8.0216	7.1196	6.3729	6.0472	5.7487	5.2223	4.7746	4.0591	3.5177	3.0971
18	16.3983	14.9920	13.7535	12.6593	11.6896	10.8276	10.0591	9.3719	8.7556	8.2014	7.2497	6.4674	6.1280	5.8178	5.2732	4.8122	4.0799	3.5294	3.1039
19	17.2260	15.6785	14.3238	13.1339	12.0853	11.1581	10.3356	9.6036	8.9501	8.3649	7.3658	6.5504	6.1982	5.8775	5.3162	4.8435	4.0967	3.5386	3.1090
20	18.0456	16.3514	14.8775	13.5903	12.4622	11.4699	10.5940	9.8181	9.1285	8.5136	7.4694	6.6231	6.2593	5.9288	5.3527	4.8696	4.1103	3.5458	3.1129
25	22.0232	19.5235	17.4131	15.6221	14.0939	12.7834	11.6536	10.6748	9.8226	9.0770	7.8431	6.8729	6.4641	6.0971	5.4669	4.9476	4.1474	3.5640	3.1220
30	25.8077	22.3965	19.6004	17.2920	15.3725	13.7648	12.4090	11.2578	10.2737	9.4269	8.0552	7.0027	6.5660	6.1772	5.5168	4.9789	4.1601	3.5693	3.1242
40	32.8347	27.3555	23.1148	19.7928	17.1591	15.0463	13.3317	11.9246	10.7574	9.7791	8.2438	7.1050	6.6418	6.2335	5.5482	4.9966	4.1659	3.5712	3.1250
50	39.1961	31.4236	25.7298	21.4822	18.2559	15.7619	13.8007	12.2335	10.9617	9.9148	8.3045	7.1327	6.6605	6.2463	5.5541	4.9995	4.1666	3.5714	3.1250
60	44.9550	34.7609	27.6756	22.6235	18.9293	16.1614	14.0392	12.3766	11.0480	9.9672	8.3240	7.1401	6.6651	6.2402	5.5553	4.9999	4.1667	3.5714	3.1250

kasneb

ATD LEVEL II

FUNDAMENTALS OF FINANCE

TUESDAY: 27 November 2018. **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) Differentiate between "primary market" and "secondary market". (4 marks)

(b) In relation to Islamic finance, explain four sources of finance. (8 marks)

(c) A businessman wants to save for the university education of his son. The businessman estimates that the education expenses will be Sh.1 million per year for four years when his son joins university in 16 years time. The expenses will be payable at the beginning of the years. He expects the annual interest rate of 8% over the next two decades. (Assume that the deposit is made at the end of the year).

Required:
Calculate the amount of money that he should deposit in the bank each year for the next 15 years to take care of his son's university education expenses. (4 marks)

(d) Baldwin Ronny borrowed Sh.5 million from a bank at the rate of 15% per annum. The loan is to be repaid in equal instalments at the end of each year for the next three years. Interest on the loan is to be paid on a reducing balance basis.

Required:
Prepare a loan amortisation schedule. (4 marks)
(Total: 20 marks)

QUESTION TWO

(a) Outline two reasons for the time preference for money. (2 marks)

(b) Explain four factors to be considered while formulating the dividend policy. (8 marks)

(c) The following is an extract from the statement of financial position of EPSY Ltd. as at 30 June 2018:

	Sh."000"
Ordinary shares of Sh.50 each	5,200
Reserves	4,850
9% preference shares of Sh.100 each	4,500
14% loan notes	5,000
Total long-term funds	19,550

Additional information:
1. The ordinary shares are quoted at Sh.80 per share. Ordinary shareholders expect cash dividend of Sh.4 per share and a dividend growth at the rate of 12% at the end of every year.
2. The preference shares which are unredeemable are quoted at Sh.72 per share.
3. The loan notes are quoted at par.
4. The corporate rate of tax is 33% per annum.

Required:
The weighted average cost of capital using market value. (10 marks)
(Total: 20 marks)

QUESTION THREE

(a) Explain three reasons for the regulation of financial markets in your country. (6 marks)

(b) The following is an extract from the financial statements of Takuy Ltd. for the year ended 31 December 2016 and 2017:

	Year 2017 Sh. "Million"
Sales	80
Cost of sales	56

	Year 2016 Sh. "Million"	Year 2017 Sh. "Million"
Inventory	9	12
Accounts receivable	12	16
Accounts payable	7	10

The financial year for Takuy Ltd. has 365 days.

Required:

Calculate the following:

(i) Operating cycle. (4 marks)

(ii) Cash operating cycle. (2 marks)

(c) Jimia Brothers have provided the following information regarding their business:

1. The estimated sales are Sh.50,000 in December 2018, Sh.55,000 in January 2019 and Sh.60,000 in February 2019. All sales will be in cash.
2. Their estimated purchases are Sh.20,000 in December 2018, Sh.22,000 in January 2019 and Sh.25,000 in February 2019. The payments for the purchases will be made after a lag of one month. Outstanding on the account of purchases in November 2018 is Sh.22,000.
3. The rent per month is Sh.5,000.
4. Salaries and other expenses, payable in cash are expected to be Sh.15,000 in December 2018, Sh.18,000 in January 2019 and Sh.20,000 in February 2019.
5. They expect to buy furniture worth Sh.25,000 on cash payment in January 2019.
6. The cash balance at present is Sh.5,000. Their target cash balance, however is Sh.8,000.

Required:

Prepare a statement showing the surplus or deficit in relation to the minimum cash balance required. (8 marks)

(Total: 20 marks)

QUESTION FOUR

(a) Distinguish between "internal sources of finance" and "external sources of finance", giving an example in each case. (4 marks)

(b) Outline four advantages of retained earnings as a source of finance. (4 marks)

(c) Mahdady Ltd. are evaluating two mutually exclusive projects, x and y.

The details of the projects are given as follows:

Project x:

The cost of project is Sh.2,000,000. It is expected to generate an annual net cash inflow of Sh.250,000 each year to perpetuity.

Project y:

This project will cost Sh.1,500,000. It is expected to have a useful life of 3 years with a scrap value of Sh.300,000 after 3 years.

This investment will require an initial investment of working capital of Sh.200,000 at the start (Year 0) which will however be recovered at the end of the asset's useful life.

The estimated pre-tax cash flow from this project excluding provision for depreciation in each year are given as follows:

Year:	**1**	**2**	**3**
	Sh."000"	**Sh."000"**	**Sh."000"**
Pre-tax cash flow	1,200	1,400	1,300

Additional information:

1. The firm provides for depreciation on a straight line basis.
2. Cost of capital is 10% and the corporation tax rate applicable is 30%.

Required:

(i) Net present value (NPV) for project x and y. (10 marks)

(ii) Advise the company on which project to undertake. (2 marks)

(Total: 20 marks)

QUESTION FIVE

(a) State four causes of agency conflict between shareholders and independent auditors. (4 marks)

(b) Citing three reasons, explain why firms should focus on value maximisation as their main objective instead of profit maximisation. (6 marks)

(c) Harold Mutiso bought shares of ABC Ltd. at a price of Sh.40 each. The forecasted market price for each share and dividend payable on each share in each year over the next three years from now are given as follows:

Year	**Market price per share (MPS)**	**Dividend per share (DPS)**
	Sh.	**Sh.**
1	42	2
2	44	2.5
3	45	3.5

Required:

(i) Expected rate of return from the shares. (4 marks)

(ii) Standard deviation of return. (4 marks)

(iii) Coefficient of variation. (2 marks)

(Total: 20 marks)

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Present Value of 1 Received at the End of n Periods:

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

Period	1%	2%	3%	4%	5%	6%	7%	8%	9%	10%	12%	14%	15%	16%	18%	20%	24%	28%	32%	36%
1	.9901	.9804	.9709	.9615	.9524	.9434	.9346	.9259	.9174	.9091	.8929	.8772	.8696	.8621	.8475	.8333	.8065	.7813	.7576	.7353
2	.9803	.9612	.9426	.9246	.9070	.8900	.8734	.8573	.8417	.8264	.7972	.7695	.7561	.7432	.7182	.6944	.6504	.6104	.5739	.5407
3	9706	.9423	.9151	.8890	.8638	.8396	.8163	.7938	.7722	.7513	.7118	.6750	.6575	.6407	.6086	.5787	.5245	.4768	.4348	.3975
4	.9610	.9238	.8885	.8548	.8227	.7921	.7629	.7350	.7084	.6830	.6355	.5921	.5718	.5523	.5158	.4823	.4230	.3725	.3294	.2923
5	.9515	9057	.8626	.8219	.7835	.7473	.7130	.6806	.6499	.6209	.5674	.5194	.4972	.4761	.4371	.4019	.3411	2910	2495	.2149
6	.9420	.8880	.8375	.7903	.7462	.7050	.6663	.6302	5963	.5645	.5066	.4556	.4323	.4104	.3704	.3349	.2751	.2274	1890	.1580
7	.9327	.8706	.8131	.7599	.7107	.6651	.6227	.5835	.5470	.5132	.4523	.3996	3759	.3538	.3139	.2791	.2218	1776	.1432	.1162
8	.9235	.8535	.7894	.7307	.6768	.6274	.5820	.5403	.5019	.4665	.4039	3506	.3269	.3050	.2660	.2326	.1789	.1388	.1085	.0854
9	.9143	.8368	.7664	.7026	.6446	.5919	.5439	5002	.4604	4241	.3606	3075	.2843	.2630	.2255	.1938	.1443	.1084	.0822	.0628
10	.9053	.8203	.7441	.6756	.6139	.5584	.5083	.4632	.4224	.3855	.3220	.2697	.2472	.2267	.1911	.1615	.1164	.0847	0623	.0462
11	.8963	8043	.7224	.6496	.5847	.5268	.4751	.4289	.3875	.3505	.2875	.2366	2149	.1954	.1619	.1346	.0938	.0662	0472	.0340
12	.8874	.7885	.7014	.6246	.5568	.4970	.4440	.3971	3555	.3186	.2567	.2076	.1869	1685	.1372	.1122	.0757	.0517	.0357	.0250
13	.8787	.7730	.6810	.6006	.5303	.4688	.4150	.3677	.3262	.2897	.2292	.1821	.1625	.1452	.1163	.0935	.0610	.0404	.0271	.0184
14	.8700	.7579	.6611	.5775	.5051	.4423	.3878	.3405	.2992	.2633	.2046	1597	.1413	.1252	.0985	.0779	0492	.0316	.0205	.0135
15	.8613	.7430	.6419	.5553	.4810	.4173	.3624	3152	.2745	.2394	.1827	1401	.1229	.1079	.0835	.0649	.0397	.0247	.0155	0099
16	.8528	.7284	.6232	.5339	.4581	.3936	.3387	.2919	.2519	.2176	.1631	.1229	1069	.0930	.0708	.0541	.0320	.0193	0118	0073
17	8444	.7142	.6050	.5134	.4363	.3714	.3166	.2703	2311	.1978	.1456	.1078	.0929	.0802	.0600	.0451	.0258	.0150	.0089	0054
18	.8360	.7002	.6874	.4936	.4155	.3503	.2959	.2502	.2120	.1799	.1300	0946	0808	.0691	.0508	.0376	.0208	.0118	.0068	.0039
19	.8277	.6864	5703	.4746	.3957	.3305	.2765	.2317	.1945	.1635	.1161	.0829	0703	.0596	.0431	.0313	.0168	.0092	.0051	.0029
20	8195	.6730	.5537	.4564	.3769	.3118	.2584	.2145	.1784	1486	1037	0728	.0611	.0514	.0365	.0261	.0135	0072	.0039	0021
25	.7798	.6095	.4776	.3751	.2953	.2330	.1842	.1460	.1160	.0923	.0588	0378	.0304	.0245	0160	.0105	0046	.0021	.0010	0005
30	7419	.5521	.4120	.3083	.2314	.1741	.1314	.0994	0754	.0573	0334	.0196	.0151	.0116	0070	.0042	.0016	0006	.0002	.0001
40	6717	.4529	.3066	.2083	.1420	.0972	.0668	0460	.0318	.0221	.0107	.0053	.0037	.0026	0013	.0007	.0002	.0001		
50	.6080	.3715	2281	.1407	.0872	.0543	.0339	0213	.0134	.0085	.0035	.0014	.0009	.0006	.0003	0001				
60	.5504	.3048	.1697	.0951	.0535	.0303	.0173	0099	.0057	.0033	.0011	0004	.0002	0001						

* The factor is zero to four decimal places

Present Value of an Annuity of 1 Per Period for n Periods:

$$PVIF_{r,n} = \sum_{t=1}^{n} \frac{1}{(1+r)^t} = \frac{1 - \frac{1}{(1+r)^n}}{r}$$

