STRATHMORE INSTITUTE OF MATHEMATICAL SCIENCES

BACHELOR OF BUSINESS SCIENCE ACT/FENG/FE

END OF SEMESTER EXAMINATION

BSF 1204 CORPORATE FINANCE

DATE: 25th March 2022 Time: 2 Hours

Instructions

1. This examination consists of **FIVE** questions.
2. Answer **Question ONE (COMPULSORY)** and any other **TWO** questions.

Question One

a)

Nyakemincha Ltd, is a manufacturing business that current operates in a country where it is the industry norm to give credit terms to customers. The finance manager of the firm has made a proposal to the board of directors on who the firm can attempt to turn around the firm dwindling sales. The following are the details that has been collected on a fact-finding mission:

The firm currently operates with terms of net 80 days and currently has account receivable investment amounting to Kes 4,400,000 for the year ended 31st December 2021. Eighty (80%) of the firm's current sales are on credit.

The firm is contemplating on changing the credit terms: it intends to offer 2% discount to cash and credit customers who will pay within 20 days, while maintaining the normal credit period to a maximum of 90 days. This will result to an increase in firm's total sales by 60%. All cash customers and 40% of credit customers will take advantage of the discount offer. The average debt collection period will increase to 80 days from the current 72 days. The bad debts are expected to remain at 3% of the credit sales. Once the proposal is implemented it will result to an increase in trade payable by Kes 1,000,000 while the inventory investment will remain at 5% of the firm's total sales.

The firm's working capital is financed using overdraft finance from a local bank which charges 16% annual interest cost. The current gross profit margin of 40% will be maintained even after the proposal is implemented.

Assume a 360-days year and corporate tax rate of 30%.

Required:

Advise the finance director whether the proposed changes will be financially acceptable. (14 marks).

b) Sean Ltd, has set a minimum cash account balance of Kes 7,500. The average cost to the company of making deposits or selling investments is Kes 18 per transaction and the standard deviation of its cash flows was Kes 1,000 per day during the last year. The average interest rate on investments is 5.11% per year. Assume a 365 days year. Determine the;

   i) spread,
   ii) the upper limit and
   iii) return point for the cash account of Co using the Miller-Orr model and explain the relevance of these values for the cash management of the company. (5 marks)

c) There are instances of conflict of decisions, that a firm can take when appraising a capital project, using the net present value method and the internal rate of return method. How do we resolve such conflicts? (2 marks)

d) Mahir. Co. is appraising an investment project which it hopes will boost its performance. The project will cost Kes 20 million and the firm will carry out a market survey to evaluate the marketability of the produce to be made; this will cost Kes 2 million. These amounts must be paid in full in the first year of operation. The project is expected to have an economic life of 4 years; after which the machine will be sold for scrap at 10% of its initial cost. Forecast sales volume, selling price, variable cost and fixed costs will be as follows:

Year	*1*	*2*	*3*	*4*
Sales (units/year)	300,000	410,000	525,000	220,000
Selling price(Kes/unit)	125	130	140	120
Variable cost(Kes/unit)	71	71	71	71
Fixed costs (Kes '000)	3,000	3,100	3,200	3,000

The corporation tax rate is 30% and tax are paid one year in arrears. The government of Kenya through the relevant tax laws grants any capital investment a 25% capital allowances, on the machine's initial cost, on a reducing balance basis. The project's after-tax cost of capital is 12%.

Required: Calculate the projects net present value. (9 marks)

Question Two

a) Identify and explain the key stages in the capital investment decision-making process, and the role of investment appraisal in this process. (5 marks)

b) Taliban Ltd., wants to raise capital for an upcoming. It intends to raise the capital as indicated below:

Sources of capital	*Weight (%)*
Long-term debt	40%
Preference share	10%
Ordinary share capital	50%

The debt financing will done as follow: the company will borrow an 8% long-term loan The total amount that can be raised through the bank, amounts to Kes 10 million. Any extra debt will be financed through an issue of the of a 7 % bonds are redeemable in six years' time at a 5% premium to their nominal value of Kes 100 per bond and have an ex interest market value of Kes 104·50 per bond.

Equity financing will be raised from both retained earnings, which currently stands at Kes 15 million and a second offering of shares. The ordinary shares of the Co. have an ex div market value of Kes 4·70 per share and an ordinary dividend of 36·3 cents per share has just been paid. Historic dividend payments have been as follows:

Year	*2018*	*2019*	*2020*	*2021*
Dividend per share (cents)	30.9	32.2	33.6	35

Any new issue of shares will attract Kes 0.50 issue cost per share.

