TECHNICAL UNIVERSITY OF MOMBASA

School of Business

Department of Accounting & Finance

UNIVERSITY EXAMINATION FOR:

BACHELOR OF COMMERCE & BACHELOR OF BUSINESS ADMINSTRATION

BFI 4301: FINANCIAL MANAGEMENT

END OF SEMESTER EXAMINATION

SERIES:JULY 2025

TIME: 2 HOURS

Instructions to Candidates

You should have the following for this examination

-*Answer Booklet, examination pass and student ID*

This paper consists of **FIVE** questions. Attempt question ONE (Compulsory) and any other TWO questions.

Do not write on the question paper.

Question One

(a) In January 20X4 Tinoco Ltd gave the go-ahead to its research and development department to pursue work on a major new product line, code-named 'Product Z'. The cash expenditure to date on this development has totaled sh.200,000, consisting of sh.70,000 during 20X4 and sh.130,000 during 20X5. The work is now complete, resulting in a marketable product.

In order to market this product the company will need to build and equip a new factory specifically for the purpose. A suitable site has been found which, if the company decides to go ahead with production, will be purchased on 1 January 20X6 at a cost of sh.270,000. Construction of the factory will then commence immediately and take an estimated two years at a total cost of sh.2.5 million. Half of this sum will be payable as a stage payment at the end of the first year of construction, the balance being payable on completion.

Installation of the necessary machinery can be done during the last two months of construction and will cost a total of sh.1,250,000. sh.250,000 of this will be paid upon delivery and the balance in two equal annual instalments on the anniversary of delivery.

The company intends to undertake a significant advertising campaign for this new product, which will commence twelve months before completion of the factory. During its first year this campaign will cost sh.150,000 and will then continue for the next two years at a cost of sh.250,000 and sh.100,000 respectively in each of those years. Payment will be made at the end of each of the three years. As a consequence of this campaign the company is forecasting an annual demand for Product Z of 400,000 units and expects this demand level to continue for ten years after production commences. Initial production will commence immediately upon completion of the factory at an annual rate to match demand.

Production costs will consist of sh.4 per unit of variable costs and annual fixed costs of sh.300,000. After five years of production the equipment within the factory will need replacement. The old machinery will be sold for sh.250,000 and new equipment acquired at the same cost and on the same terms as the original equipment. This replacement can be achieved without disruption to production.

At the end of the ten-year production period the product will be abruptly discontinued, and the production facility will then be surplus to the company's requirements. It is expected that the machinery can be sold at that time for sh.250,000 and that the factory and site will command a price of sh.1 million.

Despite extensive market research during the last six months at a cost of sh.50,000 the company remains uncertain as to the price it will be able to charge for this new product. However, the sales director is currently suggesting a selling price of sh.7.50 per unit.

The company's discount rate is 15% per annum.

Required:

(i) Calculate the net present value of the proposed new production, assuming the sales director's forecast selling price is correct. (10 marks)

(ii) Calculate the minimum selling price that must be set in order to make Product Z a viable proposition. (5 marks)

(b) Compute the market value of the firm, value of shares and the average cost of capital from the following information. **(10 marks)**

Net operating income sh. 100,000

Total investment sh. 500,000

Equity capitalization Rate:

(a) If the firm uses no debt 10%

(b) If the firm uses sh. 25,000 debentures 11%

(c) If the firm uses sh. 400,000 debentures 13%

Assume that sh. 500,000 debentures can be raised at 6% rate of interest whereas

sh. 400,000 debentures can be raised at 7% rate of interest.

(c) Modigliani and Miller advised management to ignore capital structure and concentrate on improving the organization's sales. Briefly explain why this theory has been successfully challenged. **(5 marks)**

Question Two

(a) A Company expects a net income of sh. 100,000. It has sh. 250,000, 8% debentures.

The equality capitalization rate of the company is 10%. Calculate the value of the firm and overall capitalization rate according to the net income approach (ignoring income tax). **(10 marks)**

(b) If the debenture debts are increased to sh. 400,000. What shall be the value of the firm and the overall capitalization rate? **(5 marks)**

(c) **'**Management/Directorate of any organization is necessary evil which should be done away with' Critic this assertion **(5 marks)**

Question Three

(a) Giovanni Ltd is considering investing in an ice cream plant to operate for the next four years. After that time the plant will be worn out, and Giovanni, the owner of the company, wishes to retire in any case. The plant will cost sh. 5,000 and is expected to have no realisable value after four years. If worthwhile the plant will be purchased at the end of an accounting period. Capital allowances at the rate of 18% per annum (reducing balance) will be available in respect of the expenditure.

Revenue from the plant will be sh. 7,000 per annum for the first two years and sh. 5,000 per annum thereafter. Incremental costs will be sh. 4,000 per annum throughout.

You may assume that all cash flows occur at the end of the financial year to which they relate. Assume Giovanni Ltd pays corporation tax at 21% and has a cost of capital of 10%.

Required:

(i) Calculate the tax saved through capital allowances and show when the savings arise.