Number of payments	1%	2%	3%	4%	5%	6%	7%	8%	9%	10%	12%	14%	15%	16%	18%	20%	24%	28%	32%
1	0.9901	0.9804	0.9709	0.9615	0.9524	0.9434	0.9346	0.9259	0.9174	0.9091	0.8929	0.8772	0.8696	0.8621	0.8475	0.8333	0.8065	0.7813	0.7576
2	1.9704	1.9416	1.9135	1.8861	1.8594	1.8334	1.8080	1.7833	1.7591	1.7355	1.6901	1.6467	1.6257	1.6052	1.5656	1.5278	1.4568	1.3916	1.3315
3	2.9410	2.8839	2.8286	2.7751	2.7232	2.6730	2.6243	2.5771	2.5313	2.4869	2.4018	2.3216	2.2832	2.2459	2.1743	2.1065	1.9813	1.8684	1.7663
4	3.9020	3.8077	3.7171	3.6299	3.5460	3.4651	3.3872	3.3121	3.2397	3.1699	3.0373	2.9137	2.8550	2.7982	2.6901	2.5887	2.4043	2.2410	2.0957
5	4.8534	4.7135	4.5797	4.4518	4.3295	4.2124	4.1002	3.9927	3.8897	3.7908	3.6048	3.4331	3.3522	3.2743	3.1272	2.9906	2.7454	2.5320	2.3452
6	5.7955	5.6014	5.4172	5.2421	5.0757	4.9173	4.7665	4.6229	4.4859	4.3553	4.1114	3.8887	3.7845	3.6847	3.4976	3.3255	3.0205	2.7594	2.5342
7	6.7282	6.4720	6.2303	6.0021	5.7864	5.5824	5.3893	5.2064	5.0330	4.8684	4.5638	4.2883	4.1604	4.0386	3.8115	3.6046	3.2423	2.9370	2.6775
8	7.6517	7.3255	7.0197	6.7327	6.4632	6.2098	5.9713	5.7466	5.5348	5.3349	4.9676	4.6389	4.4873	4.3436	4.0776	3.8372	3.4212	3.0758	2.7860
9	8.5660	8.1622	7.7861	7.4353	7.1078	6.8017	6.5152	6.2469	5.9952	5.7590	5.3282	4.9464	4.7716	4.6065	4.3030	4.0310	3.5655	3.1842	2.8681
10	9.4713	8.9826	8.5302	8.1109	7.7217	7.3601	7.0236	6.7101	6.4177	6.1446	5.6502	5.2161	5.0188	4.8332	4.4941	4.1925	3.6819	3.2689	2.9304
11	10.3676	9.7868	9.2526	8.7605	8.3064	7.8869	7.4987	7.1390	6.8052	6.4951	5.9377	5.4527	5.2337	5.0286	4.6560	4.3271	3.7757	3.3351	2.9776
12	11.2551	10.5753	9.9540	9.3851	8.8633	8.3838	7.9427	7.5361	7.1607	6.8137	6.1944	5.6603	5.4206	5.1971	4.7932	4.4392	3.8514	3.3868	3.0133
13	12.1337	11.3484	10.6350	9.9856	9.3936	8.8527	8.3577	7.9038	7.4869	7.1034	6.4235	5.8424	5.5831	5.3423	4.9095	4.5327	3.9124	3.4272	3.0404
14	13.0037	12.1062	11.2961	10.5631	9.8986	9.2950	8.7455	8.2442	7.7862	7.3667	6.6282	6.0021	5.7245	5.4675	5.0081	4.6106	3.9616	3.4587	3.0609
15	13.8651	12.8493	11.9379	11.1184	10.3797	9.7122	9.1079	8.5595	8.0607	7.6061	6.8109	6.1422	5.8474	5.5755	5.0916	4.6755	4.0013	3.4834	3.0764
16	14.7179	13.5777	12.5611	11.6523	10.8378	10.1059	9.4466	8.8514	8.3126	7.8237	6.9740	6.2651	5.9542	5.6685	5.1624	4.7296	4.0333	3.5026	3.0882
17	15.5623	14.2919	13.1661	12.1657	11.2741	10.4773	9.7632	9.1216	8.5436	8.0216	7.1196	6.3729	6.0472	5.7487	5.2223	4.7746	4.0591	3.5177	3.0971
18	16.3983	14.9920	13.7535	12.6593	11.6896	10.8276	10.0591	9.3719	8.7556	8.2014	7.2497	6.4674	6.1280	5.8178	5.2732	4.8122	4.0799	3.5294	3.1039
19	17.2260	15.6785	14.3238	13.1339	12.0853	11.1581	10.3356	9.6036	8.9501	8.3649	7.3658	6.5504	6.1982	5.8775	5.3162	4.8435	4.0967	3.5386	3.1090
20	18.0456	16.3514	14.8775	13.5903	12.4622	11.4699	10.5940	9.8181	9.1285	8.5136	7.4694	6.6231	6.2593	5.9288	5.3527	4.8696	4.1103	3.5458	3.1129
25	22.0232	19.5235	17.4131	15.6221	14.0939	12.7834	11.6536	10.6748	9.8226	9.0770	7.8431	6.8729	6.4641	6.0971	5.4669	4.9476	4.1474	3.5640	3.1220
30	25.8077	22.3965	19.6004	17.2920	15.3725	13.7648	12.4090	11.2578	10.2737	9.4269	8.0552	7.0027	6.5660	6.1772	5.5168	4.9789	4.1601	3.5693	3.1242
40	32.8347	27.3555	23.1148	19.7928	17.1591	15.0463	13.3317	11.9246	10.7574	9.7791	8.2438	7.1050	6.6418	6.2335	5.5482	4.9966	4.1659	3.5712	3.1250
50	39.1961	31.4236	25.7298	21.4822	18.2559	15.7619	13.8007	12.2335	10.9617	9.9148	8.3045	7.1327	6.6605	6.2463	5.5541	4.9995	4.1666	3.5714	3.1250
60	44.9550	34.7609	27.6756	22.6235	18.9293	16.1614	14.0392	12.3766	11.0480	9.9672	8.3240	7.1401	6.6651	6.2402	5.5553	4.9999	4.1667	3.5714	3.1250

Future Value Factor for an Ordinary Annuity

(Interest rate = r, Number of periods = n)

n \ r	1%	2%	3%	4%	5%	6%	7%	8%	9%	10%	11%	12%	13%	14%	15%	16%	17%
1	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
2	2.0100	2.0200	2.0300	2.0400	2.0500	2.0600	2.0700	2.0800	2.0900	2.1000	2.1100	2.1200	2.1300	2.1400	2.1500	2.1600	2.1700
3	3.0301	3.0604	3.0909	3.1216	3.1525	3.1836	3.2149	3.2464	3.2781	3.3100	3.3421	3.3744	3.4069	3.4396	3.4725	3.5056	3.5389
4	4.0604	4.1216	4.1836	4.2465	4.3101	4.3746	4.4399	4.5061	4.5731	4.6410	4.7097	4.7793	4.8498	4.9211	4.9934	5.0665	5.1405
5	5.1010	5.2040	5.3091	5.4163	5.5256	5.6371	5.7507	5.8666	5.9847	6.1051	6.2278	6.3528	6.4803	6.6101	6.7424	6.8771	7.0144
6	6.1520	6.3081	6.4684	6.6330	6.8019	6.9753	7.1533	7.3359	7.5233	7.7156	7.9129	8.1152	8.3227	8.5355	8.7537	8.9775	9.2068
7	7.2135	7.4343	7.6625	7.8983	8.1420	8.3938	8.6540	8.9228	9.2004	9.4872	9.7833	10.0890	10.4047	10.7305	11.0668	11.4139	11.7720
8	8.2857	8.5830	8.8923	9.2142	9.5491	9.8975	10.2598	10.6366	11.0285	11.4359	11.8594	12.2997	12.7573	13.2328	13.7268	14.2401	14.7733
9	9.3685	9.7546	10.1591	10.5828	11.0266	11.4913	11.9780	12.4876	13.0210	13.5795	14.1640	14.7757	15.4157	16.0853	16.7858	17.5185	18.2847
10	10.4622	10.9497	11.4639	12.0061	12.5779	13.1808	13.8164	14.4866	15.1929	15.9374	16.7220	17.5487	18.4197	19.3373	20.3037	21.3215	22.3931
11	11.5668	12.1687	12.8078	13.4864	14.2068	14.9716	15.7836	16.6455	17.5603	18.5312	19.5614	20.6546	21.8143	23.0445	24.3493	25.7329	27.1999
12	12.6825	13.4121	14.1920	15.0258	15.9171	16.8699	17.8885	18.9771	20.1407	21.3843	22.7132	24.1331	25.6502	27.2707	29.0017	30.8502	32.8239
13	13.8093	14.6803	15.6178	16.6268	17.7130	18.8821	20.1406	21.4953	22.9534	24.5227	26.2116	28.0291	29.9847	32.0887	34.3519	36.7862	39.4040
14	14.9474	15.9739	17.0863	18.2919	19.5986	21.0151	22.5505	24.2149	26.0192	27.9750	30.0949	32.3926	34.8827	37.5811	40.5047	43.6720	47.1027
15	16.0969	17.2934	18.5989	20.0236	21.5786	23.2760	25.1290	27.1521	29.3609	31.7725	34.4054	37.2797	40.4175	43.8424	47.5804	51.6595	56.1101
16	17.2579	18.6393	20.1569	21.8245	23.6575	25.6725	27.8881	30.3243	33.0034	35.9497	39.1899	42.7533	46.6717	50.9804	55.7175	60.9250	66.6488
17	18.4304	20.0121	21.7616	23.6975	25.8404	28.2129	30.8402	33.7502	36.9737	40.5447	44.5008	48.8837	53.7391	59.1176	65.0751	71.6730	78.9792
18	19.6147	21.4123	23.4144	25.6454	28.1324	30.9057	33.9990	37.4502	41.3013	45.5992	50.3959	55.7497	61.7251	68.3941	75.8364	84.1407	93.4056
19	20.8109	22.8406	25.1169	27.6712	30.5390	33.7600	37.3790	41.4463	46.0185	51.1591	56.9395	63.4397	70.7494	78.9692	88.2118	98.6032	110.2846
20	22.0190	24.2974	26.8704	29.7781	33.0660	36.7856	40.9955	45.7620	51.1601	57.2750	64.2028	72.0524	80.9468	91.0249	102.4436	115.3797	130.0329
21	23.2392	25.7833	28.6765	31.9692	35.7193	39.9927	44.8652	50.4229	56.7645	64.0025	72.2651	81.6987	92.4699	104.7684	118.8101	134.8405	153.1385
22	24.4716	27.2990	30.5368	34.2480	38.5052	43.3923	49.0057	55.4568	62.8733	71.4027	81.2143	92.5026	105.4910	120.4360	137.6316	157.4150	180.1721
23	25.7163	28.8450	32.4529	36.6179	41.4305	46.9958	53.4361	60.8933	69.5319	79.5430	91.1479	104.6029	120.2048	138.2970	159.2764	183.6014	211.8013
24	26.9735	30.4219	34.4265	39.0826	44.5020	50.8156	58.1767	66.7648	76.7898	88.4973	102.1742	118.1552	136.8315	158.6586	184.1678	213.9776	248.8076
25	28.2432	32.0303	36.4593	41.6459	47.7271	54.8645	63.2490	73.1059	84.7009	98.3471	114.4133	133.3339	155.6196	181.8708	212.7930	249.2140	292.1049
26	29.5256	33.6709	38.5530	44.3117	51.1135	59.1564	68.6765	79.9544	93.3240	109.1818	127.9988	150.3339	176.8501	208.3327	245.7120	290.0883	342.7627
27	30.8209	35.3443	40.7096	47.0842	54.6691	63.7058	74.4838	87.3508	102.7231	121.0999	143.0786	169.3740	200.8406	238.4993	283.5688	337.5024	402.0323
28	32.1291	37.0512	42.9309	49.9676	58.4026	68.5281	80.6977	95.3388	112.9682	134.2099	159.8173	190.6989	227.9499	272.8892	327.1041	392.5028	471.3778
29	33.4504	38.7922	45.2189	52.9663	62.3227	73.6398	87.3465	103.9659	124.1354	148.6309	178.3972	214.5828	258.5834	312.0937	377.1697	456.3032	552.5121
30	34.7849	40.5681	47.5754	56.0849	66.4388	79.0582	94.4608	113.2832	136.3075	164.4940	199.0209	241.3327	293.1992	356.7868	434.7451	530.3117	647.4391
31	36.1327	42.3794	50.0027	59.3283	70.7608	84.8017	102.0730	123.3459	149.5752	181.9434	221.9132	271.2926	332.3151	407.7370	500.9569	616.1616	758.5038
32	37.4941	44.2270	52.5028	62.7015	75.2988	90.8898	110.2182	134.2135	164.0370	201.1378	247.3236	304.8477	376.5161	465.8202	577.1005	715.7475	888.4494
33	38.8690	46.1116	55.0778	66.2095	80.0638	97.3432	118.9334	145.9506	179.8003	222.2515	275.5292	342.4294	426.4632	532.0350	664.6655	831.2671	1040.486
34	40.2577	48.0338	57.7302	69.8579	85.0670	104.1838	128.2588	158.6267	196.9823	245.4767	306.8374	384.5210	482.9034	607.5199	765.3654	965.2698	1218.368
35	41.6603	49.9945	60.4621	73.6522	90.3203	111.4348	138.2369	172.3168	215.7108	271.0244	341.5896	431.6635	546.6808	693.5727	881.1702	1120.713	1426.491
36	43.0769	51.9944	63.2759	77.5983	95.8363	119.1209	148.9135	187.1021	236.1247	299.1268	380.1644	484.4631	618.7493	791.6729	1014.346	1301.027	1669.994
37	44.5076	54.0343	66.1742	81.7022	101.6281	127.2681	160.3374	203.0703	258.3759	330.0395	422.9825	543.5987	700.1867	903.5071	1167.498	1510.191	1954.894
38	45.9527	56.1149	69.1594	85.9703	107.7095	135.9042	172.5610	220.3159	282.6298	364.0434	470.5106	609.8305	792.2110	1030.998	1343.622	1752.822	2288.225
39	47.4123	58.2372	72.2342	90.4091	114.0950	145.0585	185.6403	238.9412	309.0665	401.4478	523.2667	684.0102	896.1984	1176.338	1546.165	2034.273	2678.224
40	48.8864	60.4020	75.4013	95.0255	120.7998	154.7620	199.6351	259.0565	337.8824	442.5926	581.8261	767.0914	1013.704	1342.025	1779.090	2360.757	3134.522
41	50.3752	62.6100	78.6633	99.8265	127.8398	165.0477	214.6096	280.7810	369.2919	487.8518	646.8269	860.1424	1146.486	1530.909	2046.954	2739.478	3668.391
42	51.8790	64.8622	82.0232	104.8196	135.2318	175.9505	230.6322	304.2435	403.5281	537.6370	718.9779	964.3595	1296.529	1746.236	2354.997	3178.795	4293.017
43	53.3978	67.1595	85.4839	110.0124	142.9933	187.5076	247.7765	329.5830	440.8457	592.4007	799.0655	1081.083	1466.078	1991.709	2709.246	3688.402	5023.830
44	54.9318	69.5027	89.0484	115.4129	151.1430	199.7580	266.1209	356.9496	481.5218	652.6408	887.9627	1211.813	1657.668	2271.548	3116.633	4279.546	5878.881
45	56.4811	71.8927	92.7199	121.0294	159.7002	212.7435	285.7493	386.5056	525.8587	718.9048	986.6386	1358.230	1874.165	2590.565	3585.128	4965.274	6879.291

kasneb

ATD LEVEL II

FUNDAMENTALS OF FINANCE

TUESDAY: 22 May 2018. **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) Distinguish between a "risky asset" and a "risk-free asset". (2 marks)

(b) In relation to financial markets, describe four characteristics of a good market. (8 marks)

(c) Stanely Kamaki is considering buying ordinary shares of ABC Ltd. which are currently trading at a market price per share (MPS) of Sh.25. 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 MPS at the end of the year
Boom	0.4	30
Average	0.3	28
Recession	0.3	20

Required:

(i) The expected rate of return from investment in the shares. (4 marks)

(ii) The standard deviation of the expected return. Comment on the result. (4 marks)

(iii) Coefficient of variation. (2 marks)

(Total: 20 marks)

QUESTION TWO

(a) Discuss four differences between Islamic banking and conventional banking. (8 marks)

(b) Johnstone Muli plans to retire in 15 years time and intends to receive an annuity of Sh.50,000 per annum for the next 20 years after retirement. The annual interest rate is 6%. He expects to receive the first annuity payment at the end of the 15th year from today which is the same day as his retirement date.

Required:

The amount that he should invest today in order to receive his expected retirement annuity. (6 marks)

(c) Fanisi Limited borrowed Sh.10,000,000 from Nisil Bank Ltd. The loan has an interest rate of 14% and it is to be repaid in four equal instalments payable at the end of each year for the next four years.

Required:

Prepare a loan amortisation schedule. (6 marks)

(Total: 20 marks)

QUESTION THREE

(a) Explain three types of dividend policy that could be adopted by firms in your country. (6 marks)

(b) The earnings per share (EPS) and dividend per share (DPS) for Mogotio Ltd. for each of the years ended 31 December 2014, 2015, 2016 and 2017 were as follows:

Year ended 31 December	EPS (Sh.)	DPS (Sh.)
2014	12.50	5.50
2015	14.60	6.05
2016	13.50	6.66
2017	16.00	7.32

Required:
The dividend cover and the dividend payout ratio for each of the years ended 31 December 2014, 2015, 2016 and 2017. (4 marks)

(c) Online Ltd. sells goods currently in terms of "net 45". The firm is considering relaxing its terms of sale to "net 60". The firm's annual sales is currently estimated at Sh.5,000,000. However, it is expected to increase by 20% if the terms of sale are relaxed. The variable cost to sales ratio is 40%.

