



PIONEER INTERNATIONAL UNIVERSITY

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UNIVERSITY EXAMINATIONS

UNIT CODE: FNCE 4112 UNIT NAME: FINANCIAL MODELLING AND FORECASTING

SEMESTER: MAY - AUGUST 2022

ACADEMIC YEAR: 2021/2022

DATE: JULY

TIME: 2:00 HOURS

INSTRUCTIONS: Answer question one (30 marks) and any other two

QUESTION ONE – 30 MARKS

- a) Financial Ratios are crucial tools for analyzing financial statements. However, they have some limitations. Highlight the five key limitations of financial ratios (5 marks)
- b) The following information was extracted from the financial statements of Bidii and Jamii Ltd in respect of the year ended 30th September 2021

INCOME EXTRACTS FOR THE YEAR ENDED 30TH SEPT. 2021

	Bidii (shs '000s)	Jamii (shs 000)
Sales	497,000	371,000
Cost of sales	258,000	153,000
Operating profit	138,000	79,000
Interest expenses	19,000	-

FINANCIAL EXTRACTS AS AT 30TH SEPT. 2021

	Bidii (‘shs’ 000’s)	Jamii (‘shs’ 000’s)
Non-current assets		
<u>Current assets</u>		
Inventory	100,000	87,000
Debtors	46,000	42,000
Cash at bank	40,000	44,000
Current liabilities	98,000	108,000

Loan term loan	33,000	-
Shareholder's funds	197,000	157,000

Required to for each company to compute the following ratios:

- i. Acid test ratio. (2 marks)
- ii. Return on investment (ROI) (2 marks)
- iii. Inventory turnover. (2 marks)
- iv. Debt equity ratio. (2 marks)
- v. Gross profit margin. (2 marks)
- c) Explain the steps of the forecasting process. [10 marks]

QUESTION TWO -20 MARKS

The following are the sales figures of a firm for the past five years.

Years	2013	2014	2015	2016	2017
Amount (shs.)	458	511	757	580	601

Required:

- i) Represent this information in a scatter diagram. [3 marks]
- ii) Forecast the sales for 2018 using regression analysis. [7 marks]
- b) Explain five assumptions of Linear Regression analysis. [10 marks]

QUESTION THREE-20 MARKS

Outline the common causes of business failure

(8 marks)

The following data relates to a company in the telecommunication industry for the year to 31 December 2012:

	Ksh.000
Sales	25,678
Total assets	49,579
Total liabilities	5,044
Retained earnings	177
Working capital	-1,777
Earnings before interest and taxes	2,605
Markets value of equity	10,098
Book value of total liabilities	5,044

Required:

- i. Using the Altman Z-score model assess the financial health of the company (6 Marks)
- ii. Assume the facts as in the above illustration except that company is paying interest on a long-term debt instrument amounting to ksh 905,000 per year and that the company's

total liabilities is constituted in the ratio of 2:5 between current and non-current components

Required:

Using the Springate model assess the financial health of the company.

(6 Marks)

- a) What is the financial model? [2 marks]
- b) Give four examples of financial models and state the importance of the models. [4 marks]
- c) Discuss the components of the time series analysis? [4 marks]

QUESTION FOUR-20 MARKS

- a) The following information relates to sales of HP laptop for four years.

Sales of laptops in '000s					
Year		Quarter 1	Quarter 2	Quarter 3	Quarter 4
	1	50	61	72	59
	2	51	72	85	61
	3	53	58	87	78
	4	57	59	102	83

REQUIRED: Illustrate how trend and seasonal variations can be calculated and forecast the sales for year 6. (10 marks)

- b) Explain two impediments in time series analysis (2 marks)
- c) Give four examples of financial models and state the importance of the models. [4 marks]
- d) Discuss the components of the time series analysis? [4 marks]

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1. 2. 3. 4. 5. 6. 7. 8. 9. 10.