

The
Management
University
of Africa



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UNDERGRADUATE UNIVERSITY EXAMINATIONS

SCHOOL OF MANAGEMENT AND LEADERSHIP

DEGREE OF BACHELOR OF COMMERCE

FIN 414: PORTFOLIO ANALYSIS MANAGEMENT

DATE: 7TH 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:

INVESTMENT ADVICE TO ELKANNAH, A NEW INVESTOR

Elkannah is a novice in matters investments, having recently graduated from college but in a non-business related field. He is however, determined to start the investment journey right from a young age, with the prospects of not having to wallow in poverty at old age. He has adequate time to bounce back even after wrong investment decisions that could lead to losses.

Elkannah has approached you for advice, knowing very well that apart from being his friend and peer in terms of age, your field of study has been in Bachelor of Commerce from the Management University of Africa, and thus well acquainted with investment matters after studying a course in Portfolio Analysis and Management.

Required:

- a) Propose to Elkannah five well elaborated objectives of portfolio management from an investor's perspective. **(10 Marks)**
- b) Demonstrate to Elkannah five asset allocation strategies, clearly showing the management approaches underpinning each strategy. **(10 Marks)**
- c) In advising Elkannah about investment in bonds and the concept of time value of money, compute the value of a \$ 1,000 corporate bond with an annual interest rate of 5%, making semi-annual interest payments for 2 years, after which the bond matures and the principal must be repaid. Assume a yield to maturity (YTM) of 3%. **(5 Marks)**

QUESTION TWO

Four investments; W, X, Y and Z, having the following distribution of returns, are being analysed:

	Rate of return (%)			
Probability of Occurrence	W	X	Y	Z
0.1	10%	2%	15%	6%
0.2	10%	3%	12%	9%
0.4	10%	8%	10%	10%
0.3	10%	20%	7%	12%

Required:

- Compute the expected return of each investment. **(4 Marks)**
- Compute the standard deviation of each investment. **(6 Marks)**
- Rank the investments in order of priority starting with the most preferred, and give the reason for such ranking. **(2 Marks)**
- Explain the term 'diversification' in regard to investment decisions, citing its benefits. **(3 Marks)**

QUESTION THREE

The table below shows data on three assets: J, K and L.

	Rate of return (%)		
Probability of Occurrence	J	K	L
0.2	3%	13%	4%
0.5	8%	10%	10%
0.3	18%	8%	14%

Required:

- a) Compute the covariance between the following sets of assets, commenting on your results in each case:
- i) J and K **(2½ Marks)**
 - ii) J and L **(2½ Marks)**
 - iii) K and L **(2½ Marks)**
- b) Compute the correlation coefficient of the following sets of assets, commenting on your results in each case:
- i) J and K **(2½ Marks)**
 - ii) J and L **(2½ Marks)**
 - iii) K and L **(2½ Marks)**

QUESTION FOUR

- a) Security A's returns depend on only three risk factors i.e. Inflation, Gross Domestic Product (GDP) and the aggregate degree of risk aversion.

The required rate of return on a portfolio with unit sensitivity to each factor and zero-sensitivity to other factors is as follows: Inflation 12%, Gross Domestic Product (GDP) 9%, Degree of risk aversion 6%.

Security A has betas of 0.8 with the inflation factor, 1.2 with the Gross Domestic Product (GDP) factor and - 0.4 with risk aversion factor.

The risk free rate of return is 8% and the market expected rate of return is 14%. The standard deviation of the market return is 5% while the covariance of return for security A and the market is 10%.

Required:

Compute security A's required rate of return using:

- i) Capital Asset Pricing Model (CAPM) **(3 Marks)**
 - ii) Arbitrage Pricing Theory (APT) **(3 Marks)**
- b) Demonstrate the concept of 'efficient portfolios' using an appropriate diagram and elaborate explanations. **(9 Marks)**

QUESTION FIVE

- a) An investor holds a portfolio with sh 40,000 invested in Asset Y and sh 10,000 invested in Asset Z. The expected return on Asset Y is 12%, and the expected return on Asset Z is 6%.

Required:

Determine the expected return of the portfolio. **(4 Marks)**

- b) Compose four assumptions underlying the Capital Asset Pricing Model (CAPM). **(8 Marks)**
- c) Critique three assumptions of the Capital Asset Pricing Model (CAPM) based on real life situations. **(3 Marks)**

QUESTION SIX

- a) Argue out four justifications for the importance of Portfolio Management. **(8 Marks)**
- b) Design an appropriate diagram on the 'efficient frontier' showing which assets are considered efficient and which ones are inefficient, giving the reasons thereof. **(5 Marks)**
- c) Distinguish between 'Active' versus 'Passive' Portfolio Management classifications: **(2 Marks)**