Additional information:
1. Bad debts are expected to remain at 5% of the firm's credit sales.
2. Debt management and collection expenses are expected to increase by 5% per annum from the current level of Sh.400,000.
3. Credit sales are estimated to be 80% of total sales. The remainder of the sales are cash sales.
4. The minimum required rate of return by investors is 12% per annum.
5. Corporate tax rate applicable is 30%.
6. The average collection period is currently 50 days. This is expected to increase to 75 days after relaxing the terms of sale.

(Assume a 360-day year)

Required:
Determine whether the firm should relax its terms of sale. (10 marks)
(Total: 20 marks)

QUESTION FOUR

(a) In relation to the goals of a firm, discuss the following:

(i) Two financial objectives of a firm. (4 marks)

(ii) Two non-financial objectives of a firm. (4 marks)

(b) Upendo Ltd. is contemplating raising an additional Sh.5,000,000 to finance an expansion programme. The firm's capital structure which is considered to be optimal is given as follows:

	Sh."000"
Ordinary share capital (Sh.10 par value)	10,000
Reserves	5,000
14% debenture capital (Sh.100 par value)	6,000
15% preference share capital (Sh.20 par value)	9,000
	30,000

Additional information:
1. New ordinary shares will be issued at Sh.50 each, subject to a floatation cost of 10% of issue price. The firm's dividend policy is that future dividends are expected to grow at 5% each year in perpetuity. The firm paid dividend of Sh.2 per share in the current year.
2. New 14% irredeemable debentures will be issued at Sh.120 each. Floatation cost of Sh.5 per unit issued will be incurred.
3. New 15% preference shares will be issued at par. A floatation cost of Sh.2 per share issued will be incurred.
4. Corporate tax rate applicable is 30%.
5. The firm expects to generate Sh.1,000,000 from internal sources to finance this expansion programme.

Required:
Weighted marginal cost of capital (WMCC) of the firm. (12 marks)
(Total: 20 marks)

QUESTION FIVE

(a) A vast range of funding alternatives are available to companies for financing development projects.

In the light of the above statement, summarise four factors to consider when choosing methods of financing a project. (8 marks)

(b) Majani Limited intends to raise a long-term debt amounting to Sh.18,000,000 at an interest rate of 14% per annum. The money could be invested in either project A or project B. The projects are expected to generate the following net cash inflows:

Period (year)	Project A Sh.	Project B Sh.
1	3,000,000	8,000,000
2	1,000,000	7,500,000
3	4,000,000	5,000,000
4	6,000,000	2,000,000
5	8,000,000	4,500,000

Required:

(i) The net present value (NPV) for each project. (8 marks)

(ii) Giving appropriate reason(s), advise the management of Majani Ltd. on the project to invest in. (2 marks)

(iii) Highlight two disadvantages of using the NPV to evaluate investment projects. (2 marks)

(Total: 20 marks)

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Present Value of 1 Received at the End of n Periods:

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

Period	1%	2%	3%	4%	5%	6%	7%	8%	9%	10%	12%	14%	15%	16%	18%	20%	24%	28%	32%	36%
1	.9901	.9804	.9709	.9615	.9524	.9434	.9346	9259	.9174	.9091	.8929	8772	8696	.8621	.8475	.8333	.8065	.7813	.7576	.7353
2	.9803	.9612	.9426	.9246	.9070	.8900	8734	.8573	8417	.8264	.7972	7695	.7561	.7432	.7182	.6944	.6504	.6104	5739	.5407
3	.9706	.9423	.9151	.8890	.8638	.8396	.8163	.7938	.7722	.7513	.7118	.6750	6575	.6407	.6086	.5787	.5245	.4768	4348	3975
4	.9610	.9238	.8885	.8548	.8227	.7921	.7629	.7350	7084	6830	.6355	5921	.5718	.5523	.5158	4823	.4230	.3725	3294	2923
5	.9515	.9057	.8626	.8219	.7835	.7473	.7130	.6806	.6499	.6209	.5674	5194	.4972	.4761	.4371	.4019	.3411	2910	2495	.2149
6	.9420	.8880	.8375	.7903	.7462	.7050	.6663	.6302	.5963	.5645	.5066	.4556	.4323	.4104	.3704	.3349	.2751	.2274	.1890	.1580
7	.9327	.8706	.8131	.7599	.7107	.6651	.6227	.5835	.5470	.5132	.4523	3996	.3759	.3538	.3139	.2791	.2218	'1776	.1432	.1162
8	.9235	.8535	.7894	.7307	.6768	.6274	.5820	.5403	.5019	.4665	4039	.3506	3269	.3050	.2660	.2326	.1789	.1388	.1085	.0854
9	.9143	.8368	.7664	.7026	.6446	.5919	.5439	.5002	.4604	.4241	.3606	3075	.2843	.2630	.2255	.1938	.1443	.1084	.0822	.0628
10	9053	.8203	.7441	.6756	.6139	.5584	.5083	4632	.4224	.3855	.3220	.2697	.2472	.2267	.1911	.1615	.1164	.0847	0623	.0462
11	8963	.8043	.7224	.6496	.5847	.5268	.4751	.4289	.3875	.3505	2875	.2366	.2149	.1954	1619	.1346	.0938	.0662	.0472	0340
12	.8874	.7885	.7014	.6246	.5568	.4970	.4440	.3971	3555	.3186	.2567	.2076	.1869	1685	.1372	.1122	.0757	.0517	.0357	.0250
13	.8787	7730	.6810	.6006	.5303	.4688	.4150	.3677	.3262	.2897	.2292	.1821	.1625	.1452	.1163	0935	.0610	.0404	.0271	.0184
14	.8700	.7579	.6611	.5775	.5051	.4423	.3878	.3405	.2992	.2633	.2046	1597	.1413	.1252	.0985	.0779	0492	.0316	0205	.0135
15	.8613	.7430	.6419	.5553	.4810	.4173	.3624	3152	.2745	.2394	.1827	1401	.1229	.1079	.0835	0649	.0397	.0247	.0155	0099
16	.8528	.7284	.6232	.5339	.4581	.3936	.3387	.2919	.2519	.2176	.1631	.1229	1069	.0930	.0708	.0541	.0320	.0193	.0118	.0073
17	.8444	7142	.6050	.5134	.4363	.3714	.3166	.2703	.2311	.1978	.1456	.1078	.0929	.0802	.0600	.0451	.0258	.0150	.0089	0054
18	.8360	.7002	.5874	.4936	.4155	.3503	.2959	.2502	.2120	.1799	.1300	0946	.0808	0691	.0508	.0376	.0208	.0118	.0068	.0039
19	.8277	.6864	.5703	.4746	.3957	.3305	.2765	2317	.1945	1635	.1161	.0829	.0703	.0596	.0431	.0313	.0168	.0092	.0051	0029
20	8195	.6730	.5537	.4564	.3769	.3118	.2584	.2145	1784	1486	1037	0728	.0611	.0514	.0365	.0261	0135	.0072	.0039	.0021
25	7798	6095	4776	.3751	.2953	.2330	.1842	.1460	.1160	.0923	.0588	0378	.0304	.0245	0160	0105	.0046	.0021	0010	0005
30	.7419	.5521	.4120	.3083	.2314	.1741	.1314	.0994	0754	.0573	0334	0196	.0151	.0116	0070	.0042	.0016	.0006	0002	.0001
40	.6717	.4529	3066	.2083	.1420	.0972	.0668	0460	.0318	.0221	.0107	.0053	0037	.0026	.0013	.0007	.0002	.0001		
50	.6080	.3715	.2281	.1407	.0872	.0543	.0339	0213	.0134	.0085	.0035	0014	.0009	.0006	.0003	.0001				
60	.5504	.3048	1697	.0951	.0535	.0303	.0173	.0099	.0057	.0033	.0011	.0004	.0002	.0001						

* The factor is zero to four decimal places

Present Value of an Annuity of 1 Per Period for n Periods:

$$PVIF_{r,t} = \sum_{i=1}^{n} \frac{1}{(1+r)^i} = \frac{1 - \frac{1}{(1+r)^n}}{r}$$

Number of Payments	1%	2%	3%	4%	5%	6%	7%	8%	9%	10%	12%	14%	15%	16%	18%	20%	24%	28%	32%
1	0.9901	0.9804	0.9709	0.9615	0.9524	0.9434	0.9346	0.9259	0.9174	0.9091	0.8929	0.8772	0.8696	0.8621	0.8475	0.8333	0.8065	0.7813	0.7576
2	1.9704	1.9416	1.9135	1.8861	1.8594	1.8334	1.8080	1.7833	1.7591	1.7355	1.6901	1.6467	1.6257	1.6052	1.5656	1.5278	1.4568	1.3916	1.3315
3	2.9410	2.8839	2.8286	2.7751	2.7232	2.6730	2.6243	2.5771	2.5313	2.4869	2.4018	2.3216	2.2832	2.2459	2.1743	2.1065	1.9813	1.8684	1 7663
4	3.9020	3.8077	3.7171	3.6299	3.5460	3.4651	3.3872	3.3121	3.2397	3.1699	3.0373	2.9137	2.8550	2.7982	2.6901	2.5887	2.4043	2.2410	2.0957
5	4.8534	4.7135	4.5797	4.4518	4.3295	4.2124	4.1002	3.9927	3.8897	3.7908	3.6048	3.4331	3.3522	3.2743	3.1272	2.9906	2.7454	2.5320	2.3452
6	5.7955	5.6014	5.4172	5.2421	5.0757	4.9173	4.7665	4.6229	4.4859	4.3553	4.1114	3.8887	3.7845	3.6847	3.4976	3 3255	3.0205	2.7594	2 5342
7	6.7282	6.4720	6.2303	6.0021	5.7864	5.5824	5.3893	5.2064	5.0330	4.8684	4.5638	4.2883	4.1604	4.0386	3.8115	3.6046	3.2423	2.9370	2.6775
8	7.6517	7.3255	7.0197	6.7327	6.4632	6 2098	5.9713	5.7466	5.5348	5.3349	4.9676	4.6389	4.4873	4.3436	4.0776	3.8372	3.4212	3.0758	2.7860
9	8.5660	8.1622	7.7861	7.4353	7.1078	6.8017	6.5152	6.2469	5.9952	5.7590	5.3282	4.9464	4.7716	4.6065	4.3030	4 0310	3.5655	3.1842	2.8681
10	9.4713	8.9826	8.5302	8.1109	7.7217	7.3601	7.0236	6.7101	6.4177	6 1446	5.6502	5.2161	5.0188	4.8332	4.4941	4.1925	3.6819	3.2689	2 9304
11	10.3676	9.7868	9.2526	8.7605	8.3064	7.8869	7.4987	7.1390	6.8052	6.4951	5.9377	5.4527	5.2337	5.0286	4.6560	4.3271	3.7757	3.3351	2.9776
12	11.2551	10.5753	9.9540	9.3851	8.8633	8.3838	7.9427	7.5361	7.1607	6.8137	6.1944	5.6603	5.4206	5.1971	4.7932	4.4392	3.8514	3.3868	3.0133
13	12.1337	11.3484	10.6350	9.9856	9 3936	8.8527	8.3577	7.9038	7.4869	7.1034	6 4235	5.8424	5.5831	5.3423	4.9095	4 5327	3.9124	3.4272	3 0404
14	13.0037	12.1062	11.2961	10.5631	9.8986	9.2950	8.7455	8.2442	7.7862	7.3667	6.6282	6.0021	5.7245	5.4675	5.0081	4.6106	3.9616	3.4587	3 0609
15	13.8651	12.8493	11.9379	11.1184	10.3797	9.7122	9.1079	8.5595	8 0607	7.6061	6.8109	6.1422	5.8474	5.5755	5.0916	4.6755	4.0013	3.4834	3.0764
16	14.7179	13.5777	12.5611	11.6523	10.8378	10.1059	9.4466	8.8514	8.3126	7.8237	6.9740	6.2651	5.9542	5.6685	5.1624	4.7296	4.0333	3.5026	3.0882
17	15.5623	14.2919	13.1661	12.1657	11.2741	10.4773	9.7632	9.1216	8.5436	8.0216	7.1196	6.3729	6.0472	5.7487	5.2223	4.7746	4.0591	3.5177	3 0971
18	16.3983	14.9920	13.7535	12.6593	11.6896	10.8276	10.0591	9.3719	8.7556	8.2014	7.2497	6.4674	6.1280	5.8178	5.2732	4.8122	4.0799	3.5294	3 1039
19	17.2260	15.6785	14.3238	13.1339	12.0853	11.1581	10.3356	9.6036	8 9501	8 3649	7.3658	6.5504	6 1982	5.8775	5.3162	4.8435	4.0967	3.5386	3.1090
20	18.0456	16.3514	14.8775	13.5903	12.4622	11.4699	10.5940	9.8181	9.1285	8.5136	7 4694	6.6231	6.2593	5 9288	5.3527	4.8696	4.1103	3.5458	3 1129
25	22 0232	19.5235	17.4131	15.6221	14.0939	12.7834	11.6536	10.6748	9.8226	9.0770	7.8431	6 8729	6.4641	6.0971	5.4669	4.9476	4.1474	3.5640	3 1220
30	25.8077	22.3965	19.6004	17.2920	15.3725	13.7648	12.4090	11.2578	10.2737	9.4269	8.0552	7.0027	6 5660	6.1772	5.5168	4.9789	4.1601	3.5693	3 1242
40	32.8347	27.3555	23.1148	19.7928	17.1591	15.0463	13.3317	11.9246	10.7574	9 7791	8.2438	7.1050	6.6418	6.2335	5.5482	4.9966	4.1659	3.5712	3 1250
50	39.1961	31.4236	25.7298	21.4822	18.2559	15.7619	13.8007	12.2335	10 9617	9 9148	8.3045	7.1327	6.6605	6.2463	5.5541	4.9995	4.1666	3.5714	3 1250
60	44.9550	34.7609	27.6756	22.6235	18.9293	16 1614	14.0392	12.3766	11 0480	9.9672	8 3240	7.1401	6.6651	6.2402	5 5553	4.9999	4.1667	3.5714	3 1250

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ATD LEVEL II

FUNDAMENTALS OF FINANCE

TUESDAY: 28 November 2017. **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) Highlight four factors that could influence the amount of cash that a firm should hold. (4 marks)

(b) Describe three challenges faced by Islamic financial institutions (IFIs) in your country. (6 marks)

(c) The following data relates to Takymatt Ltd.:

Selling price per unit	Sh.80
Variable cost per unit	Sh.50
Fixed cost per unit	Sh.10
Annual credit sales	300,000 units
Collection period	2 months
Rate of return	16%

The company is considering a change in policy that would relax its credit policy.

Additional information:

1. Sales were expected to increase by 20%.
2. Collection period would change to 3 months.
3. Bad debt losses were expected to be 3% of the increased sales.
4. Collection costs were expected to increase by Sh.20,000.

