The Management University of Africa
Sponsored by the Kenya Institute of Management

UNDERGRADUATE UNIVERSITY EXAMINATIONS

SCHOOL OF MANAGEMENT AND LEADERSHIP

DEGREE OF BACHELOR OF COMMERCE

FIN 412: **PORTFOLIO MANAGEMENT**

DATE: **9TH APRIL 2026**

DURATION: 2 HOURS

MAXIMUM MARKS: 70

INSTRUCTIONS:

1. Write your registration number on the answer booklet.
2. **DO NOT** write on this question paper.
3. This paper contains **SIX (6)** questions.
4. Question **ONE** is compulsory.
5. Answer any other **THREE** questions.
6. Question **ONE** carries **25 MARKS** and the rest carry **15 MARKS** each.
7. **Write all your answers in the Examination answer booklet provided.**

QUESTION ONE

Read the Case Study below carefully and answer the questions that follow:

EVALUATING RISK AND RETURN: A COMPARATIVE STUDY OF CAPM, APT, AND MARKOWITZ PORTFOLIO THEORY

Background

Investors and financial analysts rely on various models to assess risk, estimate returns, and optimize portfolios. Among the most prominent models are:

Capital Asset Pricing Model (CAPM) – A single-factor model that describes the relationship between expected return and risk (measured by beta); Arbitrage Pricing Theory (APT) – A multi-factor model that accounts for various macroeconomic risk factors affecting asset returns; and Markowitz Portfolio Theory (MPT) – A framework for constructing an efficient portfolio by diversifying assets to minimize risk while maximizing expected returns.

XYZ Asset Management, a Kenyan-based investment firm, is reviewing its risk-return assessment models to optimize its investment strategies. The firm manages portfolios for institutional and retail investors, each with different risk appetites and return expectations.

The Chief Investment Officer is concerned about market volatility and wants to determine which model best suits their investment analysis and decision-making. The firm currently applies CAPM but is considering APT and MPT for improved accuracy. To make an informed decision, the investment team must: Compare and contrast the models in terms of risk measurement, assumptions, and application; evaluate the strengths and weaknesses of each model in predicting asset returns and determine the best model based on Kenya's financial market conditions. The team must now analyze and present a recommendation based on their findings.

Required:

a) Compare and contrast CAPM and APT in terms of their assumptions, risk factors, applicability to the Kenyan financial market and assess the model that provides a more realistic framework for pricing assets. **(6 marks)**

b) Evaluate the effectiveness of CAPM and Markowitz Portfolio Theory and how they differ in assessing risk-return trade-offs. **(6 marks)**

c) Discuss how APT and MPT models address market risks and recommend the model that aligns with the investment needs of a long-term institutional investor. **(6 marks)**

d) Based on the challenges and objectives of XYZ Asset Management, recommend the model (CAPM, APT, or Markowitz Portfolio Theory) that would be the best choice for the firm. Justify your recommendation with practical examples from the Kenyan financial market. **(7 marks)**

QUESTION TWO

a) Analyze how the four components of the Capital Asset Pricing Model (CAPM) equation contribute to asset valuation and portfolio risk assessment. **(6 marks)**

b) Evaluate four hedging strategies that businesses can adopt to mitigate financial risks. **(4 marks)**

c) Examine the two fundamental assumptions when examining indifference and how they apply to Markowitz Portfolio Theory. **(5 marks)**

QUESTION THREE

a) Examine two ways in which cross-border listing impacts a company's financial growth and market reach. **(5 marks)**

b) Fund X has the following characteristics:
Fund Return (R_f) = 15%; Market Return (R_m) = 12%; Beta (β) = 1.2 and Risk-Free Rate (Rf) = 3%. Determine the fund's Jensen's Alpha and interpret it. **(5 marks)**

c) Analyze two psychological biases that affect an individual investor's decision-making. **(5 marks)**

QUESTION FOUR

a) Compare active and passive portfolio management strategies in terms of risk, cost, and performance predictability. **(5 marks)**

b) Determine the intrinsic value and speculative premium on the 50 call option given: Stock Price = $48.50; Strike Price = $50 and Call Option Price = $2.75. **(10 marks)**

QUESTION FIVE

a) Appraise three benefits Kenya and India enjoy due to the demutualization of stock exchanges. **(6 marks)**

b) Capital market theories provide various tools for valuing financial assets and analyzing market trends. Considering Kenya's financial landscape, critically evaluate two key advantages of capital market theories in enhancing investment decision-making and economic development. Provide relevant examples to support your argument. **(9 marks)**

QUESTION SIX

a) Calculate stock A's expected return using the Arbitrage Pricing Theory (APT). **(6 marks)**

Given Data:

- Gross domestic product (GDP) growth: *ß* = 0.6, RP = 4%
- Inflation rate: *ß* = 0.8, RP = 2%
- Gold prices: *ß* = -0.7, RP = 5%
- Standard and Poor's 500 index return: *ß* = 1.3, RP = 9%
- The risk-free rate is 3%

b) Critique the practical application of Markowitz Portfolio Theory in portfolio optimization. **(9 marks)**