The balance of capital will be raised through 4% irredeemable preference shares with a nominal value of Kes 100. Similar preference shares have a market value Kes 40.

AMH Co pays profit tax at an annual rate of 30% per year.

Required: calculate the marginal cost of capital for the new capital that the firm intends to raise. (15 marks)

Question Three

Mandigo Co needs to increase production capacity to meet increasing demand for an existing product, 'Kahawa', which is used in food processing. A new machine, with a useful life of four years and a maximum output of 600,000 kg of Kahawa per year, could be bought for Kes800,000, payable immediately. The scrap value of the machine after four years would be Kes30,000. Forecast demand and production of Kahawa over the next four years is as follows:

Year	1	2	3	4
Demand (kg)	1·4 million	1·5 million	1·6 million	1·7 million

Existing production capacity for Kahawa is limited to one million kilograms per year and the new machine would only be used for demand additional to this.

The current selling price of Kahawa is Kes8·00 per kilogram and the variable cost of materials is Kes5·00 per kilogram. Other variable costs of production are Kes1·90 per kilogram. Fixed costs of production associated with the new machine would be Kes240,000 in the first year of production, increasing by Kes20,000 per year in each subsequent year of operation.

Mandigo Co pays tax one year in arrears at an annual rate of 30% and can claim capital allowances (tax-allowable depreciation) on a 25% reducing balance basis. A balancing allowance is claimed in the final year of operation.

Mandigo Co uses its after-tax weighted average cost of capital when appraising investment projects. It has a cost of equity of 11% and a before-tax cost of debt of 8·6%. The long-term finance of the company, on a market-value basis, consists of 80% equity and 20% debt.

Required:

(a) Calculate the net present value of buying the new machine and advise on the acceptability of the proposed purchase (work to the nearest Kes1,000). **(15 marks)**

(b) Calculate the internal rate of return of buying the new machine and advise on the acceptability of the proposed purchase (work to the nearest Kes1,000). **(5 marks)**

Question Four

Plot Co sells both Product P and Product Q, with sales of both products occurring evenly throughout the year.

Product P

The annual demand for Product P is 300,000 units and an order for new inventory is placed each month. Each order costs Kes 267 to place. The cost of holding Product P in inventory is 10 cents per unit per year. Buffer inventory equal to 40% of one month's sales is maintained.

Product Q

The annual demand for Product Q is 456,000 units per year and Plot Co buys in this product at Kes 1 per unit on 60 days credit. The supplier has offered an early settlement discount of 1% for settlement of invoices within 30 days.

Other information

Plot Co finances working capital with short-term finance costing 5% per year. Assume that there are 365 days in each year.

Required:

a) Calculate the following values for Product P:

i) The total cost of the current ordering policy. (3 marks)

ii) The total cost of an ordering policy using the economic order quantity; (3 marks)

iii) The net cost or saving of introducing an ordering policy using the economic order quantity and advise the company on the best course of action (2 mark)

b) Calculate the net value in dollars to Plot Co of accepting the early settlement discount for Product Q. Advise the firm on whether the supplier's offer is financially acceptable. (6 marks)

c) Discuss how invoice discounting and factoring can aid the management of trade receivables. (6 marks)

Question Five

a) Discuss 5 factors that may influence the dividend policy a firm can adopt, in relation to the amount of dividend payable. (5 marks)

b) The following are the financial data extracted from the financial statements of EABL Ltd, for the year ended 30 June 2018.

Total sales	Kes 20 million
Total assets turnover	2 times
Debt to total assets	30%
Current ratio	3X
Inventory turnover	5X
Average collection period	18 days
Fixed assets turnover	5X
Gross profit margin	25%

Assume 360 days in a year

Required:

A statement of financial position of EABL Ltd, as at 30 June 2018. (8 Marks).

c) Under the agency theory, the debtholder stands to lose if the shareholder's take actions that increase their risk exposure. In line with the above statement, what some of measures that the debtholders can take to reduce the risk exposure from the shareholders' actions. (Each point = 1 mark). (4 marks)

d) Discuss whether changing the capital structure of a company can lead to a reduction in its cost of capital. (3 marks)