Required:

Determine whether Takymatt Ltd. should relax its credit policy. (10 marks)

(Total: 20 marks)

QUESTION TWO

(a) Highlight three advantages and three disadvantages of private placement as a source of finance to the issuing company. (6 marks)

(b) Explain two assumptions that justify the use of weighted average cost of capital (WACC) as a discount rate when undertaking capital budgeting decisions. (4 marks)

(c) The following extract of the statement of financial position of Mapato Ltd. shows the capital structure of the company as at 31 December 2016:

	Sh."000"
Ordinary share capital (Sh.125 par value)	62,500
Reserves	121,500
Shareholder's funds	184,000
14% debentures (Sh.500 par value)	118,500
	302,500

The management of the company consider the above capital structure optimal.

Additional information:

1. The company's earnings before interest and tax (EBIT) average is Sh.75 million per annum. These earnings are expected to be maintained in the foreseeable future.
2. The ordinary shares are currently trading at Sh.400 per share.
3. The market price of the debentures is Sh.525 per debenture.
4. The corporate tax rate is 30%.
5. The firm adopts 100% dividend payout ratio as its dividend policy.

Required:

(i) The cost of equity. (3 marks)

(ii) The after-tax cost of debt. (2 marks)

(iii) Market-weighted average cost of capital (WACC). (5 marks)

(Total: 20 marks)

QUESTION THREE

(a) Discuss three limitations of profit maximisation as an objective of a firm. (6 marks)

(b) Juma Masese receives an annuity of Sh.20,000 payable once every two years. The annuity stretches out to over 20 years. The first payment occurs two years from today. The annual interest rate is 6%.

Required:

Calculate the present value (PV) of the annuity. (4 marks)

(c) Kipande 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 at the end of this period.

Additional information:

1. The annual contribution from the product will be Sh.4,600,000.
2. Fixed operating costs excluding depreciation would amount to Sh.950,000 per annum.
3. As a result of the expansion of the product line, working capital is expected to increase by Sh.1,500,000 at the start of production and will be released at the end of the 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 12% per annum.

Required:

Using the Net Present Value (NPV) approach, advise Kipande Ltd. on whether to invest in the new product line.

(10 marks)

(Total: 20 marks)

QUESTION FOUR

(a) Describe five functions of a financial system in your country. (10 marks)

(b) Madar Ltd. has had stable earnings growth rate of 8% per annum for the past 10 years. In year 2016, the company paid dividends of Sh.2.6 million on net income of Sh.9.8 million. However, in 2017 earnings are expected to increase to Sh.12.6 million and Madar Ltd. plans to invest Sh.7.3 million in a plant expansion. This one-time unusual earnings growth will not be maintained though, and after 2017, the company will return to its previous 8% earnings growth rate.

The company's target debt ratio is 35%.

Required:

Calculate Madar Ltd.'s total dividends for the year 2017 under each of the following policies:

(i) The company's year 2017 dividend payment is set to force dividends to grow at the long run growth rate in earnings. (2 marks)

(ii) The company continues with the year 2016 dividend payout ratio. (2 marks)

(iii) The company uses a pure residual policy with all distributions in the form of dividends. (2 marks)

(c) Polycarp Omondi expects to make a deposit of Sh.500,000 in his savings account at the end of the year 2017. He intends to make a deposit of Sh.100,000 at the end of each subsequent year. The sum deposited will earn interest at the rate of 6% per annum compounded annually.

Required:
The cumulative amount that will be in his account at the end of the year 2020. (4 marks)

(Total: 20 marks)

QUESTION FIVE

(a) Outline four roles of a finance manager. (4 marks)

(b) Citing three reasons, justify why there is need for a company to pay stable dividends. (6 marks)

(c) Distinguish between "systematic risk" and "unsystematic risk". (4 marks)

(d) The forecasted rate of return on the stock of firm X Ltd. in different states of nature and their probability of occurrence are given as follows:

State of nature	**Probability**	**Forecasted return (%)**
Boom	0.3	15
Most likely	0.5	10
Recession	0.2	-5

Required:

(i) Expected return for the stock. (2 marks)

(ii) The standard deviation of return. (4 marks)

(Total: 20 marks)

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KASNEB

ATD LEVEL II

FUNDAMENTALS OF FINANCE

TUESDAY: 23 May 2017. **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) Differentiate between "business risk" and "financial risk". (4 marks)

(b) Discuss three advantages of leasing as a source of finance. (6 marks)

(c) Ufanisi Ltd. is considering raising additional Sh.10 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)	30
10% preference share capital (Sh.50 par)	10
	100

The firm expects to raise Sh.2 million from internal sources.

The firm pays a constant ordinary dividend of Sh.2 per share in each year. This is expected to remain so in the foreseeable future.

Additional information:

1. The firm will issue new ordinary shares at a current price of Sh.25 per share and will incur a floatation cost of Sh.5 per share.
2. New 8% irredeemable debentures will be issued at par of Sh.100 each. Floatation cost of 5% of par value will be incurred.
3. New 10% preference shares will be issued at Sh.60 each. Par value of each share is Sh.50. Floatation cost of Sh.2 per share will be incurred.
4. Corporate tax rate applicable is 30%.

Required:

Weighted marginal cost of capital of the firm. (10 marks)

(Total: 20 marks)

QUESTION TWO

(a) Highlight four circumstances under which a company would prefer to use debt financing to other sources of finance. (4 marks)

(b) Describe two factors that influence the credit period extended by a company to its customers. (4 marks)

(c) Kenland Ltd. is considering its capital budget for the year 2018. The following information relates to four mutually exclusive projects:

Project:		**P1**	**P2**	**P3**	**P4**
Amounts:		**Sh. "000"**	**Sh. "000"**	**Sh. "000"**	**Sh. "000"**
Initial cash outflows		(8,000)	(10,000)	(20,000)	(16,000)
Cash inflows:	Year 1	2,000	4,000	8,000	6,000
	Year 2	4,000	6,000	12,000	10,000
	Year 3	6,000	6,000	10,000	8,000

Additional information:
1. The firm has a capital budget ceiling of Sh.20 million and the cost of capital is 10%.
2. The cash flows are assumed to occur at the end of the year.

Required:
Advise the company on the project to undertake using the following investment appraisal techniques:

(i) Net present value (NPV). (6 marks)

(ii) Profitability index (PI). (6 marks)

(Total: 20 marks)

QUESTION THREE

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

(i) Principle of equity. (2 marks)

(ii) Principle of participation. (2 marks)

(iii) Principle of ownership. (2 marks)

(b) Describe four financial market participants, citing the role played by each of the participants. (8 marks)

(c) A prospective investor is considering buying shares of Company X which are currently selling at the securities exchange for Sh.100.

The forecasted market price of each share at the end of one year's holding period and the corresponding probability of occurrence are given as follows:

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

Required:

(i) The expected rate of return for company X's share. (2 marks)

(ii) The standard deviation of return for company X's share. (4 marks)

(Total: 20 marks)

QUESTION FOUR

(a) Explain three key dates, with reference to dividend payment chronology. (6 marks)

(b) Discuss two limitations of using a firm's overall cost of capital as an investment discount rate. (4 marks)

(c) Stelwat Onyango borrowed Sh.1,500,000 from a bank at the rate of 1.5% per month. The loan is to be repaid monthly over a period of 6 months. Interest on the loan is to be paid on a reducing balance basis.

Required:
Prepare a loan amortisation schedule. (6 marks)

(d) Billy Kamar expects to make equal annual payments into his savings account at the beginning of each year over a period of 5 years. The sum deposited will earn interest at the rate of 10% per annum, compounded annually. He will be targeting to raise a cumulative sum of Sh.2,000,000 to undertake a capital investment.

Required:
Determine the annual instalment payment into Billy Kamar's savings account. (4 marks)

(Total: 20 marks)

QUESTION FIVE

(a) Summarise the following categories of agency problem:

(i) Managers versus owners. (2 marks)

(ii) Creditors versus owners. (2 marks)

(iii) Owners versus other parties. (2 marks)

(b) Describe two benefits of shareholders' wealth maximisation as an objective of a firm. (4 marks)

(c) ABC Ltd. expects to make payments of Sh.4,500,000 in the coming year. The firm's investment in marketable securities generates an annual return of 20%.

The firm incurs a cost of Sh.20 per transaction when buying or selling marketable securities.

The minimum cash balance maintained by this company at all times is Sh.10,000.
(Assume a 360-day year).

Required:
Using Baumol's model of cash management, determine:

(i) ABC Ltd.'s optimal cash balance. (3 marks)

(ii) Total relevant cost incurred in each year. (3 marks)

(iii) The cash conversion cycle (period) in days. (2 marks)

(iv) Average cash balance that will be maintained by ABC Ltd. (2 marks)

(Total: 20 marks)

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KASNEB

ATD LEVEL II

FUNDAMENTALS OF FINANCE

TUESDAY: 22 November 2016. **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) Summarise two differences between "accounting" and "finance". (4 marks)

(b) Discuss four ways in which the goals of a business organisation might complement each other. (8 marks)

(c) Joel borrowed a 3-year loan of Sh.1,500,000 at an interest rate of 9 per cent per annum from his employer to buy a saloon car. His employer required a three equal end-of-year repayments.

Required:

(i) Annual instalment to be paid by Joel at the end of each year. (1 mark)

(ii) Loan armotisation schedule. (3 marks)

(d) John Mativo promised to give his son Sh.1,000,000 in cash on his 25th birthday. Today is his son's 16th birthday.

Required:

(i) John Mativo intends to make annual payments into a fund after one year. Determine the annual payments, given that the fund would pay interest at the rate of 8 per cent per annum. (2 marks)

(ii) If he decides to invest a lumpsum in the account after one year and let it compound annually, compute the lumpsum. (2 marks)

(Total: 20 marks)

QUESTION TWO

(a) Explain three reasons why a company might decide to issue bonus shares instead of paying cash dividends. (6 marks)

(b) Bright Ltd. is considering a new product line to supplement its current product line. It is anticipated that the new product line will involve an initial cash investment of Sh.1,400,000 at the beginning and Sh.2,000,000 in year 1. After tax cash inflows are expected as follows: Sh.500,000 in year 2, Sh.600,000 in year 3, Sh.700,000 in year 4 and Sh.800,000 each year thereafter through year 10. Though the product line might be viable after year 10, the company prefers to be conservative and end all projections at that time. The company's cost of capital is 15%.

Required:

Advise Bright Ltd. on whether to invest in the new product line using each of the following investment evaluation criteria:

(i) Net present value (NPV). (5 marks)

(ii) Internal rate of return (IRR). (6 marks)

(iii) Pay back period (PBP). (3 marks)

(Total: 20 marks)

QUESTION TIIREE

(a) In relation to Islamic finance, explain the following concepts:

(i) Hibah. (2 marks)

(ii) Ijarah. (2 marks)

(b) Describe two factors that might have contributed to the growth of financial innovation in your country. (4 marks)

(c) Wema Ltd. intends to expand its business operations. On 31 October 2016, the company had the following existing and proposed capital structure to support the expansion programme:

1. The existing 9% debentures had a book value of Sh.2,000,000 and a market value of Sh.1,800,000.

2. A 12% preference share capital stands in the books at Sh.4,000,000 (20,000 shares) and has a total market value of Sh.5,000,000.
3. There are 100,000 ordinary shares with a current market price of Sh.80 each. The dividend for the year ended 31 October 2016 is expected to be Sh.2.40 per share, and a growth rate of 8% each year for the foreseeable future.
4. The company plans to issue 50,000 ordinary shares at a market price of Sh.80 per share. The cost of floating the shares is estimated at Sh.100,000.
5. A six year loan of Sh.4,500,000 is to be raised at an interest rate of 10% per annum. A cost of Sh.150,000 will be incurred in raising this loan.

(Ignore taxation).

Required:

(i) Current weighted average cost of capital (WACC) for Wema Ltd. using market values. (6 marks)

(ii) Expected weighted average cost of capital (WACC) for Wema Ltd. after the expansion programme. (6 marks)

(Total: 20 marks)

QUESTION FOUR

(a) Outline four functions of a cash budget. (4 marks)

(b) Highlight six demerits of using ordinary share capital in financing a company's operation. (6 marks)

(c) The following information was extracted from the financial statements of Flight Company Ltd. for the years ended 31 October 2015 and 2016:

	2015 Sh. "000"	2016 Sh. "000"
Finished goods	24,000	27,000
Work-in-progress	15,000	18,000
Stocks-Raw materials	21,000	24,000
Purchases	120,000	150,000
Cost of goods sold	180,000	236,000
Sales	324,000	372,000
Debtors	45,000	54,000
Creditors	27,000	36,000

(Assume a 365-day year).

Required:

The operating cycle period for each of the two years. (10 marks)

(Total: 20 marks)

QUESTION FIVE

(a) Describe four advantages of establishing a central depository system (CDS). (8 marks)

(b) In the context of risk and investment, explain the following terms:

(i) Risk-free return. (2 marks)

(ii) Expected rate of return. (2 marks)

(iii) Average rate of return. (2 marks)

(c) The following data relates to share Y returns and the corresponding probabilities under different economic conditions:

	Share Y	
Economic condition	**Rate of return (%)**	**Probability**
Growth	18.5	0.20
Expansion	16.5	0.40
Stagnation	10.0	0.25
Decline	-8.0	0.15

Required:

(i) The expected rate of return for share Y. (2 marks)

(ii) The standard deviation of return for share Y. (4 marks)

(Total: 20 marks)

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Present Value of 1 Received at the End of n Periods:

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

Period	1%	2%	3%	4%	5%	6%	7%	8%	9%	10%	12%	14%	15%	16%	18%	20%	24%	28%	32%	36%
1	.9901	.9804	.9709	.9615	.9524	.9434	.9346	.9259	.9174	.9091	.8929	.8772	.8696	.8621	.8475	.8333	.8065	.7813	.7576	.7353
2	.9803	.9612	.9426	.9246	.9070	.8900	.8734	.8573	.8417	.8264	.7972	.7695	.7561	.7432	.7182	.6944	.6504	.6104	.5739	.5407
3	.9706	.9423	.9151	.8890	.8638	.8396	.8163	.7938	.7722	.7513	.7118	.6750	.6575	.6407	.6086	.5787	.5245	.4768	.4348	.3975
4	.9610	.9238	.8885	.8548	.8227	.7921	.7629	.7350	.7084	.6830	.6355	.5921	.5718	.5523	.5158	.4823	.4230	.3725	.3294	.2923
5	.9515	.9057	.8626	.8219	.7835	.7473	.7130	.6806	.6499	.6209	.5674	.5194	.4972	.4761	.4371	.4019	.3411	.2910	.2495	.2149
6	.9420	.8880	.8375	.7903	.7462	.7050	.6663	.6302	.5963	.5645	.5066	.4556	.4323	.4104	.3704	.3349	.2751	.2274	.1890	.1580
7	.9327	.8706	.8131	.7599	.7107	.6651	.6227	.5835	.5470	.5132	.4523	.3996	.3759	.3538	.3139	.2791	.2218	.1776	.1432	.1162
8	.9235	.8535	.7894	.7307	.6768	.6274	.5820	.5403	.5019	.4665	.4039	.3506	.3269	.3050	.2660	.2326	.1789	.1388	.1085	.0854
9	.9143	.8368	.7664	.7026	.6446	.5919	.5439	.5002	.4604	.4241	.3606	.3075	.2843	.2630	.2255	.1938	.1443	.1084	.0822	.0628
10	.9053	.8203	.7441	.6756	.6139	.5584	.5083	.4632	.4224	.3855	.3220	.2697	.2472	.2267	.1911	.1615	.1164	.0847	.0623	.0462
11	.8963	.8043	.7224	.6496	.5847	.5268	.4751	.4289	.3875	.3505	.2875	.2366	.2149	.1954	.1619	.1346	.0938	.0662	.0472	.0340
12	.8874	.7885	.7014	.6246	.5568	.4970	.4440	.3971	.3555	.3186	.2567	.2076	.1869	.1685	.1372	.1122	.0757	.0517	.0357	.0250
13	.8787	.7730	.6810	.6006	.5303	.4688	.4150	.3677	.3262	.2897	.2292	.1821	.1625	.1452	.1163	.0935	.0610	.0404	.0271	.0184
14	.8700	.7579	.6611	.5775	.5051	.4423	.3878	.3405	.2992	.2633	.2046	.1597	.1413	.1252	.0985	.0779	.0492	.0316	.0205	.0135
15	.8613	.7430	.6419	.5553	.4810	.4173	.3624	.3152	.2745	.2394	.1827	.1401	.1229	.1079	.0835	.0649	.0397	.0247	.0155	.0099
16	.8528	.7284	.6232	.5339	.4581	.3936	.3387	.2919	.2519	.2176	.1631	.1229	.1069	.0930	.0708	.0541	.0320	.0193	.0118	.0073
17	.8444	.7142	.6050	.5134	.4363	.3714	.3166	.2703	.2311	.1978	.1456	.1078	.0929	.0802	.0600	.0451	.0258	.0150	.0089	.0054
18	.8360	.7002	.5874	.4936	.4155	.3503	.2959	.2502	.2120	.1799	.1300	.0946	.0808	.0691	.0508	.0376	.0208	.0118	.0068	.0039
19	.8277	.6864	.5703	.4746	.3957	.3305	.2765	.2317	.1945	.1635	.1161	.0829	.0703	.0596	.0431	.0313	.0168	.0092	.0051	.0029
20	.8195	.6730	.5537	.4564	.3769	.3118	.2584	.2145	.1784	.1486	.1037	.0728	.0611	.0514	.0365	.0261	.0135	.0072	.0039	.0021
25	.7798	.6095	.4776	.3751	.2953	.2330	.1842	.1460	.1160	.0923	.0588	.0378	.0304	.0245	.0160	.0105	.0046	.0021	.0010	.0005
30	.7419	.5521	.4120	.3083	.2314	.1741	.1314	.0994	.0754	.0573	.0334	.0196	.0151	.0116	.0070	.0042	.0016	.0006	.0002	.0001
40	.6717	.4529	.3066	.2083	.1420	.0972	.0668	.0460	.0318	.0221	.0107	.0053	.0037	.0026	.0013	.0007	.0002	.0001	*	*
50	.6080	.3715	.2281	.1407	.0872	.0543	.0339	.0213	.0134	.0085	.0035	.0014	.0009	.0006	.0003	.0001	*	*	*	*
60	.5504	.3048	.1697	.0951	.0535	.0303	.0173	.0099	.0057	.0033	.0011	.0004	.0002	.0001	*	*	*	*	*	*

* The factor is zero to four decimal places

Present Value of an Annuity of 1 Per Period for n Periods:

$$PVIF_{r,t} = \sum_{r=1}^{n} \frac{1}{(1+r)^r} = \frac{1 - \frac{1}{(1+r)^n}}{r}$$

Number of payments	1%	2%	3%	4%	5%	6%	7%	8%	9%	10%	12%	14%	15%	16%	18%	20%	24%	28%	32%
1	0.9901	0.9804	0.9709	0.9615	0.9524	0.9434	0.9346	0.9259	0.9174	0.9091	0.8929	0.8772	0.8696	0.8621	0.8475	0.8333	0.8065	0.7813	0.7576	0.7353
2	1.9704	1.9416	1.9135	1.8861	1.8594	1.8334	1.8080	1.7833	1.7591	1.7355	1.6901	1.6467	1.6257	1.6052	1.5656	1.5278	1.4568	1.3916	1.3315	1.2760
3	2.9410	2.8839	2.8286	2.7751	2.7232	2.6730	2.6243	2.5771	2.5313	2.4869	2.4018	2.3216	2.2832	2.2459	2.1743	2.1065	1.9813	1.8684	1.7663	1.6735
4	3.9020	3.8077	3.7171	3.6299	3.5460	3.4651	3.3872	3.3121	3.2397	3.1699	3.0373	2.9137	2.8550	2.7982	2.6901	2.5887	2.4043	2.2410	2.0957	1.9658
5	4.8534	4.7135	4.5797	4.4518	4.3295	4.2124	4.1002	3.9927	3.8897	3.7908	3.6048	3.4331	3.3522	3.2743	3.1272	2.9906	2.7454	2.5320	2.3452	2.1807
6	5.7955	5.6014	5.4172	5.2421	5.0757	4.9173	4.7665	4.6229	4.4859	4.3553	4.1114	3.8887	3.7845	3.6847	3.4976	3.3255	3.0205	2.7594	2.5342	2.3388
7	6.7282	6.4720	6.2303	6.0021	5.7864	5.5824	5.3893	5.2064	5.0330	4.8684	4.5638	4.2883	4.1604	4.0386	3.8115	3.6046	3.2423	2.9370	2.6775	2.4550
8	7.6517	7.3255	7.0197	6.7327	6.4632	6.2098	5.9713	5.7466	5.5348	5.3349	4.9676	4.6389	4.4873	4.3436	4.0776	3.8372	3.4212	3.0758	2.7860	2.5404
9	8.5660	8.1622	7.7861	7.4353	7.1078	6.8017	6.5152	6.2469	5.9952	5.7590	5.3282	4.9464	4.7716	4.6065	4.3030	4.0310	3.5655	3.1842	2.8681	2.6033
10	9.4713	8.9826	8.5302	8.1109	7.7217	7.3601	7.0236	6.7101	6.4177	6.1446	5.6502	5.2161	5.0188	4.8332	4.4941	4.1925	3.6819	3.2689	2.9304	2.6570
11	10.3676	9.7868	9.2526	8.7605	8.3064	7.8869	7.4987	7.1390	6.8052	6.4951	5.9377	5.4527	5.2337	5.0286	4.6560	4.3271	3.7757	3.3351	2.9776	2.7084
12	11.2551	10.5753	9.9540	9.3851	8.8633	8.3838	7.9427	7.5361	7.1607	6.8137	6.1944	5.6603	5.4206	5.1971	4.7932	4.4392	3.8514	3.3868	3.0133	2.7317
13	12.1337	11.3484	10.6350	9.9856	9.3936	8.8527	8.3577	7.9038	7.4869	7.1034	6.4235	5.8424	5.5831	5.3423	4.9095	4.5327	3.9124	3.4272	3.0404	2.7520
14	13.0037	12.1062	11.2961	10.5631	9.8986	9.2950	8.7455	8.2442	7.7862	7.3667	6.6282	6.0021	5.7245	5.4675	5.0081	4.6106	3.9616	3.4587	3.0609	2.7636
15	13.8651	12.8493	11.9379	11.1184	10.3797	9.7122	9.1079	8.5595	8.0607	7.6061	6.8109	6.1422	5.8474	5.5755	5.0916	4.6755	4.0013	3.4834	3.0764	2.7728
16	14.7179	13.5777	12.5611	11.6523	10.8378	10.1059	9.4466	8.8514	8.3126	7.8237	6.9740	6.2651	5.9542	5.6685	5.1624	4.7296	4.0333	3.5026	3.0882	2.7801
17	15.5623	14.2919	13.1661	12.1657	11.2741	10.4773	9.7632	9.1216	8.5436	8.0216	7.1196	6.3729	6.0472	5.7487	5.2223	4.7746	4.0591	3.5177	3.0971	2.7861
18	16.3983	14.9920	13.7535	12.6593	11.6896	10.8276	10.0591	9.3719	8.7556	8.2014	7.2497	6.4674	6.1280	5.8178	5.2732	4.8122	4.0799	3.5294	3.1039	2.7910
19	17.2260	15.6785	14.3238	13.1339	12.0853	11.1581	10.3356	9.6036	8.9501	8.3649	7.3658	6.5504	6.1982	5.8775	5.3162	4.8435	4.0967	3.5386	3.1090	2.7951
20	18.0456	16.3514	14.8775	13.5903	12.4622	11.4699	10.5940	9.8181	9.1285	8.5136	7.4694	6.6231	6.2593	5.9288	5.3527	4.8696	4.1103	3.5458	3.1129	2.7985
25	22.0232	19.5235	17.4131	15.6221	14.0939	12.7834	11.6536	10.6748	9.8226	9.0770	7.8431	6.8729	6.4641	6.0971	5.4669	4.9476	4.1474	3.5640	3.1220	2.8026
30	25.8077	22.3965	19.6004	17.2920	15.3725	13.7648	12.4090	11.2578	10.2737	9.4269	8.0552	7.0027	6.5660	6.1772	5.5168	4.9789	4.1601	3.5693	3.1242	2.8039
40	32.8347	27.3555	23.1148	19.7928	17.1591	15.0463	13.3317	11.9246	10.7574	9.7791	8.2438	7.1050	6.6418	6.2335	5.5482	4.9966	4.1659	3.5712	3.1250	2.8046
50	39.1961	31.4236	25.7298	21.4822	18.2559	15.7619	13.8007	12.2335	10.9617	9.9148	8.3045	7.1327	6.6605	6.2463	5.5541	4.9995	4.1666	3.5714	3.1250	2.8047
60	44.9550	34.7609	27.6756	22.6235	18.9293	16.1614	14.0392	12.3766	11.0480	9.9672	8.3240	7.1401	6.6651	6.2402	5.5553	4.9999	4.1667	3.5714	3.1250	2.8047

KASNEB

ATD LEVEL II

FUNDAMENTALS OF FINANCE

TUESDAY: 24 May 2016. **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) Outline four advantages that could accrue to a firm from using debt capital over equity capital as a mode of financing. (4 marks)

(b) Describe three factors that should be considered while evaluating an investment in securities. (6 marks)

(c) The management of Furaha Ltd. is evaluating five investment projects whose expected cash flows are shown below:

	Year			
Projects	**January 2016**	**December 2016**	**December 2017**	**December 2018**
	Sh. "000"	**Sh. "000"**	**Sh. "000"**	**Sh. "000"**
A	(120,000)	60,000	50,000	50,000
B	(60,000)	(40,000)	50,000	90,000
C	(80,000)	(100,000)	120,000	140,000
D	0	(160,000)	90,000	110,000
E	(100,000)	20,000	60,000	80,000

Additional information:

1. Ignore tax and depreciation.
2. The required rate of return on investment is 16%.

Required:

Using the net present value (NPV) approach, determine the project(s) that should be undertaken, assuming that capital would be available when required. (10 marks)

(Total: 20 marks)

QUESTION TWO

(a) Highlight four types of alternative investment vehicles available in the financial markets. (4 marks)

(b) Discuss four goals of a firm in your country. (8 marks)

(c) Delight Ltd.'s capital structure as at 31 December 2014 was as follows:

	Sh. "000"
Ordinary shares at Sh.0.50 par value	12,000
Reserves	4,000
9% Preference shares at Sh.1.00 par value	6,000
14% Debentures	8,000
	30,000

Additional information:

1. The ordinary shares are quoted at Sh.0.80.
2. The next ordinary dividend is estimated at Sh.0.04 growing thereafter at 12% in perpetuity.
3. The preference shares are quoted at Sh.0.72 while debentures are quoted at par.
4. Corporate tax rate is 30%.

Required:

Weighted average cost of capital using the book value. (8 marks)

(Total: 20 marks)

QUESTION THREE

(a) Summarise five advantages of preference share capital to shareholders. (5 marks)

(b) With reference to time value of money, explain the following terms:

(i) Present value. (2 marks)

(ii) Future value. (2 marks)

(iii) Loan amortisation. (2 marks)

(c) Jvan Ltd. uses 2,000 units of stock item K each year. The cost of holding a single item for a year is Sh.2.00 and the cost of placing an order is Sh.45. The company is considering to double its ordering batches from 200 units to 400 units.

Required:

(i) Economic order quantity (EOQ). (3 marks)

(ii) Number of orders every year. (2 marks)

(iii) Number of days before an order is placed. (Assuming a 365 day - year). (2 marks)

(iv) Advise the management whether the decision to double its ordering batches should be undertaken. (2 marks)

(Total: 20 marks)

QUESTION FOUR

(a) In relation to Islamic finance, explain the following concepts:

(i) Riba. (2 marks)

(ii) Mudharaba. (2 marks)

(b) Summarise five reasons why financial markets in developing countries have experienced slow growth. (5 marks)

(c) In an investment seminar, one of the facilitators noted that "there are three categories of investors; that is, risk-averse investors, risk-neutral investors and risk-taker investors".

With reference to the above statement, explain each of the three categories of investors. (3 marks)

(d) (i) Billy Rich intends to deposit Sh.2,400,000 in a bank paying an annual interest rate of 6% compounded quarterly. Determine his bank balance and the amount of interest he will earn after six years. (4 marks)

(ii) Robert Milele is planning to invest in rental properties. He has approached the local bank for a mortgage loan, and received an offer of Sh. 8 million at an annual mortgage interest rate of 9% for a period of 15 years compounded monthly.

Required:

Determine the monthly mortgage payments to be made by Robert Milele. (4 marks)

(Total: 20 marks)

QUESTION FIVE

(a) Discuss four dividend pay-out policies adopted by different companies in your country. (8 marks)

(b) The following information relates to the prices of security Y and security Z and the dividend per share for the last four years.

