



STRATHMORE INSTITUTE OF MATHEMATICAL SCIENCES
BBS ACTUARIAL SCIENCE
END OF SEMESTER EXAMINATION
BSA 2103: FINANCIAL STATEMENT ANALYSIS AND VALUATION IN ACTUARIAL
SCIENCE

DATE: 8th September 2021

Time: 2 Hours

QUESTION ONE

- a) Giving relevant examples, explain briefly how the accounting ratios can help the company determine its strategic and competitive capabilities. **(6 marks)**
- b) The following financial information of Zuri co ltd is presented to financial analyst, which he intends to use the information in making economic decision.

	Zuri co ltd Shs 'm'
Revenues	5,000
Profit before interest and tax	350
Finance costs	50
Profit before taxes	300
Income tax expense	100
Profit after tax	200
Total assets	2,500
Total non-current liabilities	1,000
Equity	1,500
Total equity and liabilities	2,500

Required:

Using the financial information above, calculate the return on equity (ROE) for Zuri co ltd and explain the factors that can lead to a better ROE. (8 marks)

- c) Quota co ltd is a public limited company which deals with the manufacture of specialized equipments in Joyland, in a foreign country. New tax laws has been enacted in the country and as a result of the new legislation, Quota co ltd Limited has start experiencing cash flow problems. The following is the financial information of subsidiaries of Quota co ltd for the year ending 31 March 2020.

Quota Industries Limited

	Alpha Ltd	Beta Ltd	Cytlon Ltd	Dyke Ltd
Working capital	40,000	20,000	60,000	400,000
Retained earnings	600,000	200,000	200,000	2,000,000
Profit before interest and tax	100,000	0	(300,000)	300,000
Total assets	2,000,000	1,000,000	8,000,000	18,000,000
Market value of equity	200,000	50,000	480,000	1,000,000
Liabilities	1,200,000	20,000	7,400,000	10,000,000
Revenue	2,000,000	1,000,000	8,000,000	18,000,000

Required:

- i) Determine the Altman's Z Score for each subsidiary company and analyzing on the results obtained (8 marks)*
 - ii) Provide any other ratios that can be incorporated into the Altman's bankruptcy prediction model to make more meaningful. (3 marks)*
 - iii) List any five indicators of possible business failure (5 marks)*
- (Total: 30 marks)**

QUESTION TWO

Shown below are the financial statements of Joyland Co Ltd for its most recent two years:

Joyland Company Limited
Statement of Profit or Loss
For the Year Ending

	FY2	FY1
	Shs '000'	Shs '000'
Revenue	150,000	110,000
Cost of sales	(117,000)	(85,800)
Gross profit	33,000	24,200
Distribution costs	(6,000)	(5,000)
Administrative expenses	(9,000)	(9,200)
Finance costs- loan note interest	(1,750)	(500)
Profit before tax	16,250	9,500
Income tax expense	(5,750)	(3,000)
Profit for the year	10,500	6,500

Joyland Company Limited
Statement of Financial Position
As At

	FY2	FY1
	Shs '000'	Shs '000'
Assets		
Non-current assets		
Property, plant and equipment	148,000	85,000
Current assets		
Inventory	15,500	12,000
Trade receivables	11,000	8,000
Bank	500	5,000
	27,000	25,000
Total assets	175,000	110,000
Equity and liabilities		
Equity		
Equity shares of Shs. 1 each	80,000	80,000
Retained earnings	15,000	10,000
	95,000	90,000
Non-current liabilities		
10% loan notes	55,000	5,000
Current liabilities		
Trade payables	21,000	13,000
Current tax payable	4,000	2,000
	25,000	15,000
Total equity and liabilities	175,000	110,000

Additional Information:

1. Depreciation for the PPE was Shs. 3.5m; and there was no disposal of PPE during the year.
2. The company had the policy of paying dividends at the end of the year

Required:

- a) **Present the cash flows from operating activities for FY2 and provide the analysis (10 marks)**
 - b) **Assuming the figure provided in the statement of financial position are average compute for the two years:**
 - (i) **Return on Capital Employed (R.O.C.E) (2 marks)**
 - (ii) **Current ratio (2 marks)**
 - (iii) **Interest bearing debt to equity ratio (2 marks)**
 - c) **Based on the solution to part (b) above analyze the ratios and provide recommendation to a potential investor. (4 marks)**
- (Total: 20 marks)**

QUESTION THREE

Shown below are the financial statements of Joyland Co Ltd for its most recent two years:

Statements of profit or loss for the year ended 31 March:

	2021	2020
	Shs '000'	Shs '000'
Revenue	150,000	110,000
Cost of sales	(117,000)	(85,800)
Gross profit	33,000	24,200
Distribution costs	(6,000)	(5,000)
Administrative expenses	(9,000)	(9,200)
Finance costs- loan note interest	(1,750)	(500)
Profit before tax	16,250	9,500
Income tax expense	(5,750)	(3,000)
Profit for the year	10,500	6,500

