



ZCAS UNIVERSITY

**BBF4302-Treasury Management**

**Mid Semester Examination**

**Monday 16<sup>th</sup> October 2023**

**12:30- 15:30**

**TIME ALLOWED: THREE HOURS (plus 5 minutes to read through the paper)**

**INSTRUCTIONS:**

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**Instructions to Candidates:**

1. Section A: This question is compulsory and must be attempted
2. Section B Answer any **THREE (3)** questions from this section
3. This examination paper carries a total of **100Marks**

SECTION A: Question 1 is compulsory and must be attempted

QUESTION ONE

<b>Statement of Profit or Loss for the year ended 31-12-2020 and 31-12-2021</b>			
	2020		2021
Sales	301560		389620
Cost of Sale	167200		180040
Gross Profit	134360		209580
Operating Expenses	87300		153500
Profit before Interest and Tax	47,060.00		56,080.00
Interest Expense	7,500.00		10,200.00
Profit before Tax	39,560.00		45,880.00
<b>Statement of Financial Position as at 31-12-2020 and 31-12-2021</b>			
	K		K
<b>Non Current Assets</b>			
Property, Plant & Equipment	200,000.00		256,900.00
<b>Current Assets</b>			
Inventory	41,600.00		25,900.00
Receivables	67,200.00		54,120.00
Cash at Bank	18,200.00		11,280.00
<b>Total Assets</b>	<b>327,000.00</b>		<b>347,800.00</b>
<b>Equity and Liabilities</b>			
Equity (ordinary shares of K1 each)	100,000.00		120,000.00
Share Premium	20,000.00		30,000.00
Retained Earnings	89,300.00		77,250.00
	209,300.00		227,250.00
<b>Non-Current Liabilities</b>			
12% Loan Notes	60,000.00		85,000.00
<b>Current Liabilities</b>			
Payables	43,700.00		23,650.00
Taxation	14,000.00		11,900.00
<b>Total Equity &amp; Liabilities</b>	<b>327,000.00</b>		<b>347,800.00</b>

Financial ratios are quantitative metrics used to assess the financial health and performance of a company. They provide valuable insights into various aspects of a company's operations, including its profitability, liquidity, solvency, and efficiency. Financial ratios are commonly used by investors, analysts, and stakeholders to make informed decisions about a company's financial position.

**Required:**

Calculate the following financial ratios for each year and make relevant comments

- i. Gross Profit Margin
- ii. Net profit Margin'
- iii. Return on Capital Employed
- iv. Asset Turnover Ratio
- v. Current Ratio
- vi. Quick ratio
- vii. Inventory turnover Ratio
- viii. Payable payment period
- ix. Receivable Collection period
- x. Gearing ratios

**[Total:40Marks]**

**Section B: any three (3) questions of your choice**

**QUESTION TWO**

Suppose you are the Finance manager of a small manufacturing company that produces customized widgets. Your company uses a specific type of raw material, which is essential for widget production. You have a steady demand for this raw material, with an average requirement of 200 units per week. The cost of placing an order for the raw material is \$50 per order, and the cost of holding inventory is \$2 per unit per year.

1. Calculate the Economic Order Quantity (EOQ) for the raw material in this scenario  
**[5Marks]**
2. How many orders per year will you need to place to meet your demand? **[5Marks]**
3. What is the reorder point if you want to maintain a safety stock of 20 units? **[5Marks]**
4. How often should you reorder the raw material if you want to minimize your total inventory cost? **[5Marks]**

**[Total:20Marks]**



### QUESTION THREE

Imagine you are a Treasurer for a multinational corporation that operates in various countries. The company has multiple subsidiaries, each with its own cash balances in different currencies. The headquarters of the company is in the United States, and your primary responsibility is to manage the company's global cash positions efficiently.

- a) Given the diverse locations of your subsidiaries and their varied cash balances in different currencies, explain the concept of cash pooling. How can cash pooling be beneficial to your organization's cash management strategy, and what are the potential challenges or risks associated with implementing cash pooling? [5Marks]
- b) Discuss the different types of cash pooling structures available, such as notional pooling, zero balancing, and physical pooling. What are the advantages and disadvantages of each type, and under what circumstances might you choose one over the other? [5Marks]
- c) Suppose one of your subsidiaries is located in a country with strict currency controls and regulations. How might these regulations impact your ability to implement cash pooling, and what alternative cash management strategies or structures could you consider in this situation? [5Marks]
- d) Your company aims to optimize its liquidity and minimize borrowing costs. Explain how an interest optimization technique, such as target balancing, can be integrated into a cash pooling strategy. Provide an example of how this technique could work in practice. [5Marks]

[Total:20Marks]

### QUESTION FOUR

You are a financial analyst for a manufacturing company that wants to implement the Miller-Orr Model to manage its cash balances. The company has identified a need for an effective cash management strategy to avoid running into liquidity issues.

- a) Explain the objectives and principles of the Miller-Orr Model and how it helps organizations set upper and lower control limits for cash balances. [3Marks]
- b) The minimum cash balances of K2,000,000 is required at Liquid Express Solutions Limited and transferring money to and from the bank costs K5,000 per transaction. Inspections of daily cash flows over the past years (from Experience) suggests that the standard deviation of is 300,000 per day and hence the variance of 9,00,000,000. The interest rate is 0.1% per day. Calculate, the Spread between the Upper and the Lower Limit, the Upper Limit and the return point. [7Marks]
- c) Calculate the target cash balance, upper control limit (UCL), and lower control limit (LCL) for the company based on the given parameters: the company's daily cash flow volatility is K500,000, the required average cash balance is K3,000,000, and the Z-value for a 95% confidence level is 1.65. [7Marks]
- d) Describe the actions the company should take if its actual cash balance exceeds the UCL or falls below the LCL. How can the Miller-Orr Model assist the company in maintaining appropriate cash levels and managing liquidity efficiently? [3Marks]

[Total:20Marks]

#### QUESTION FIVE

- a) As the treasurer of a multinational corporation, explain how you would approach managing foreign exchange (FX) risk. Describe at least two different FX risk management strategies (Internal & External Methods), highlighting their advantages and potential drawbacks. **[5Marks]**
- b) You are the finance manager of a retail company that frequently holds cash to cover operational expenses and payments to suppliers. The company is considering adopting the Baumol Model to optimize its cash management.
- i. Explain the key assumptions of the Baumol Model and how it can help the company determine its optimal cash balance. **[3Marks]**
  - ii. Calculate the company's optimal cash balance using the Baumol Model, the number of transactions that will arise each year, the cost of making those transactions per year and the opportunity cost of holding cash per year based on the given parameters: the annual cash usage for operational expenses is K1,000,000, the fixed cost of transferring funds from investments to cash is K500, and the opportunity cost of holding cash is 5%. **[10Marks]**
  - iii. Discuss the implications of the calculated optimal cash balance on the company's cash management strategy. How can the Baumol Model assist the company in minimizing cash-related costs? **[2Marks]**

[Total:20Marks]