Year	Dividend per share (Security Y) Sh.	Market price (Security Y) Sh.	Dividend per share (Security Z) Sh.	Market price (Security Z) Sh.
1	2	200	1.5	60
2	3	230	2	65
3	2	210	2	80
4	4	260	3	85

Required:

(i) The rate of return of security Y and security Z. (3 marks)

(ii) Expected average return for each security. (3 marks)

(iii) Standard deviation for each security. (6 marks)

(Total: 20 marks)

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Present Value of 1 Received at the End of n Periods:

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

Period	1%	2%	3%	4%	5%	6%	7%	8%	9%	10%	12%	14%	15%	16%	18%	20%	24%	28%	32%	36%
1	.9901	.9804	.9709	.9615	.9524	.9434	.9346	.9259	.9174	.9091	.8929	.8772	.8696	.8621	.8475	.8333	.8065	.7813	.7576	.7353
2	.9803	.9612	.9426	.9246	.9070	.8900	.8734	.8573	.8417	.8264	.7972	.7695	.7561	.7432	.7182	.6944	.6504	.6104	.5739	.5407
3	.9706	.9423	.9151	.8890	.8638	.8396	.8163	.7938	.7722	.7513	.7118	.6750	.6575	.6407	.6086	.5787	.5245	.4768	.4348	.3975
4	.9610	.9238	.8885	.8548	.8227	.7921	.7629	.7350	.7084	.6830	.6355	.5921	.5718	.5523	.5158	.4823	.4230	.3725	.3294	.2923
5	.9515	.9057	.8626	.8219	.7835	.7473	.7130	.6806	.6499	.6209	.5674	.5194	.4972	.4761	.4371	.4019	.3411	.2910	.2495	.2149
6	.9420	.8880	.8375	.7903	.7462	.7050	.6663	.6302	.5963	.5645	.5066	.4556	.4323	.4104	.3704	.3349	.2751	.2274	.1890	.1580
7	.9327	.8706	.8131	.7599	.7107	.6651	.6227	.5835	.5470	.5132	.4523	.3996	.3759	.3538	.3139	.2791	.2218	.1776	.1432	.1162
8	.9235	.8535	.7894	.7307	.6768	.6274	.5820	.5403	.5019	.4665	.4039	.3506	.3269	.3050	.2660	.2326	.1789	.1388	.1085	.0854
9	.9143	.8368	.7664	.7026	.6446	.5919	.5439	.5002	.4604	.4241	.3606	.3075	.2843	.2630	.2255	.1938	.1443	.1084	.0822	.0628
10	.9053	.8203	.7441	.6756	.6139	.5584	.5083	.4632	.4224	.3855	.3220	.2697	.2472	.2267	.1911	.1615	.1164	.0847	.0623	.0462
11	.8963	.8043	.7224	.6496	.5847	.5268	.4751	.4289	.3875	.3505	.2875	.2366	.2149	.1954	.1619	.1346	.0938	.0662	.0472	.0340
12	.8874	.7885	.7014	.6246	.5568	.4970	.4440	.3971	.3555	.3186	.2567	.2076	.1869	.1685	.1372	.1122	.0757	.0517	.0357	.0250
13	.8787	.7730	.6810	.6006	.5303	.4688	.4150	.3677	.3262	.2897	.2292	.1821	.1625	.1452	.1163	.0935	.0610	.0404	.0271	.0184
14	.8700	.7579	.6611	.5775	.5051	.4423	.3878	.3405	.2992	.2633	.2046	.1597	.1413	.1252	.0985	.0779	.0492	.0316	.0205	.0135
15	.8613	.7430	.6419	.5553	.4810	.4173	.3624	.3152	.2745	.2394	.1827	.1401	.1229	.1079	.0835	.0649	.0397	.0247	.0155	.0099
16	.8528	.7284	.6232	.5339	.4581	.3936	.3387	.2919	.2519	.2176	.1631	.1229	.1069	.0930	.0708	.0541	.0320	.0193	.0118	.0073
17	.8444	.7142	.6050	.5134	.4363	.3714	.3166	.2703	.2311	.1978	.1456	.1078	.0929	.0802	.0600	.0451	.0258	.0150	.0089	.0054
18	.8360	.7002	.5874	.4936	.4155	.3503	.2959	.2502	.2120	.1799	.1300	.0946	.0808	.0691	.0508	.0376	.0208	.0118	.0068	.0039
19	.8277	.6864	.5703	.4746	.3957	.3305	.2765	.2317	.1945	.1635	.1161	.0829	.0703	.0596	.0431	.0313	.0168	.0092	.0051	.0029
20	.8195	.6730	.5537	.4564	.3769	.3118	.2584	.2145	.1784	.1486	.1037	.0728	.0611	.0514	.0365	.0261	.0135	.0072	.0039	.0021
25	.7798	.6095	.4776	.3751	.2953	.2330	.1842	.1460	.1160	.0923	.0588	.0378	.0304	.0245	.0160	.0105	.0046	.0021	.0010	.0005
30	.7419	.5521	.4120	.3083	.2314	.1741	.1314	.0994	.0754	.0573	.0334	.0196	.0151	.0116	.0070	.0042	.0016	.0006	.0002	.0001
40	.6717	.4529	.3066	.2083	.1420	.0972	.0668	.0460	.0318	.0221	.0107	.0053	.0037	.0026	.0013	.0007	.0002	.0001		
50	.6080	.3715	.2281	.1407	.0872	.0543	.0339	.0213	.0134	.0085	.0035	.0014	.0009	.0006	.0003	.0001				
60	.5504	.3048	.1697	.0951	.0535	.0303	.0173	.0099	.0057	.0033	.0011	.0004	.0002	.0001						

* The factor is zero to four decimal places

Present Value of an Annuity of 1 Per Period for n Periods:

$$PVIF_{r,n} = \sum_{t=1}^{n} \frac{1}{(1+r)^t} = \frac{1 - \frac{1}{(1+r)^n}}{r}$$

Number of payments	1%	2%	3%	4%	5%	6%	7%	8%	9%	10%	12%	14%	15%	16%	18%	20%	24%	28%	32%
1	0.9901	0.9804	0.9709	0.9615	0.9524	0.9434	0.9346	0.9259	0.9174	0.9091	0.8929	0.8772	0.8696	0.8621	0.8475	0.8333	0.8065	0.7813	0.7576
2	1.9704	1.9416	1.9135	1.8861	1.8594	1.8334	1.8080	1.7833	1.7591	1.7355	1.6901	1.6467	1.6257	1.6052	1.5656	1.5278	1.4568	1.3916	1.3315
3	2.9410	2.8839	2.8286	2.7751	2.7232	2.6730	2.6243	2.5771	2.5313	2.4869	2.4018	2.3216	2.2832	2.2459	2.1743	2.1065	1.9813	1.8684	1.7663
4	3.9020	3.8077	3.7171	3.6299	3.5460	3.4651	3.3872	3.3121	3.2397	3.1699	3.0373	2.9137	2.8550	2.7982	2.6901	2.5887	2.4043	2.2410	2.0957
5	4.8534	4.7135	4.5797	4.4518	4.3295	4.2124	4.1002	3.9927	3.8897	3.7908	3.6048	3.4331	3.3522	3.2743	3.1272	2.9906	2.7454	2.5320	2.3452
6	5.7955	5.6014	5.4172	5.2421	5.0757	4.9173	4.7665	4.6229	4.4859	4.3553	4.1114	3.8887	3.7845	3.6847	3.4976	3.3255	3.0205	2.7594	2.5342
7	6.7282	6.4720	6.2303	6.0021	5.7864	5.5824	5.3893	5.2064	5.0330	4.8684	4.5638	4.2883	4.1604	4.0386	3.8115	3.6046	3.2423	2.9370	2.6775
8	7.6517	7.3255	7.0197	6.7327	6.4632	6.2098	5.9713	5.7466	5.5348	5.3349	4.9676	4.6389	4.4873	4.3436	4.0776	3.8372	3.4212	3.0758	2.7860
9	8.5660	8.1622	7.7861	7.4353	7.1078	6.8017	6.5152	6.2469	5.9952	5.7590	5.3282	4.9464	4.7716	4.6065	4.3030	4.0310	3.5655	3.1842	2.8681
10	9.4713	8.9826	8.5302	8.1109	7.7217	7.3601	7.0236	6.7101	6.4177	6.1446	5.6502	5.2161	5.0188	4.8332	4.4941	4.1925	3.6819	3.2689	2.9304
11	10.3676	9.7868	9.2526	8.7605	8.3064	7.8869	7.4987	7.1390	6.8052	6.4951	5.9377	5.4527	5.2337	5.0286	4.6560	4.3271	3.7757	3.3351	2.9776
12	11.2551	10.5753	9.9540	9.3851	8.8633	8.3838	7.9427	7.5361	7.1607	6.8137	6.1944	5.6603	5.4206	5.1971	4.7932	4.4392	3.8514	3.3868	3.0133
13	12.1337	11.3484	10.6350	9.9856	9.3936	8.8527	8.3577	7.9038	7.4869	7.1034	6.4235	5.8424	5.5831	5.3423	4.9095	4.5327	3.9124	3.4272	3.0404
14	13.0037	12.1062	11.2961	10.5631	9.8986	9.2950	8.7455	8.2442	7.7862	7.3667	6.6282	6.0021	5.7245	5.4675	5.0081	4.6106	3.9616	3.4587	3.0609
15	13.8651	12.8493	11.9379	11.1184	10.3797	9.7122	9.1079	8.5595	8.0607	7.6061	6.8109	6.1422	5.8474	5.5755	5.0916	4.6755	4.0013	3.4834	3.0764
16	14.7179	13.5777	12.5611	11.6523	10.8378	10.1059	9.4466	8.8514	8.3126	7.8237	6.9740	6.2651	5.9542	5.6685	5.1624	4.7296	4.0333	3.5026	3.0882
17	15.5623	14.2919	13.1661	12.1657	11.2741	10.4773	9.7632	9.1216	8.5436	8.0216	7.1196	6.3729	6.0472	5.7487	5.2223	4.7746	4.0591	3.5177	3.0971
18	16.3983	14.9920	13.7535	12.6593	11.6896	10.8276	10.0591	9.3719	8.7556	8.2014	7.2497	6.4674	6.1280	5.8178	5.2732	4.8122	4.0799	3.5294	3.1039
19	17.2260	15.6785	14.3238	13.1339	12.0853	11.1581	10.3356	9.6036	8.9501	8.3649	7.3658	6.5504	6.1982	5.8775	5.3162	4.8435	4.0967	3.5386	3.1090
20	18.0456	16.3514	14.8775	13.5903	12.4622	11.4699	10.5940	9.8181	9.1285	8.5136	7.4694	6.6231	6.2593	5.9288	5.3527	4.8696	4.1103	3.5458	3.1129
25	22.0232	19.5235	17.4131	15.6221	14.0939	12.7834	11.6536	10.6748	9.8226	9.0770	7.8431	6.8729	6.4641	6.0971	5.4669	4.9476	4.1474	3.5640	3.1220
30	25.8077	22.3965	19.6004	17.2920	15.3725	13.7648	12.4090	11.2578	10.2737	9.4269	8.0552	7.0027	6.5660	6.1772	5.5168	4.9789	4.1601	3.5693	3.1242
40	32.8347	27.3555	23.1148	19.7928	17.1591	15.0463	13.3317	11.9246	10.7574	9.7791	8.2438	7.1050	6.6418	6.2335	5.5482	4.9966	4.1659	3.5712	3.1250
50	39.1961	31.4236	25.7298	21.4822	18.2559	15.7619	13.8007	12.2335	10.9617	9.9148	8.3045	7.1327	6.6605	6.2463	5.5541	4.9995	4.1666	3.5714	3.1250
60	44.9550	34.7609	27.6756	22.6235	18.9293	16.1614	14.0392	12.3766	11.0480	9.9672	8.3240	7.1401	6.6651	6.2402	5.5553	4.9999	4.1667	3.5714	3.1250

KASNEB

ATD LEVEL II

FUNDAMENTALS OF FINANCE

WEDNESDAY: 18 November 2015. **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) Explain the term "agency conflict". (2 marks)

(b) Describe four roles of a finance manager. (4 marks)

(c) Analyse three motives of holding cash by an organisation. (6 marks)

(d) Discuss four factors to be considered by an organisation when choosing the source of finance. (8 marks)

(Total: 20 marks)

QUESTION TWO

(a) Citing two reasons, justify the importance of time value of money. (4 marks)

(b) Explain four factors that affect a company's dividend policy. (8 marks)

(c) Kipawa 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.4,600,000.
2. Fixed production cost excluding depreciation would amount to Sh.950,000 per annum.
3. As a result of the expansion of the product line, working capital is expected to increase by Sh.1,500,000 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 12% per annum.

Required:

Using the net present value (NPV), advise Kipawa Ltd. on whether to invest in the new product line. (8 marks)

(Total: 20 marks)

QUESTION THREE

(a) Explain the following terms as used in cost of capital:

(i) Weighted average cost of capital. (2 marks)

(ii) Marginal cost of capital. (2 marks)

(b) Describe three functions of financial market in your country. (6 marks)

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

	Sh.
Ordinary shares (Sh.20 par value)	8,000,000
8% preference shares (Sh.24 par value)	1,200,000
10% debentures (Sh.100 par value)	2,000,000
Total capital employed	11,200,000

The current market price of the above finances are as follows:

1. Ordinary shares, Sh.32 per share inclusive of Sh.2 as floatation costs. Ordinary shareholders expect cash dividends of Sh.4 per share and a dividend growth at the rate of 5% at the end of every year.

2. The 8% preference shares currently sell at Sh.20 per share.
3. The 10% debentures currently sell for Sh.100.
4. The corporate rate of tax is 30% per annum.

Required:
The weighted average cost of capital using market value. (10 marks)
(Total: 20 marks)

QUESTION FOUR

(a) Explain four differences between Islamic banking and conventional banking. (8 marks)

(b) Explain the following terms as used in the context of risk and investment:

(i) Risk. (2 marks)

(ii) Systematic risk. (2 marks)

(iii) Unsystematic risk. (2 marks)

(c) The following data relate to the returns of share Q traded at the securities exchange in your country:

Year	Share Q Returns
2010	-10.00%
2011	21.50%
2012	36.98%
2013	15.48%
2014	27.04%

Required:
(i) The average rate of return for share Q over the five year period. (2 marks)

(ii) The standard deviation of return for share Q. (4 marks)
(Total: 20 marks)

QUESTION FIVE

(a) Distinguish between "working capital" and "operating cycle". (4 marks)

(b) Quest Ltd., requires 720,000 units for ten days. The ordering cost per order is Sh.450 and the carrying cost per unit is Sh.4.

Required:
The economic order quantity (EOQ). (2 marks)

(c) In an investment seminar, one of the facilitators noted that "depending on the mix of short term financing and long term financing, a company could follow either of the following approaches: matching approach, conservative approach or aggressive approach".