Statements of financial position as at 31 March:

	2021	2020
	Shs '000'	Shs '000'
Assets		
Non-current assets		
Property, plant and equipment	118,000	85,000
Goodwill	30,000	-
	148,000	85,000
Current assets		
Inventory	15,500	12,000
Trade receivables	11,000	8,000
Bank	500	5,000
	27,000	25,000
Total assets	175,000	110,000
Equity and liabilities		
Equity		
Equity shares of Shs. 1 each	80,000	80,000
Retained earnings	15,000	10,000
	95,000	90,000
Non-current liabilities		
10% loan notes	55,000	5,000
Current liabilities		
Trade payables	21,000	13,000
Current tax payable	4,000	2,000
	25,000	15,000
Total equity and liabilities	175,000	110,000

The following information is available:

- (i) On 1 January 2021, Joyland Co Ltd purchased the trading assets and operations of Success Co. Ltd for Shs. 50 million and, on the same date, issued additional 10% loan notes to finance the purchase. Success Co. Ltd was an unincorporated entity and its results (for three months from 1 January 2021 to 31 March 2021) and net assets (including goodwill not subject to any impairment) are included in Joyland Co Ltd's financial statements for the year ended 31 March 2021. There were no other purchases or sales of non-current assets during the year ended 31 March 2021.
- (ii) Extracts of the results (for three months) of the previously separate business of Success Co. Ltd, which are included in Joyland Co Ltd's statement of profit or loss for the year ended 31 March 2021, are:

	Shs '000'
Revenue	30,000
Cost of sales	(21,000)
Gross profit	9,000
Distribution costs	(2,000)
Administrative expenses	(2,000)

- (iii) The following six ratios have been correctly calculated for Joyland Co Ltd for the year ended 31 March 2020:

Return on capital employed (ROCE)	10.5%
Net assets (equal to capital employed) turnover	1.16 times
Gross profit margin	22%
Profit before interest and tax margin	9.1%
Current ratio	1.7:1
Gearing [debt/(debt+equity)]	5.3%

Required:

(a) Calculate for the year ended 31 March 2021:

- (i) Equivalent ratios (all six) to the above for Joyland Co Ltd based on its reported figures; and**
- (ii) Equivalent ratios to the first FOUR only for Joyland Co Ltd excluding the effects of the purchase of Success Co. Ltd.**

Note: Assume the capital employed for Success Co. Ltd is equal to its purchase price of Shs. 50 million. (10 marks)

- (b) Assess the comparative financial performance and position of Joyland Co Ltd for the year ended 31 March 2021.**

Your answer should refer to the effects of the purchase of Success Co. Ltd.

(10 marks)

(Total: 20 marks)

QUESTION FOUR

- a) Explain what is meant by the term 'Earnings management' **(2 marks)**
- b) Recording the substance of transactions, rather than their legal form, is an important principle in financial accounting. Abuse of this principle can lead to profit manipulation; non-recognition of assets and substantial debt not being recorded on the balance sheet.

Required:

Describe how the use of off-balance sheet financing can mislead users of financial statements (your answer should lay emphasis on earnings management). (6 marks)

- c) For the year ending 31st December 2020, Stimulus products limited had a net income of shs.2, 500,000. The company declared and paid shs.200, 000 of dividends on preferred stock. The company also had the following information about their ordinary shares.

Shares outstanding on 1 st January 2020	1,000,000
Shares issued on 1 st April 2020	200,000
Shares repurchased (treasury shares) on 1 st October 2020	(100,000)
Shares outstanding on 31 st December 2020	1,100,000

Required:

Determine

- i) **The company's weighted average number of shares outstanding (4 marks)**
- ii) **The company's basic EPS (2 marks)**
- d) Bobbyland Company limited reported net income of Kshs. 750,000 for the year ended 31st December 2020. The company had a weighted average of 690,000 ordinary shares. In addition, the company has only one potentially dilutive security: Kshs. 50,000 of 6% convertible bonds, convertible into a total of 10,000 ordinary shares. Assuming a tax rate of 30%

Required:

Determine the basic and diluted E.P.S. (6 marks)

QUESTION FIVE

- a) (i) Explain briefly the work performed by financial analysts **(2 marks)**
(ii) Discuss the importance of performing the financial analysis **(2 marks)**
- b) Distinguish between vertical and horizontal analysis using a well-illustrated examples. **(8 marks)**
- c) Explain the effect of both finance lease and operating lease on the following:
- i) Statement of financial position **(2 marks)**
 - ii) Statement of profit or loss and other comprehensive income **(2 marks)**
 - iii) Profitability ratios (i.e. asset turnover ratios, return on equity) **(4 marks)**
- (Total: 20 marks)**

