

**MERU UNIVERSITY OF SCIENCE AND TECHNOLOGY**

**P.O. Box 972-60200 – Meru-Kenya**

**Tel: 020-2069349, 061-2309217. 064-30320 Cell phone: +254 712524293, +254 789151411**

**Fax: 064-30321**

**Website:** [**www.must.ac.ke**](http://www.must.ac.ke) **Email:** [**info@must.ac.ke**](mailto:info@must.ac.ke)

**University Examinations 2015/2016**

FOURTH YEAR SECOND SEMESTER EXAMINATION FOR THE DEGREE

OF

BACHELOR OF COMMERCE

**BFC 3480: CONTEMPORARY ISSUES IN FINANCE**

**DATE: APRIL 2016 TIME: 2 HOURS**

**INSTRUCTIONS:** *Answer question* ***one*** *and any other* ***two***questions.

**QUESTION ONE (30 MARKS)**

1. By use of a diagram, explain the tenet of dominance principle in portfolio theory(4 marks)
2. Briefly explain the following heuristic terms as used in behavioral finance.
3. Mental accounting (2 marks)
4. Anchoring (2 marks)
5. Overconfidence (2 marks)
6. Lazy mart Ltd is an all equity financed firm with a cost of equity of 16%. It is currently considering the following capital projects.

|  |  |  |  |
| --- | --- | --- | --- |
| **PROJECT** | **INITIAL OUTLAY (‘000’)** | **EXPECTED ONE YEAR** | |
|  |  | Cash flow (‘000’) | Beta |
| V | 1200 | 1400 | 1 |
| W | 1100 | 1300 | 0.8 |
| X | 1500 | 1800 | 2.1 |
| Y | 1000 | 1200 | 1.4 |
| Z | 1100 | 1300 | 1.5 |

The 91 day Treasury bill rate is 6% during the period and expected return on the NSE indes is 13%.

Required:

1. Using Sharpe-Litner Capital asset pricing model, which projects are acceptable (5 marks)
2. Which projects would be acceptable if they were discounted at the firms cost of capital, indicating incorrect decisions made using CAPM. (5 marks)
3. Zeta Industries is considering the acquisition of the Nota Corporation in a stock-for-stock exchange. Assume that no immediate synergistic benefits are expected. Selected financial data on the two companies are shown here:

|  |  |  |
| --- | --- | --- |
|  | Zeta | Nota |
| Sales (millions) | Shs 500 | Shs 100 |
| Earnings after taxes (millions) | Shs 30 | Shs 12 |
| Common shares outstanding (millions) | 6 | 2 |
| Earnings per share | Shs 5 | Ss 6 |
| Common stock price per share | Shs 50 | Shs 40 |
| Dividends per share | Shs 2 | Shs 1.50 |

1. If Zeta is not willing to incur an initial dilution in its earnings per share – that is, not have the post-merger earnings per share be below shs 5 per share – and if Zeta also feels that it will have to offer the Nota shareholders a minimum of 25 percent over Nota’s current market price, what is the relevant range of Nota per-share stock prices with which Zeta is working? (5 marks)
2. Calculate Zeta’s post-merger earnings per share if the Nota stockholders accept an offer by Zeta of shs 50 a share in a stock-for-stock exchange. (5 marks)

**QUESTION TWO (20 MARKS)**

You are intending to invest in shares of two companies, X1, and X2. Your broker gave you the following information about the holding period returns on the two hares, X1, and X2, 20 share NSE index and short term government securities over five periods:

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Period | Holding period returns (%) | | |  |
|  | Share X1, | Share X2 | NSE index | Short term government security |
| 1 | 22 | 18 | 12 | 8 |
| 2 | 24 | 16 | 11 | 7 |
| 3 | 20 | 20 | 13 | 9 |
| 4 | 18 | 24 | 14 | 10 |
| 5 | 21 | 14 | 10 | 8 |

**Required:**

Use the market model to:

1. Calculate betas for each company and comment on its volatility (8 marks)
2. Characteristic line for the two shares (4 marks)
3. Non market risk for the shares (8 marks)

**QUESTION THREE (20 MARKS)**

The following are the prices of three assets A, B and C over a period of 10 years.

|  |  |  |  |
| --- | --- | --- | --- |
| Period | Prices (shs) | | |
|  | A | B | C |
| 1 | 100 | 64 | 20 |
| 2 | 105 | 66 | 24 |
| 3 | 110 | 68 | 25 |
| 4 | 102 | 65 | 26 |
| 5 | 108 | 67 | 24 |
| 6 | 112 | 69 | 28 |
| 7 | 110 | 70 | 28 |
| 8 | 114 | 72 | 29 |
| 9 | 116 | 74 | 30 |
| 10 | 113 | 73 | 32 |

**Required:**

1. Calculate the holding period return on three assets A, B and C. (6 marks)
2. The risk of the three assets (6 marks)
3. Assuming you invested equally in the three assets, calculate the risk and returns of a portfolio consisting of asset A, B and C. (8 marks)

**QUESTION FOUR (20 MARKS)**

1. Discuss the challenges the Kenya government will face in operationalizing derivative markets.
2. Shining Rock Mining is a gold-mining firm that is concerned about controlling the volatility of its revenues. The current price of gold is shs 325 per ounce, but over the past year it has traded for as little as shs 250 and as much as shs 375. These price swings have been known to occur in as little as one month. Shining Rock expects to have 5,000 ounces of gold available for sale over the coming month.
3. If Shining Rock does not hedge these sales, what is the maximum amount of total revenue they could hope to receive based on prices over the past year? What is the minimum amount of total revenue they could hope to receive? (4 marks)
4. The futures price for gold delivered in one month is shs327. If Shining Rock sells its gold in the futures market, what will be its total revenue? (4 marks)
5. If Shining Rock buys a put option to sell gold in one month at shs327, and the put option costs shs3 per ounce, what will its total revenue be? (4 marks)

**QUESTION FIVE (20 MARKS)**

1. By use of a diagram, differentiate between traditional CAPM and CAPM according to Fischer Black (8 marks)
2. Following are the returns for three funds H, J and K, market index and 91 day Treasury bill over four periods:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Periods | Returns (%) on | | | | |
| Portfolio H | Portfolio J | Portfolio K | Market Index | 91 day T bill |
| 1 | 16 | 14 | 20 | 13 | 9 |
| 2 | 12 | 16 | 24 | 11 | 8 |
| 3 | 10 | 22 | 18 | 9 | 9 |
| 4 | 8 | 24 | 15 | 12 | 9 |

**Required:**

Evaluate the performance of the above portfolios using:

1. Sharpe measure (4 marks)
2. Treynor measure (4 marks)
3. Jensen alpha (4 marks)