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 414 : PORTFOLIO ANALYSIS MANAGEMENT

DATE: 6TH AUGUST 2024

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 following case and answer the questions that follow:

Wakesho Investments Company has conducted preliminary feasibility studies and identified four investment projects for further analysis and consideration. The four investments are; P, Q, R and S. The distribution of returns of the investment projects are as shown below:

	Rate of return (%)			
Probability of Occurrence	**P**	**Q**	**R**	**S**
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:

a) Calculate the expected return of each investment. **(8 Marks)**

b) Compute the standard deviation of each investment. **(8 Marks)**

c) Rank the investments from the most preferred to the least preferred, and cite the reason for your ranking. **(4 Marks)**

d) Demonstrate why Wakesho Investments Company should hold portfolios of investments rather than any single investment. **(5 Marks)**

QUESTION TWO

a) Describe the following types of efficiency in relation to securities markets:

- **i)** Allocative Efficiency **(2 Marks)**
- **ii)** Operational Efficiency **(2 Marks)**
- **iii)** Information Efficiency **(2 Marks)**

b) Examine three factors responsible for bond price fluctuations in the secondary securities markets showing through examples how each affects bond prices. **(9 Marks)**

QUESTION THREE

a) An investor holds a portfolio with sh 70,000 invested in Asset X and sh 30,000 invested in Asset Y. The expected return on Asset X is 10%, and the expected return on Asset Y is 8%.

Required:

Determine the expected return of the portfolio. **(5 Marks)**

b) Critique five assumptions upon which the Capital Asset Pricing Model (CAPM) is anchored. **(10 Marks)**

QUESTION FOUR

Data for the rates of return for three assets; X, Y and Z has been tabulated below:

	Rate of return (%)		
Probability of Occurrence	**X**	**Y**	**Z**
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) X and Y **(3½ Marks)**

ii) X and Z **(3½ Marks)**

b) Compute the correlation coefficient of the following sets of assets, commenting on your results in each case:

i) X and Y **(3½ Marks)**

ii) X and Z **(3½ Marks)**

c) Determine which of the two portfolios (XY) or (XZ) is better giving the reason thereof. **(1 Mark)**

QUESTION FIVE

a) Stock Y'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 4%.

Stock Y 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 rate of return on riskless government treasury bills is 10% and the market expected rate of return is 16%. The standard deviation of the market return is 5% while the covariance of return for Stock Y and the market is 10%.

Required:

Compute Stock Y's required rate of return using:

i) Capital Asset Pricing Model (CAPM) **(5 Marks)**

ii) Arbitrage Pricing Theory (APT) **(5 Marks)**

b) As an experienced portfolio manager, analyse five procedural steps you would undertake in the management of a client's investments. **(5 Marks)**

QUESTION SIX

a) Demonstrate the 'efficient frontier', underpinning criteria for determining which assets are regarded as efficient and/or inefficient, using a diagram and examples. **(6 Marks)**

b) Differentiate the following sets of Portfolio Management approaches:

i) 'Active' versus 'Passive' Portfolio Management **(3 Marks)**

ii) 'Discretionary' versus 'Non-Discretionary' Portfolio Management **(3 Marks)**

c) In regard to bond management, explain the term 'duration' and how it is measured. **(3 Marks)**