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KIRIRI WOMEN'S UNIVERSITY OF SCIENCE AND TECHNOLOGY
UNIVERSITY EXAMINATION, 2015/2016 ACADEMIC YEAR
FOURTH YEAR, SECOND SEMESTER EXAMINATION
FOR THE DEGREE OF BACHELOR OF SCIENCE
(BUSINESS ADMINISTRATION)

Date: August, 2016

Time:

KFI 406 – INVESTMENT ANALYSIS 11

INSTRUCTIONS TO CANDIDATES

ANSWER QUESTION ONE (COMPULSORY) AND ANY OTHER TWO QUESTIONS

QUESTION ONE (30 MARKS)

- a) List and explain five factors that can influence the value of a call option. (10 Marks)
- b) You have been provided with the following information

Stock Price	Shs. 100
Exercise Price	Shs. 95
Interest rate	10%
Time to expiration	3 months
Standard deviation	50%

Apply the Black-Scholes model to value a call option with information provided above.

(6 Marks)

- c) Mapato Limited is a company involved in the processing of cooking oil. The management is considering whether to replace an existing cooler with a new one. The old cooler is fully depreciated and has no salvage value. If not replaced, the company will continue to incur Sh.1.8 million as annual operating expenses and an additional Sh.500,000 in repair costs per annum over the next fifteen years. The new cooler costs Sh.3,150,000. Its annual operating expenses and repair costs are estimated at Sh.1.3 million and Sh.350,000 respectively over its estimated economic life of fifteen years. It is expected to be worthless after the expiry of this period. The cost of capital is 10% and the company depreciates its assets using the straight-line method. (Assume a 30% corporation tax rate.)

Required:

- i) Compute the incremental net annual cash flows if the old cooler is replaced. (10 Marks)
- ii) Using the net present value (NPV) method, advice the management on whether or not to replace the old cooler. (4 Marks)

QUESTION TWO (20 MARKS)

The management of Afro Quatro Ltd want to establish the amount of financial needs for the next two years. The balance sheet of the firm as at 31 December 2001 is as follows:

	<u>Sh.'000'</u>
Net fixed assets	124,800
Stock	38,400
Debtors	28,800
Cash	<u>7,200</u>
Total assets	<u>199,200</u>
Financed by:	
Ordinary share capital	84,000
Retained earnings	35,200
12% long-term debt	20,000
Trade creditors	36,000
Accrued expenses	<u>24,000</u>
	<u>199,200</u>

For the year ended 31 December 2001, sales amounted to Sh.240,000,000. The firm projects that the sales will increase by 15% in year 2002 and 20% in year 2003.

The after tax profit on sales has been 11% but the management is pessimistic about future operating costs and intends to use an after-tax profit on sales rate of 8% per annum

The firm intends to maintain its dividend payout ratio of 80%. Assets are expected to vary directly with sales while trade creditors and accrued expenses form the spontaneous sources of financing. Any external financing will be effected through the use of commercial paper.

- a) Determine the amount of external financial requirements for the next two years. (10 Marks)
- b) i) A proforma balance sheet as at 31 December 2003. (8 Marks)
- ii) State the fundamental assumption made in your computations in (a) and b (i) above. (2 Marks)

QUESTION THREE (20 MARKS)

- a) X Ltd intends to take-over Y Ltd by offering two of its share for every five shares in Y Company Ltd. Relevant financial data is as follows:

	X Ltd	Y Ltd
EPS	Shs 2	Shs 2
Market price per share	Shs 100	Shs 40
Price earnings ratio	50	20
No. of shares	100,000	250,000
Total earnings	Shs 200,000	Shs 500,000
Total market value	Shs 10,000,000	Shs 10,000,000

REQUIRED:

- i) Compute the combined EPS & MPS (6 Marks)
- ii) Has wealth been created for shareholders? (4 Marks)
- b) Explain five advantages of growth by acquisition. (10 Marks)

QUESTION FOUR (20 MARKS)

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

STATE OF THE ECONOMY	PROBABILITY OF OCCURENCE	RATE OF RETURN		
		A	B	C
Recession	0.25	10%	9%	14%
Average	0.50	14	13	12
BOOM	0.25	16	18	10

REQUIRED:

- i) Find each project expected rate of return, variance, standard deviation and coefficient of variation. (9 Marks)
- ii) Compute the correlation coefficient between
- i) A and B (2 Marks)
 - ii) A and C (2 Marks)
 - iii) B and C (2 Marks)
- b) Compute the expected return on a portfolio if the firm invests equal wealth on each asset. (3 Marks)
- c) Compute the standard deviation of the portfolio. (2 Marks)

QUESTION FIVE (20 MARKS)

- a) Discuss briefly four techniques a company might use to hedge against the foreign exchange risk involved in foreign trade. (8 Marks)
- b) You are provided with the following information in respect of four listed companies.

	Working Capital	Retained Earnings	Earnings Before interest and tax	Market value of equity	Total Assets	Liabilities	Sales
	Sh.'000'	Sh.'000'	Sh.'000'	Sh.'000'	Sh.'000'	Sh.'000'	Sh.'000'
A Ltd.	4,000	60,000	10,000	20,000	200,000	120,000	200,000
B Ltd.	2,000	20,000	0	5,000	100,000	80,000	120,000
C Ltd.	6,000	20,000	-30,000	48,000	800,000	740,000	900,000
D Ltd.	40,000	200,000	30,000	100,000	1,800,000	1,000,000	2,000,000

Required:

- i) The Z-Score for each of the companies. Comment on the results obtained. (8 Marks)
- ii) It has been suggested that other ratios ought to be incorporated into Altman's bankruptcy prediction model. What is your opinion on this? (4 Marks)