



**National University of  
Science and Technology**  
Think in Other Terms



**FACULTY OF COMMERCE  
DEPARTMENT OF FINANCE  
BACHELOR OF COMMERCE IN FINANCE  
SUPPLIMENTARY EXAMINATION–JULY 2015  
INSTITUTIONAL INVESTMENT ANALYSIS [CFI 4103]**

**TIME ALLOWED: THREE (3) HOURS**

**INSTRUCTIONS TO CANDIDATES**

1. Answer **Four (4)** Questions
2. Write neatly and legibly.

**INFORMATION TO CANDIDATES**

1. This paper contains **FOUR (4)** Questions.
2. Questions carry a total of **25 marks** each.
3. This paper contains **FOUR (4)** printed pages including cover page.
4. The businesses and persons in this question paper are intended to be fictitious.

## QUESTION ONE

a) You open an investment account with a brokerage firm and purchase 400 shares of Oasis Investment Bank at \$25 per share on margin. You borrow \$3 000 from the broker at a call rate of 5% per annum.

i. What is the initial margin in your account? **[3 marks]**

ii. If the share price falls by 25% by the end of the year, what will be the margin in your account by year end? **[4 marks]**

iii. If the maintenance margin is 30%, at what price will you receive a margin call from your broker? **[4 marks]**

Assuming that Oasis Investment Bank pays a dividend of \$0.20 per share, what will be the rate of return on your investment? **[4 marks]**

b) Differentiate between Bottom Up and Top Down Approach to investment analysis **[10 marks]**

**Total [25 marks]**

## QUESTION TWO

a) Suppose the risk free rate is 3%, expected return on the market portfolio is 13%, and its standard deviation is 23%. A Company from South Africa, Mkandla Investments, has a standard deviation of 50% but uncorrelated to the market.

i. Calculate Mkandla's beta and expected return. **[3,4 marks]**

ii. Explain the meaning of the results in i) above **[4 marks]**

b) Why do investors analyse and value shares? **[8 marks]**

c) Explain the impact of an illiquid market on the valuation of securities **[6 marks]**

**Total [25 marks]**

### QUESTION THREE

- a) The index model for mining stocks RioZim and Falgold is estimated using the following results

$$R_R = 1.0\% + 0.9 R_M + e_R$$

$$R_F = -2.0\% + 1.1 R_M + e_F$$

Given that the standard deviation of the market is 20% while firm specific risk for RioZim and Falgold is 30% and 10% respectively, find the standard deviation and the covariance between them. **[3, 3, 3 marks]**

- b) Evaluate emerging markets as a diversification option for international investors.

**[8 marks]**

- c) You are given the following information for shares listed on the Zimbabwe Stock Exchange:

Company	P/S ratio
Delta	0.01
Zeco	0.14
Econet	0.27
Cains	0.32

- i. Which stock is undervalued compared to others? Justify your choice

**[5 marks]**

- d) Why does the correlation among financial assets increase in an economic downturn (recession)?

**[ 3 marks]**

**Total [25 marks]**

### QUESTION FOUR

- a) Explain three reasons why the Zimbabwe Stock Exchange is currently underperforming compared to regional stock exchanges. **[12 marks]**

b) You are given the following distribution of Alpha stock, Gama stock and Treasury Bills:

	Bullish Market	Bearish Market	Crisis
Probability	0.5	0.3	0.2
Rate of Return Alpha	25%	10%	-25%
Rate of Return Gama	1%	-5%	35%
TBs	5%	5%	5%

Compute the expected return and standard deviations using scenario analysis, given the following alternatives:

- i. Half in Alpha and Half in T-Bills **[4 marks]**
- ii. Half in Alpha and Half in Gama stock **[4 marks]**
- iii. Which alternative is superior? Why? **[5 marks]**

**Total [25 marks]**

**END OF EXAMINATION PAPER**