Required:
Discuss each of the three approaches mentioned above. (6 marks)

(d) Summarise four cases in favour of retained earnings as an internal source of finance. (8 marks)
(Total: 20 marks)

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Present Value of 1 Received at the End of n Periods:

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

Period	1%	2%	3%	4%	5%	6%	7%	8%	9%	10%	12%	14%	15%	16%	18%	20%	24%	28%	32%	36%
1	.9901	.9804	.9709	.9615	.9524	.9434	.9346	.9259	.9174	.9091	.8929	.8772	.8696	.8621	.8475	.8333	.8065	.7813	.7576	.7353
2	.9803	.9612	.9426	.9246	.9070	.8900	.8734	.8573	.8417	.8264	.7972	.7695	.7561	.7432	.7182	.6944	.6504	.6104	.5739	.5407
3	.9706	.9423	.9151	.8890	.8638	.8396	.8163	.7938	.7722	.7513	.7118	.6750	.6575	.6407	.6086	.5787	.5245	.4768	.4348	.3975
4	.9610	.9238	.8885	.8548	.8227	.7921	.7629	.7350	.7084	.6830	.6355	.5921	.5718	.5523	.5158	.4823	.4230	.3725	.3294	.2923
5	.9515	.9057	.8626	.8219	.7835	.7473	.7130	.6806	.6499	.6209	.5674	.5194	.4972	.4761	.4371	.4019	.3411	.2910	.2495	.2149
6	.9420	.8880	.8375	.7903	.7462	.7050	.6663	.6302	.5963	.5645	.5066	.4556	.4323	.4104	.3704	.3349	.2751	.2274	.1890	.1580
7	.9327	.8706	.8131	.7599	.7107	.6651	.6227	.5835	.5470	.5132	.4523	.3996	.3759	.3538	.3139	.2791	.2218	.1776	.1432	.1162
8	.9235	.8535	.7894	.7307	.6768	.6274	.5820	.5403	.5019	.4665	.4039	.3506	.3269	.3050	.2660	.2326	.1789	.1388	.1085	.0854
9	.9143	.8368	.7664	.7026	.6446	.5919	.5439	.5002	.4604	.4241	.3606	.3075	.2843	.2630	.2255	.1938	.1443	.1084	.0822	.0628
10	.9053	.8203	.7441	.6756	.6139	.5584	.5083	.4632	.4224	.3855	.3220	.2697	.2472	.2267	.1911	.1615	.1164	.0847	.0623	.0462
11	.8963	.8043	.7224	.6496	.5847	.5268	.4751	.4289	.3875	.3505	.2875	.2366	.2149	.1954	.1619	.1346	.0938	.0662	.0472	.0340
12	.8874	.7885	.7014	.6246	.5568	.4970	.4440	.3971	.3555	.3186	.2567	.2076	.1869	.1685	.1372	.1122	.0757	.0517	.0357	.0250
13	.8787	.7730	.6810	.6006	.5303	.4688	.4150	.3677	.3262	.2897	.2292	.1821	.1625	.1452	.1163	.0935	.0610	.0404	.0271	.0184
14	.8700	.7579	.6611	.5775	.5051	.4423	.3878	.3405	.2992	.2633	.2046	.1597	.1413	.1252	.0985	.0779	.0492	.0316	.0205	.0135
15	.8613	.7430	.6419	.5553	.4810	.4173	.3624	.3152	.2745	.2394	.1827	.1401	.1229	.1079	.0835	.0649	.0397	.0247	.0155	.0099
16	.8528	.7284	.6232	.5339	.4581	.3936	.3387	.2919	.2519	.2176	.1631	.1229	.1069	.0930	.0708	.0541	.0320	.0193	.0118	.0073
17	.8444	.7142	.6050	.5134	.4363	.3714	.3166	.2703	.2311	.1978	.1456	.1078	.0929	.0802	.0600	.0451	.0258	.0150	.0089	.0054
18	.8360	.7002	.5874	.4936	.4155	.3503	.2959	.2502	.2120	.1799	.1300	.0946	.0808	.0691	.0508	.0376	.0208	.0118	.0068	.0039
19	.8277	.6864	.5703	.4746	.3957	.3305	.2765	.2317	.1945	.1635	.1161	.0829	.0703	.0596	.0431	.0313	.0168	.0092	.0051	.0029
20	.8195	.6730	.5537	.4564	.3769	.3118	.2584	.2145	.1784	.1486	.1037	.0728	.0611	.0514	.0365	.0261	.0135	.0072	.0039	.0021
25	.7798	.6095	.4776	.3751	.2953	.2330	.1842	.1460	.1160	.0923	.0588	.0378	.0304	.0245	.0160	.0105	.0046	.0021	.0010	.0005
30	.7419	.5521	.4120	.3083	.2314	.1741	.1314	.0994	.0754	.0573	.0334	.0196	.0151	.0116	.0070	.0042	.0016	.0006	.0002	.0001
40	.6717	.4529	.3066	.2083	.1420	.0972	.0668	.0460	.0318	.0221	.0107	.0053	.0037	.0026	.0013	.0007	.0002	.0001	.	.
50	.6080	.3715	.2281	.1407	.0872	.0543	.0339	.0213	.0134	.0085	.0035	.0014	.0009	.0006	.0003	.0001	.	.	.	.
60	.5504	.3048	.1697	.0951	.0535	.0303	.0173	.0099	.0057	.0033	.0011	.0004	.0002	.0001	.	.	.	.	.	.

* The factor is zero to four decimal places

Present Value of an Annuity of 1 Per Period for n Periods:

$$PVIF_{r,t} = \sum_{t=1}^{n} \frac{1}{(1+r)^t} = \frac{1 - \frac{1}{(1+r)^n}}{r}$$

Number of payments	1%	2%	3%	4%	5%	6%	7%	8%	9%	10%	12%	14%	15%	16%	18%	20%	24%	28%	32%
1	0.9901	0.9804	0.9709	0.9615	0.9524	0.9434	0.9346	0.9259	0.9174	0.9091	0.8929	0.8772	0.8696	0.8621	0.8475	0.8333	0.8065	0.7813	0.7576
2	1.9704	1.9416	1.9135	1.8861	1.8594	1.8334	1.8080	1.7833	1.7591	1.7355	1.6901	1.6467	1.6257	1.6052	1.5656	1.5278	1.4568	1.3916	1.3315
3	2.9410	2.8839	2.8286	2.7751	2.7232	2.6730	2.6243	2.5771	2.5313	2.4869	2.4018	2.3216	2.2832	2.2459	2.1743	2.1065	1.9813	1.8684	1.7663
4	3.9020	3.8077	3.7171	3.6299	3.5460	3.4651	3.3872	3.3121	3.2397	3.1699	3.0373	2.9137	2.8550	2.7982	2.6901	2.5887	2.4043	2.2410	2.0957
5	4.8534	4.7135	4.5797	4.4518	4.3295	4.2124	4.1002	3.9927	3.8897	3.7908	3.6048	3.4331	3.3522	3.2743	3.1272	2.9906	2.7454	2.5320	2.3452
6	5.7955	5.6014	5.4172	5.2421	5.0757	4.9173	4.7665	4.6229	4.4859	4.3553	4.1114	3.8887	3.7845	3.6847	3.4976	3.3255	3.0205	2.7594	2.5342
7	6.7282	6.4720	6.2303	6.0021	5.7864	5.5824	5.3893	5.2064	5.0330	4.8684	4.5638	4.2883	4.1604	4.0386	3.8115	3.6046	3.2423	2.9370	2.6775
8	7.6517	7.3255	7.0197	6.7327	6.4632	6.2098	5.9713	5.7466	5.5348	5.3349	4.9676	4.6389	4.4873	4.3436	4.0776	3.8372	3.4212	3.0758	2.7860
9	8.5660	8.1622	7.7861	7.4353	7.1078	6.8017	6.5152	6.2469	5.9952	5.7590	5.3282	4.9464	4.7716	4.6065	4.3030	4.0310	3.5655	3.1842	2.8681
10	9.4713	8.9826	8.5302	8.1109	7.7217	7.3601	7.0236	6.7101	6.4177	6.1446	5.6502	5.2161	5.0188	4.8332	4.4941	4.1925	3.6819	3.2689	2.9304
11	10.3676	9.7868	9.2526	8.7605	8.3064	7.8869	7.4987	7.1390	6.8052	6.4951	5.9377	5.4527	5.2337	5.0286	4.6560	4.3271	3.7757	3.3351	2.9776
12	11.2551	10.5753	9.9540	9.3851	8.8633	8.3838	7.9427	7.5361	7.1607	6.8137	6.1944	5.6603	5.4206	5.1971	4.7932	4.4392	3.8514	3.3868	3.0133
13	12.1337	11.3484	10.6350	9.9856	9.3936	8.8527	8.3577	7.9038	7.4869	7.1034	6.4235	5.8424	5.5831	5.3423	4.9095	4.5327	3.9124	3.4272	3.0404
14	13.0037	12.1062	11.2961	10.5631	9.8986	9.2950	8.7455	8.2442	7.7862	7.3667	6.6282	6.0021	5.7245	5.4675	5.0081	4.6106	3.9616	3.4587	3.0609
15	13.8651	12.8493	11.9379	11.1184	10.3797	9.7122	9.1079	8.5595	8.0607	7.6061	6.8109	6.1422	5.8474	5.5755	5.0916	4.6755	4.0013	3.4834	3.0764
16	14.7179	13.5777	12.5611	11.6523	10.8378	10.1059	9.4466	8.8514	8.3126	7.8237	6.9740	6.2651	5.9542	5.6685	5.1624	4.7296	4.0333	3.5026	3.0882
17	15.5623	14.2919	13.1661	12.1657	11.2741	10.4773	9.7632	9.1216	8.5436	8.0216	7.1196	6.3729	6.0472	5.7487	5.2223	4.7746	4.0591	3.5177	3.0971
18	16.3983	14.9920	13.7535	12.6593	11.6896	10.8276	10.0591	9.3719	8.7556	8.2014	7.2497	6.4674	6.1280	5.8178	5.2732	4.8122	4.0799	3.5294	3.1039
19	17.2260	15.6785	14.3238	13.1339	12.0853	11.1581	10.3356	9.6036	8.9501	8.3649	7.3658	6.5504	6.1982	5.8775	5.3162	4.8435	4.0967	3.5386	3.1090
20	18.0456	16.3514	14.8775	13.5903	12.4622	11.4699	10.5940	9.8181	9.1285	8.5136	7.4694	6.6231	6.2593	5.9288	5.3527	4.8696	4.1103	3.5458	3.1129
25	22.0232	19.5235	17.4131	15.6221	14.0939	12.7834	11.6536	10.6748	9.8226	9.0770	7.8431	6.8729	6.4641	6.0971	5.4669	4.9476	4.1474	3.5640	3.1220
30	25.8077	22.3965	19.6004	17.2920	15.3725	13.7648	12.4090	11.2578	10.2737	9.4269	8.0552	7.0027	6.5660	6.1772	5.5168	4.9789	4.1601	3.5693	3.1242
40	32.8347	27.3555	23.1148	19.7928	17.1591	15.0463	13.3317	11.9246	10.7574	9.7791	8.2438	7.1050	6.6418	6.2335	5.5482	4.9966	4.1659	3.5712	3.1250
50	39.1961	31.4236	25.7298	21.4822	18.2559	15.7619	13.8007	12.2335	10.9617	9.9148	8.3045	7.1327	6.6605	6.2463	5.5541	4.9995	4.1666	3.5714	3.1250
60	44.9550	34.7609	27.6756	22.6235	18.9293	16.1614	14.0392	12.3766	11.0480	9.9672	8.3240	7.1401	6.6651	6.2402	5.5553	4.9999	4.1667	3.5714	3.1250

ATD LEVEL III

PILOT PAPER

FUNDAMENTALS OF FINANCE

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) (i) Distinguish between internal and external sources of finance for a limited liability company. (2 marks)

(ii) Discuss the advantages of leasing an asset compared to borrowing or purchase of an asset. (4 marks)

(b) Explain the types of agency costs that arise in agent-principal relationship between shareholders and managers. (4 marks)

(c) Suggest the merits of using discounted cash flows in evaluating long term investments. (4 marks)

(d) ABC Ltd. is in the Telecommunications Industry. The company's statement of financial position as at 31 December 2020 is as shown below:

Liability and Owners Equity	**Sh.'000'**	**Assets**	**Sh.'000'**
Current liabilities	12,500	Current assets	32,500
18% debentures (Sh.1,000 par)	16,000	Net fixed assets	42,875
10% preference shares	6,250		
Ordinary shares (Sh.10 par)	12,500		
Retained earnings	28,125		
	75,375		75,375

Additional information

1. The debentures are now selling at Sh.950 in the market and will be redeemed 10 years from now.
2. By the end of the last financial period, the company had declared and paid Sh.5.00 as dividend per share. The dividends are expected to grow at an annual rate of 10% in the foreseeable future. Currently, the company's shares are trading at Sh.38 per share at the local stock exchange.
3. The preference shares were floated in 2015 and their prices have remained constant.
4. Most banks are lending money at an interest of 22% per annum.
5. The Corporation tax rate is 40% per annum.

Required:

The market weighted cost of capital for this firm. (6 marks)

(Total: 20 marks)

QUESTION TWO

(a) Outline four factors that might influence the working capital needs of a firm. (4 marks)

(b) Highlight the mechanism of resolving the agency problem between shareholders and debenture holders. (5 marks)

(c) Suggest reasons why the market for venture capital is not well developed your country. (5 marks)

(d) The following information was from XYZ feasibility studies on the viability of two investment alternatives:

Project I

Initial cost Sh.100,000 and Sh.160,000 at the beginning of year 4 it will generate the following inflows:

Year	**Sh.**
1 – 3	80,000 per annum
4 – 6	50,000 per annum

Project II

Initial cost Sh.200,000 and Sh.80,000 at the beginning of year 4 and it will generate the following inflows:

Year	**Sh.**
1 – 2	100,000 per annum
3 – 6	70,000 per annum

Required:
Using the cost of finance of 12%, compute the net present value (NPV) and the profitability index (P.I) of these two projects, and advise the company accordingly.

(6 marks)
(Total: 20 marks)

QUESTION THREE

(a) Distinguish between business risk and financial risk. (4 marks)

(b) Discuss the traditional functions of a financial manager in a contemporary corporate set-up. (8 marks)

(c) Consider the returns of two securities, A and B which depend on the states of nature with the following probabilities:

		Returns	
State	**Probability**	**A**	**B**
Favourable	0.3	12	6
Moderate	0.4	15	7.5
Unfavourable	0.3	10	5

Required:
Advice the investor on which of the two securities to invest in on the basis of risk and expected return. (8 marks)

(Total: 20 marks)

QUESTION FOUR

(a) Explain the concept of time value of money. (2 marks)

(b) Joseph intends to invest in a piece of land costing Sh.850,000. He is certain that he will sell the piece of land for Sh.910,000 the same time next year, a sure gain of Sh.60,000. Given that banks are offering a 10% interest, should he invest in this project? (2 marks)

(c) Discuss the weaknesses associated with profit maximisation as a goal of the firm. (4 marks)

(d) Suggest practical problems faced by finance managers in capital budgeting decisions. (6 marks)

(e) Highlight the factors influencing the dividend policy of a firm. (6 marks)
(Total: 20 marks)

QUESTION FIVE

(a) ABC Limited is considering a project with the following details:

	Sh.
Project X cost	500,000
Scrap value	100,000

The stream of income before depreciation and taxes are as follows:

	Sh.
Year 1	100,000
Year 2	120,000
Year 3	140,000
Year 4	160,000
Year 5	200,000

Use a tax rate of 50% and straight-line depreciation.

Required:

(i) Calculate the Accounting Rate of Return (ARR) and advice the company. (6 marks)

(ii) Highlight the advantages of using the ARR technique in evaluating projects (4 marks)

(b) Outline the key functions of Capital Markets. (5 marks)

(c) Highlight the key principles of Islamic finance. (5 marks)

(Total: 20 marks)

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ATD LEVEL III

FUNDAMENTALS OF FINANCE

TUESDAY: 2 August 2022. Morning paper. **Time Allowed: 3 hours.**

Answer ALL questions. Marks allocated to each question are shown at the end of the question. Show ALL your workings. Do NOT write anything on this paper.

