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KIRIRI WOMEN'S UNIVERSITY OF SCIENCE AND TECHNOLOGY
UNIVERSITY EXAMINATION, 2023/2024 ACADEMIC YEAR
FIRST YEAR, FOURTH SEMESTER EXAMINATION
FOR THE DIPLOMA IN BANKING AND FINANCE
DBF 1106: INVESTMENT ANALYSIS

Date: 18TH APRIL 2023
Time: 11:30AM-1:30PM

INSTRUCTIONS TO CANDIDATES

ANSWER QUESTION ONE (COMPULSORY) AND ANY OTHER TWO QUESTIONS

QUESTION ONE (30 MARKS)

- a) Describe three types of market anomalies that can disprove their efficiency. (6 Marks)
- b) For accuracy purposes, the Black-Scholes Options Pricing model is based on a number of assumptions. List three of these assumptions. (6 Marks)
- c) With the help of examples, identify the risk perceptions adopted by different investors. (6 Marks)
- d) Security returns depend on only three risk factors-inflation, industrial production and the aggregate degree of risk aversion. The risk free rate is 8%, the required rate of return on a portfolio with unit sensitivity to inflation and zero-sensitivity to other factors is 13.0%, the required rate of return on a portfolio with unit sensitivity to industrial production and zero sensitivity to inflation and other factors is 10% and the required return on a portfolio with unit sensitivity to the degree of risk aversion and zero sensitivity to other factors is 6%. Security “i” has betas of 0.9 with the inflation portfolio, 1.2 with the industrial production and-0.7 with risk bearing portfolio— (risk aversion). Assume also that required rate of return on the market is 15% and stock i has CAPM beta of 1.1
Required: Compute security required rate of return using;
- i. CAPM (4 Marks)
- ii. APT (4 Marks)
- e) The beta is a commonly used measure in the analysis of asset performance. Highlight the applications of beta. (4 Marks)

QUESTION TWO (20 MARKS)

- a) With the aid of an illustration, demonstrate how feasible portfolios, efficient portfolios, and optimal portfolios are identified. (10 Marks)
- b) Investments are meant to earn a holder positive cash flows in the future. However, one needs to know the available options in order to make the right choice. Giving examples in each, evaluate the three main categories of investment types and their properties. (10 Marks)

QUESTION THREE (20 MARKS)

- a) Companies have a wide range of financing options available to them and their source of finance depends on various factors. With the aid of appropriate examples, discuss the factors that determine a firm's choice of finance. (5 Marks)
- b) Debentures are a form of debt finance commonly used by firms. Briefly examine the features of debentures. (6 Marks)

- c) Chika Ltd is a publicly trading company at the NSE. They intend on raising more funds by conducting a rights issue. Their current share price is Ksh. 150 and the subscription price of a right is Ksh. 130. If five share are needed to buy one right;
- What is the theoretical value of one right? (3 Marks)
 - What is the theoretical ex-rights value? (3 Marks)
 - If Chika's share price at the NSE two weeks after the rights issue ended was Ksh. 145, do you think the shares are overvalued? Justify your answer. (3 Marks)

QUESTION FOUR (20 MARKS)

- a) Annalisa is an investor who wishes to invest her savings in the NSE and she has identified two possible assets, X and Y. She has obtained the following information regarding the asset returns and possible outcomes;

Economy	Asset X	Asset Y
Boom: 0.5	15%	5%
Moderate: 0.3	8%	25%
Recession: 0.2	25%	18%

Required:

- Calculate the expected returns of assets X and Y. (4 Marks)
- Calculate the standard deviation of assets X and Y. (6 Marks)
- Calculate the portfolio expected return if she chose to invest equally in both assets. (2 Marks)
- Calculate the portfolio standard deviation. (5 Marks)
- Interpret the correlation coefficient of the portfolio to an investor. (3 Marks)

QUESTION FIVE (20 MARKS)

- Ankara Ltd. Is public company whose market share price Ksh. 50. They recently announced a dividend of Ksh. 5 in their last financial year. Considering their average annual dividends have grown at a constant rate of 10% and their cost of capital is 15%, what is their computed stock value? (4 Marks)
- Explain why the Arbitrage Pricing Theory model is considered superior to the Capital Asset Pricing Model. (6 Marks)
- Before the optimal investment is chosen, one needs to make some considerations given their situation. As such, discuss the steps taken in the decision making process when choosing an investment. (10 Marks)