(4 marks)

(ii) Advise Giovanni Ltd on whether or not to proceed with investment in the ice cream plant. (6 marks)

(iii) Show what difference it would make if the plant were to be purchased and sold at the beginning of the accounting period. Comment on the wisdom of disposing of an asset on the first day of an accounting period. (4 marks)

(b) Kumar company has sales of sh. 2,500,000. Variable cost of sh.. 1,250,000 and fixed cost of sh.. 50,000 and debt of sh. 1,250,000 at 8% rate of interest.

Required:

Calculate combined leverage. (6 marks)

Que**stion Four**

Strathburn Ltd is a family-owned medium-sized company specialising in the distribution of office stationery.

It is currently reviewing its investment plans for the future and has under consideration three projects to be

funded out of CU2 million of investments which have been specially set aside.

The projects and their respective cash flows and probabilities are as follows.

Project	Initial cost Sh. Millions	PV of net earnings Sh. millions	Probability
LMT	2.0	7.0	0.417
		1.0	0.583
GTV	1.0	3.5	0.5
		0.5	0.5

CUJ	1.0	3.0	0.5
		0	0.5

Required:

(a) Compare the outcomes of investing all the funds in project LMT with that of sharing them between projects GTV and CUJ (round to nearest sh.5,000). **(4 marks)**

(b)

(i) On the basis of the expected values calculated, in which project(s) would you invest?

(ii) What are the weaknesses inherent in this approach to decision-making?

(iii) What other factors should be considered in making this decision? **(8 marks)**

(b) Paramount Products Ltd. wants to raise sh. 100,000 for diversification project. Current estimates of EBIT from the new project is sh. 22,000 p.a. Cost of debt will be 15% for amounts up to and including sh. 40,000, 16% for additional amounts up to and including sh. 50,000 and 18% for additional amounts above sh. 50,000.

The equity shares (face value of sh. 10) of the company have a current market value of Sh. 40. This is expected to fall to sh. 32 if debts exceeding sh. 50,000 are raised. The following options are under consideration of the company

Options	Debt	Equity
1	50%	50%
Ii	40%	60%
iii	60%	40%

Required:

Determine EPS for each option and state which option should the Company adopt. Tax rate is 50%. **(8 marks)**

Question Five

MT is a manufacturer of electrical products, with advanced information technology features. MT's results have stagnated over recent years with static sales and falling operating profit margins. Recent developments in information technology have however allowed MT to develop new lines, which the directors would like to launch on markets as soon as possible, although competition is strong. MT needs to invest in new manufacturing technology if it is to launch these products. If the products are successful, MT is in the process of developing further new lines, although these are likely to be in even tougher markets.

MT is listed on its local stock exchange and has traditionally had a mixture of debt and equity finance. Its abbreviated income statement and balance sheet for the year ended 30 April 20X5 are set out below.

ABBREVIATED INCOME STATEMENT FOR THE YEAR ENDED 30 APRIL 20X5

	Sh.'000
Sales	42,000
Operating profit for the year	5,500
Interest payable	1,000
Net profit before taxation	4,500
Tax (21%)	945
Net profit after taxation	3,555
Dividends proposed	1,050
Retained profit for the year	2,505

ABBREVIATED BALANCE SHEET AS AT 30 APRIL 20X5

	Sh.'000
ASSETS	
Non-current assets at written down values	22,500
Current assets	11,500
	34,000
EQUITY AND LIABILITIES	
Capital and reserves	
Share capital sh.1 shares	4,000
Accumulated profits	10,500
	14,500
Non-current liabilities	

8% redeemable loan stock	12,500
Current liabilities	7,000
	34,000

The directors expect the new products to generate additional sales of sh.15 million in the year ended 30 April 20X6, and that the operating profit margin on these products will average 8%. The board predicts that sales and operating profit margins will improve in subsequent years, as the new lines become established. To generate these sales, the directors estimate that sh.9 million will need to be invested. The directors intend to raise these funds, either:

(a) By a rights issue of sh.1 ordinary shares at a premium of sh.2 per share

(b) By an issue of 10% loan stock at par

Even if the rights issue is chosen, MT's board would prefer to maintain a constant dividend payout ratio.

Current loan stock holders have indicated to the directors that they are unhappy with MT taking on more debt, as they believe shareholders will benefit at their expense. Certain major shareholders have also expressed concern that although dividends are linked with the results MT achieves, there appears to be no link between directors' remuneration and results.

Required:

(a) For each of the financing options

(i) Prepare a forecast income statement for the coming year **(4 marks)**

(ii) Calculate the forecast earnings per share for the coming year **(4 marks)**

(iii) Calculate the projected level of gearing at the end of the coming year. **(4 marks)**

Assume there will be no changes in results and balance sheet other than those arising from the extra sales and additional finance.

(b) Discuss why the interests of loan holders may conflict with those of shareholders and instances where their interaction may not conflict and explain how stock holders loan can affect how a company achieves its key financial objectives. **(8 marks)**