QUESTION ONE

(a) With regard to sources of finance, explain the following terms:

(i) Factoring. (2 marks)

(ii) Business angel. (2 marks)

(b) Analyse three factors that could influence the dividend decision of a firm. (6 marks)

(c) Sunlight Limited intends to invest in Project Y or Project Z.

The following are expected net cash flows from the projects:

	Project	
	Y	Z
Year	Sh.	Sh.
0	(12,000,000)	(10,000,000)
1	3,000,000	4,000,000
2	3,000,000	3,000,000
3	3,200,000	2,000,000
4	2,000,000	4,000,000
5	1,000,000	2,000,000

The company's cost of capital is 12%.

Required:

(i) Calculate the profitability index for each project. (8 marks)

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

(Total: 20 marks)

QUESTION TWO

(a) Explain three causes of conflict between shareholders and external auditors. (6 marks)

(b) Citing three reasons, justify the time preference value for money. (6 marks)

(c) The following information relates to Mafuta Safi Ltd.:

	Sh."000"
Purchase of raw materials (all on credit)	6,700
Usage of raw materials	6,500
Sale of finished goods (all on credit)	25,000
Cost of sales (finished goods)	18,000
Average creditors	1,400
Average raw materials inventory	1,200
Average work in progress	1,000

	Sh."000"
Average finished goods inventory	2,100
Average debtors	4,700

Assume a 365 days year.

Required:

The length of the operating cash cycle. (8 marks)

(Total: 20 marks)

QUESTION THREE

(a) Explain the following terms as used in valuation of securities:

(i) Fair value. (2 marks)

(ii) Investment value. (2 marks)

(b) In a finance and investment seminar, one of the facilitators' noted that "Management of debtors is crucial in working capital management".

With reference to the above statement, discuss three factors that might influence the level of debtors in a firm. (6 marks)

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

	Sh."000"
Ordinary share capital (par value Sh.100)	120,000
Preference share capital (par value Sh.100)	52,500
Debentures (par value Sh.1,000)	40,500
	213,000

Additional information:

1. The company has paid ordinary dividend of Sh.2.5. The dividend is expected to grow at a constant rate of 10% in the future and floatation cost of 12% of the market price.
2. The current market price of one ordinary share of Kenland Ltd. is Sh.120.
3. New preference shares can be sold at Sh.140 per share with a dividend of Sh.15 per share and floatation costs of Sh.8 per share.
4. The company pays out all its earning as dividends.
5. The company will sell 14% debentures with a maturity of 10 years at Sh.1,100 per debenture.
6. The par value of the debenture is Sh.1,000.

Corporate 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 debenture capital. (2 marks)

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

(Total: 20 marks)

QUESTION FOUR

(a) Explain the following terms as used in finance:

(i) Cryptocurrency. (2 marks)

(ii) Block chain technology. (2 marks)

(b) Islamic finance and investment has experienced substantial and unprecedented growth in recent years.

With reference to the above statement, discuss four Islamic finance drivers. (8 marks)

(c) John Juma borrowed Sh.500,000 on 1 May 2022 from a local bank repayable semi-annually over a two year period. The interest rate on the loan is 8% per annum.

Required:

A loan repayment schedule for the two year period. (4 marks)

(d) Kikwetu Enterprises is considering purchasing a five year Sh.1,000 par value debenture which is currently trading on the securities exchange is at Sh.950. The debenture has a coupon rate of interest of 12% per annum. Kikwetu Enterprises' required rate of return is 16%.

Required:

(i) The intrinsic value of the debenture. (3 marks)

(ii) Advise Kikwetu Enterprises on whether or not to purchase the debenture. (1 mark)

(Total: 20 marks)

QUESTION FIVE

(a) Outline four circumstances under which a company would prefer to use short term debt financing compared to other sources of finance. (4 marks)

(b) Explain three differences between a firm's "value maximisation goal" and "profit maximisation goal". (6 marks)

(c) The following information relates to returns of two securities under three states of the economy as follows:

State of economy	**Probability**	**Return on security X**	**Return on security Y**
Boom	0.40	18%	24%
Normal	0.50	14%	22%
Recession	0.10	12%	21%

Required:

(i) Expected returns on security X and Y. (2 marks)

(ii) Standard deviation of returns on security X and security Y. (2 marks)

(iii) Kalama Chivuva has invested 20% in security X and 80% in security Y. Determine his expected portfolio return. (1 mark)

(iv) Calculate covariance of returns of security X and Y. (3 marks)

(v) Determine the portfolio risk as measured by standard deviation. (2 marks)

(Total: 20 marks)

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ATD LEVEL III

FUNDAMENTALS OF FINANCE

TUESDAY: 5 April 2022. Morning paper. **Time Allowed: 3 hours.**

Answer ALL questions. Marks allocated to each question are shown at the end of the question. Show ALL your workings. Do NOT write anything on this paper.

QUESTION ONE

(a) Explain two types of financial decisions made in a company. (4 marks)

(b) Discuss four potential causes of conflict between shareholders and the management. (8 marks)

(c) The management of Daylight Ltd. is in the process of evaluating the company's dividend policy.

The following information is provided:

1. The company paid Sh.1,300,000 million as dividends in the last financial year.
2. The profit after tax for the last financial year was Sh.3,900,000 million.
3. The company has not issued any preference shares.
4. The earnings growth rate has been constant at 10% per annum for the past ten years.
5. The expected profits after tax for the current financial year is Sh.5,200,000 million.
6. The company anticipates investment opportunities worth Sh.2,800,000 million in the current financial year.
7. The capital structure of the company consists of 70% equity and 30% debt.

Required:
The optimal total dividends for the current financial year if the company wishes to adopt each of the following dividend policies:

(i) Residual dividend policy. (2 marks)

(ii) Constant payout ratio policy. (2 marks)

(iii) Stable predictable dividend policy. (2 marks)

(iv) Regular plus extra dividend policy. (2 marks)

(Total: 20 marks)

QUESTION TWO

(a) Distinguish between an "aggressive" and "conservative" working capital policy of a firm. (4 marks)

(b) Master Ltd. is a private company which intends to be listed in the Securities Exchange. The company recently paid a dividend of Sh.2.50 per share. This dividend is expected to grow at the rate of 20% for 2 years and then drop to a growth rate of 15% per annum for the next 3 years.
Thereafter the dividend will grow at 10% per annum indefinitely. The required rate of return is 12%.

Required:
The intrinsic value of the company's share. (6 marks)

(c) Salama Limited's capital structure as at 1 October 2020 was as follows:

	Sh."000"
Ordinary share capital (Sh.10 each)	373,000
Retained earnings as at 1 October 2020	27,000
18% debentures	400,000
	800,000

The above capital structure is considered optimal. The company is considering the acquisition of an investment project that will cost Sh.270 million. In order to finance the investment project, the company would be required to raise additional capital.

Additional information:

1. The company can obtain additional debentures at an interest rate of 18% per annum.
2. The dividend for the year ended 30 September 2021 is expected to be Sh.2.40 per share.
3. Additional ordinary shares can be issued on the Securities Exchange at a price of Sh.54 per share net of floatation cost amounting to Sh.6 per share.
4. Dividends are expected to grow at a rate of 8% each year for the foreseeable future.
5. Corporation tax is 30%.

Required:

(i) Cost of debentures. (2 marks)

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

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

(iv) Amount of money for the investment project to be financed through the issue of new ordinary shares if the company is to maintain the optimal capital structure. (2 marks)

(v) Amount of money for the investment project to be raised through debentures. (2 marks)

(Total: 20 marks)

QUESTION THREE

(a) Explain two applications of the time value of money concept. (4 marks)

(b) Citing three reasons, justify why a firm may prefer to raise finance through equity rather than debt finance. (6 marks)

(c) The following information relates to the forecasted returns of securities A and B and their probabilities during the financial year ending 30 April 2022.

Probability security	Forecasted returns A (%)	Security B (%)
0.15	10	8
0.20	12	10
0.10	8	7
0.15	15	12
0.25	14	10
0.15	9	8

Required:

(i) The expected return of security A and security B. (4 marks)

(ii) The standard deviation of security A and security B. (4 marks)

(iii) Advise a potential investor on the security to invest in using relative risk. (2 marks)

(Total: 20 marks)

QUESTION FOUR

(a) Explain four differences between "Islamic banking" and "conventional banking". (8 marks)

(b) Delight Limited is considering its capital budgets for the year 2022. The following information relates to three mutually exclusive projects that the management is contemplating to undertake:

Project	Initial cash out flows (Sh. "000")	Cash in flows (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

Additional information:

1. The firm has a capital budget ceiling of Sh.20 million.
2. The cost of capital for Delight Limited is 10% per annum.

Required:

Advise the management on the projects to undertake using each of the following investment appraisal techniques.

(i) Net Present Value (NPV). (6 marks)

(ii) Profitability Index (IP). (6 marks)

(Total: 20 marks)

QUESTION FIVE

(a) Identify four factors that might influence the working capital need of a company. (4 marks)

(b) Hazyl Ltd. applies the Baumol's Model to control its cash balances. The firms annual cash requirements are estimated at Sh.4,000,000. It incurs a cost of Sh.20 per transaction when either buying or selling marketable securities in the money market.

The firm's investment in marketable securities guarantees a return of 10% per annum. There are no minimum cash balances.

Optimal cash balance $= \sqrt{\frac{2\,FC}{i}}$

Where: F = fixed cost incurred when selling securities to raise cash.
C = Annual cash disbursements.
i = Annual interest earned at the marketable securities portfolio.

Required:

(i) The optimal cash balance (3 marks)

(ii) Assuming 360 days in a year, determine the cash conversion period. (2 marks)

(iii) The average cash balance. (1 mark)

(c) Explain the following types of risks in relation to finance and investments.

(i) Political risk. (2 marks)

(ii) Technological risk (2 marks)

(d) Zenkel Traders borrowed Sh.10,000,000 at an interest rate of 15% per annum from Pesa Bank. The loan is to be repaid in equal annual instalments for the next six years.

Required:

Prepare a loan amortisation schedule. (6 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

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ATD LEVEL III

FUNDAMENTALS OF FINANCE

THURSDAY: 16 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) Explain the following forms of dividend:

(i) Stock dividend. (2 marks)

(ii) Scrip dividend. (2 marks)

(b) Propose three strategies a firm could use in management of cash in the context of working capital financing policies. (6 marks)

(c) The forecasted rate of return from investment in securities X and Y over the next 5 years are as follows:

Forecasted returns (%)

Year	Security X	Security Y
2022	10	12
2023	12	8
2024	8	13
2025	15	11
2026	10	6

Required:

(i) The expected rate of return for security X and security Y. (2 marks)

(ii) The standard deviation of returns for security X and security Y. (4 marks)

(iii) The coefficient of variation of security X and security Y. (2 marks)

(iv) Interpret results in (c) (i) and (c) (ii) above. (2 marks)

(Total: 20 marks)

QUESTION TWO

(a) Explain four remedial measures to agency conflict between shareholders and debenture holders. (8 marks)

(b) Peterson Chacha borrowed Sh.5,000,000 from XYZ commercial bank at an interest rate of 14% per annum. The loan is to be repaid in equal annual instalments over a period of 4 years.
Interest on the loan is to be paid on a reducing balance basis.

Required:

Prepare a loan amortisation schedule. (4 marks)

(c) Whiteshell Ltd.'s capital structure is provided as follows:

	Sh."000"
Ordinary share capital	60,000
Reserves	20,000
10% debentures	25,000
8% preference share capital	15,000
	120,000

Additional information:

1. The firm is expected to generate annual operating profit before interest and tax of Sh.10,000,000 in perpetuity.
2. The firm has acceptable investment opportunities worth Sh.2,000,000 to be financed in each year.
3. Corporation tax rate is 30%.

Required:

(i) Total ordinary dividend payable in each year if the firm adopts residual dividend policy. (6 marks)

(ii) Total ordinary dividend payable in each year if the firm adopts 60% payout ratio policy. (2 marks)

(Total: 20 marks)

QUESTION THREE

(a) (i) Differentiate between "riba" and "gharar" as used in Islamic finance. (4 marks)

(ii) Explain three principles of Islamic finance. (6 marks)

(b) Dynamic PLC intends to invest in project Y which is expected to generate the following cash flows:

Year	Cash flows Sh.
0	–100,000
1	20,000
2	30,000
3	40,000
4	50,000
5	30,000

Additional information:

1. The cost of capital is 12% per annum.
2. The acceptable discounted payback period for Dynamic PLC is 3 years.

Required:

Advise the management of Dynamic PLC on whether to invest in Project Y using the following methods:

(i) Net present value (NPV). (4 marks)

(ii) Profitability index. (2 marks)

(iii) Discounted payback period. (4 marks)

(Total: 20 marks)

QUESTION FOUR

(a) Propose four challenges faced by small and medium sized enterprises (SMEs) in raising capital. (8 marks)

(b) Fanuel Oketch is considering making equal annual payments into his saving account at the end of each year over a period of 5 years. He expects to earn interest on the deposit at the rate of 6% per annum, compounded annually. Oketch is targeting to raise a cumulative sum of Sh.3,000,000 after 5 years to finance an investment project.

The future value of an ordinary annuity in 5 years at the rate of 6% is 5.6371.

Required:

The annual instalment to be deposited into his account each year. (2 marks)

(c) Galaxy Ltd. are considering undertaking an expansion programme which is expected to cost Sh.20 million. The expansion will be a diversification from their mainstream activities into the mining industry.

The firm's capital structure which is considered optional is given as follows:

	Sh."000"
Equity capital	80,000
Long term debt	20,000
	100,000

Additional information:

1. The firm will finance Sh.6 million of additional funds from internal sources.
2. New ordinary shares can be issued at a price of Sh.50 each. A floatation cost of Sh.5 per share will be incurred.
   The most recent dividend paid by the firm was Sh.2. This is expected to grow at the rate of 5% each year in perpetuity.
3. New 8% irredeemable debentures can be issued at a market price of Sh.110 each. The par value of each unit is Sh.100. A floatation cost of 5% of the par value will be incurred.
4. Corporation tax rate applicable is 30%.

Required:

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

(ii) The after tax cost of 8% debt. (2 marks)

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

(iv) The firm's weighted marginal cost of capital. (4 marks)

(Total: 20 marks)

QUESTION FIVE

(a) Explain the following concepts of valuation of a security:

(i) Going concern value. (2 marks)

(ii) Liquidation value. (2 marks)

(iii) Intrinsic value. (2 marks)

(b) Summarise six factors to consider when making financing decisions. (6 marks)

(c) The following information relates to Xylights Ltd. as at 31 December 2019 and 2020:

Year	**2019**	**2020**
	Sh."000"	**Sh."000"**
Closing stock of finished goods	2,000	3,000
Accounts receivables	3,500	5,500
Account payables	3,000	6,000

Additional information:

1. The total sales for the year ended 31 December 2020 were Sh.20 million.
2. From past experience 80% of firm's sales are on credit sales. This trend is not expected to change in the foreseeable future.
3. The cost of sales of the firm for the year 2020 was Sh.10 million.
4. All purchases are usually on credit basis.
5. Assume that a year has 52 weeks.

Required:

The working capital cycle (in weeks) for the year ended 31 December 2020. (8 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	4.1100	3.9539	3.3150
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	19.908	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