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**GARISSA UNIVERSITY**

**UNIVERSITY EXAMINATION 2017/2018 ACADEMIC YEAR FOUR**

**THIRD TRIMESTER EXAMINATION**

**SCHOOL OF BUSINESS AND ECONOMICS**

**FOR THE DEGREE OF BACHELOR OF BUSINESS MANAGEMENT**

**COURSE CODE: BBM 414**

**COURSE TITLE: INVESTMENT AND PORTFOLIO MANAGEMENT**

**EXAMINATION DURATION: 3 HOURS**

**DATE: 08/08/18 TIME: 2.00-5.00 PM**

**INSTRUCTION TO CANDIDATES**

* **Attempt all questions**
* **Use sketch diagrams to illustrate your answer whenever necessary**
* **Do not carry mobile phones or any other written materials in examination room**
* **Do not write on this paper**

**This paper consists of FOUR (4) printed pages *please turn over***

**QUESTION ONE (COMPULSORY)**

1. Evaluate any four assumptions on which the capital asset pricing model (CAPM) is based clearly indicating how far they hold true in practice. **[5 marks]**
2. H ltd has a portfolio of capital projects which yields an average expected rate of return of 15% per annum. This return is subject to risk and this is estimated as a standard deviation of the probabilities of expected returns of 2.5 per cent. The risk free rate of interest is 6% per annum.

Three projects have come up for consideration by the board of directors and these are designated as M. N, and O. Details of the estimates made for them appear below.

Project

M n o

Expected return 10% 8% 6%

Risk(standard deviation of the probability of distribution) 1% 1.2% 2.4%

Coefficient of correlation of project returns with portfolio returns 0.58 0.89 -0.1

Required:

Using capital asset pricing model (CAPM), advice H ltd.On the project(s) to accept or reject. **[15 marks]**

**QUESTION TWO**

1. With the aid of a diagram differentiate between an ‘efficient portfolio and an optimum portfolio’ **[6 marks]**
2. The investment portfolio of mapeni limited consists of shares in five companies operating in different industries.

|  |  |  |
| --- | --- | --- |
| Company | Amount invested (sh. Millions) | Stock beta coefficient |
| A Ltd. | 160 | 0.5 |
| B Ltd. | 120 | 2.0 |
| C Ltd. | 80 | 4.0 |
| D Ltd. | 80 | 1.0 |
| E Ltd. | 60 | 3.0 |

The risk free rate is 8%. The market returns have the following probability distribution for the next period.

|  |  |
| --- | --- |
| Market return | Probability |
| 10 | 0.1 |
| 12 | 0.2 |
| 13 | 0.4 |
| 16 | 0.2 |
| 17 | 0.1 |

**Required:**

1. Compute the expected return from the market (RM) **[5 marks]**
2. Calculate the beta coefficient for the portfolio  **[5 marks]**
3. Determine the equation for the security market line **[4 marks]**

**QUESTIONTHREE**

1. Discuss the conceptual difference between the capital asset pricing model (CAPM) and the arbitrage pricing model (APT). **[6 marks]**

An investor has investment funds of sh. 1,000,000. He intends to apportion this fund into two securities. A and B. as follows; sh. 200,000 in security A and sh. 800,000 in security B.

The return on each security is dependent on the state of the economy as shown below

State of economy probability return on security A return on security B

Boom 0.4 18% 24%

Average 0.5 14% 22%

Recession 0.1 12% 21%

**Required**

1. Expected returns on the portfolio  **[4 marks]**
2. Standard deviation of each security **[4 marks]**
3. Correlation coefficient between security A and security B **[4 marks]**
4. Assess the extent of risk diversification through portfolio holdings. **[2 marks]**

**QUESTIONFOUR**

1. Evaluate the usefulness of Altman’s Z-score in predicting bankruptcy. **[6 marks]**
2. The following statement of financial position and statement of comprehensive income relate to wendani industries limited. The firm share is currently priced at sh. 6.00 per share.Wendani industries limited

Statement of financial position as at 31 December 2010.

Assets. Sh. Liabilities and shareholders’ equity sh.

Cash 400,000 accounts payable 5,000,000

Accounts receivables 3,000,000 notes payable 1,000,000

Inventories 4,000,000 total current liabilities 6,000,000

Total current assets 7,400,000 mortgages 4,000,000

Premises 1,000,000 debentures 6,000,000

Plant (NBV) 5,000,000 total long-term debt 10,000,000

Equipment (NBV) 8,000,000 preference shares (100,000 shares) 1,000,000

Total fixed assets 14,000,000 ordinary shares (500,000 shares) 1,000,000

Share premium 2,000,000

Retained earnings 1,400,000

Total shareholders’ equity 5,400,000

**Total assets 21,400,000 Total shareholders’ equity 21,400,000**

Wandani industries limited.

Comprehensive income for the year ended 31 December 2010.

Sh.

Sales 6,000,000

Less: cost of sales 3,500,000

Less selling and administrative expenses 1,000,000

Earnings before interest and taxes 1,500,000

Less interest expenses: 1,100,000

Earnings before taxes 400,000

Less taxes (30%) 120,000

Net income 280,000

**Required**

Altman’s z-score for wendani industries limited. And interpret it is meaning

Hint: Z=1.2x1+1.4x2+3.3x3+0.6x4+0.999x5. **[14 marks]**

**QUESTIONFIVE**

1. Compare and contrast the efficient market hypothesis with the school of thought termed behavioral finance **[10 marks]**
2. Behavioral finance points that investors possess information processing errors. Discuss the importance of information processing errors then list and explain four information processing errors. **[10 marks]**