



PIONEER INTERNATIONAL UNIVERSITY

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UNIVERSITY EXAMINATIONS

ACADEMIC YEAR: 2021/2022

SEMESTER: SEP-DEC

UNIT CODE: FNCE 3111

UNIT NAME: ADVANCED FINANCIAL MANAGEMENT

DATE: DEC 2021

TIME: 2 HOURS

Instructions: Answer question ONE and any other TWO questions.

QUESTION ONE (30 Marks)

- a) BC Ltd intends to purchase a stone crushing machine costing Ksh. 40Million. The machine is expected to have an economic life of two years with zero salvage value at the end of its useful life. To adjust for risk on this investment, probabilities have been attached to the expected cash flows over the two year period as shown below

Year 1		Year 2	
Cash flow (Sh, '000')	Probability	Cash flows (Sh, '000')	Probability
25,000	0.40	12,000	0.20
		16,000	0.30
		22,000	0.50
30,000	0.60	20,000	0.40
		25,000	0.50
		30,000	0.10

Additional information

- The cash flows in year 2 are conditional on cash flows in year 1. All cash flows have been reported on after tax basis
- The cost of capital is 10%
- Ignore depreciation

Required

- Advice whether BC ltd should purchase the machine (20 marks)
 - Apart from method used in (i) above, describe other four methods used to incorporate risk in capital budgeting (4 marks)
- b) Describe four managerial options used in capital budgeting (4 marks)
- c) Explain the term the agency problem and how it arises in finance (2 marks)

QUESTION TWO (20 Marks)

- a) BAC Ltd. is considering three possible capital projects for next year. Each project has a 1-year life, and project returns depend on next year's state of the economy. The estimated rates of return are shown below.

State	Probability	Rates of return		
		A	B	C
Recession	0.25	10%	9%	14%
Average	0.50	14%	13%	12%
Boom	0.25	16%	18%	10%

Required:

- Find each project's standard deviation and coefficient of variation (10 marks)
 - Compute the correlation coefficient between A and B as well as A and C (5 marks)
- b) Discuss the defensive mechanisms by a target company against threats of takeovers (5 marks)

QUESTION THREE (20 Marks)

- a) ABC Ltd has 300,000 of retained earnings available. The kr is 13%. If the company exhausts the retained earnings, it can issue equity whose cost is 14%. The firm expects that it can borrow up to 400,000 at 5.6%, beyond that additional debt will have an after tax cost of 8.4%. Unlimited amounts of funds can be raised by issuing preference stock at a current cost of 10.6%. ABC Ltd capital structure is 40% debt, 50% equity, 10% preference shares.

Required

- Define the term break point and calculate the marginal cost of capital (MCC) of the various ranges of financing (10 Marks)
- b) Dividend policy has been one of the hottest research topics in corporate finance. As such, F. Black (1976) described it as "the dividend puzzle." Nearly forty years later, the puzzle still remains unresolved. Discuss the Miller and Modigliani (MM) (1961) theory and any other four dividend policy theories (10 Marks)

QUESTION FOUR (20 Marks)

- a) You have just graduated from PIU with a first class degree in finance and secured an attachment at Zemele Investments as a finance assistant. Your maiden assignment is to determine the value of a call option. Assume that you have been provided with the following information about a call option: $P = \text{Sh } 20$, $X = \text{Sh } 20$, $t = 3$ months, $KRF = 12\%$, $\delta^2 = 0.16$. i. Determine the value of the option (8 Marks)
- b) ABC Ltd sells merchandise on credit terms, requiring payment within 60 days of sale. On average it takes 85 days to manufacture, warehouse and sale a finished product. Raw material suppliers require payment within 45 days and employees are paid every 15 days. The firm calculates its weighted average payment period for raw materials and labour to be 35 days. Determine the operating cycle and the cash conversion cycle (8 Marks)
- c) The time value of money concept states that a shilling today is worth more than a shilling tomorrow. Highlight the key reasons why an investor would prefer cash today as opposed to cash tomorrow (4 marks)

QUESTION FIVE (20 Marks)

a) The following statement of financial position and income statement relate to BC limited. The firms share is currently priced at sh. 60 per share.

BC LTD

Statement of financial position as at 31 December 2020

Assets	Sh '000'	Equity and liabilities	Sh '000'
Cash	400	Accounts payable	5,000
Account receivable	3,000	Notes payable-bank	1,000
Inventories	4,000	Total current liabilities	6,000
Total current assets	7,400	Mortgages	4,000
Premises	1,000	Debentures	6,000
Plant (NBV)	5,000	Total long term debt	10,000
Equipment (NBV)	8,000	Preference shares (100,000 shares)	1,000
Total fixed assets	14,000	Ordinary shares (500,000 shares)	1,000
Total Assets	21,400	Share premium	2,000
		Retained earnings	1,400
		Total shareholders' equity	5,400
		Total	21,400

BC LTD

Income Statement for the year ended 31 December 2020

	Sh '000'
Sales	6,000
Less: cost of goods sold	3,500
Less: selling expenses	1,000
EBIT	1,500
Less: interest expense	1,100
EBT	400
Less: taxes (30%)	120
Net income	280

Required

- i. Altman Z-score for BC ltd and interpret its meaning (15 marks)
- b) Explain the term efficient market hypothesis and discuss the main forms of EMH (5 marks)

