MERU UNIVERSITY OF SCIENCE AND TECHNOLOGY

P.O. Box 972-60200 – Meru-Kenya
Tel: +254(0) 799 529 958, +254(0) 799 529 959, + 254 (0) 712 524 293,
Website: info@must.ac.ke Email: info@must.ac.ke

University Examinations 2024/2025

FIRST YEAR SECOND SEMESTER EXAMINATION FOR THE DEGREE OF MASTER OF FINANCE

BFC 5112/BFA 5112: INVESTMENT AND PORTFOLIO MANAGEMENT

DATE: DECEMBER 2024 **TIME:3 HOURS**

INSTRUCTIONS: *Answer question **one** and any other **three** questions*

QUESTION ONE (30 MARKS)

a) Kemikali Ltd. is a locally incorporated firm operating in the field of investments and asset management with its asset under management (AUM) in excess of Sh.5 billion. Teddy Kioko is a high net worth individual and is seeking to invest Sh. 150 million mainly in bonds and other long-term investments through the firm.

Required:

Evaluate the FOUR major steps in the portfolio management process that are expected to be followed while investing the client's funds.

b) As a portfolio manager of XYZ Ltd., you have been tasked to prepare an outline to be used by new entrants to portfolio management on investment performance standards.

Required:

Prepare the outline covering FIVE features of investment performance standards.

c) James Kimani, a security broker gathers the following information relating to three securities:

Security	Beta	Current price	Expected rice	Expected dividend
		Sh.	Sh.	Sh.
Unix U	0.85	22	24	0.75
Nice N	1.25	48	51	2.00
Dent D	-0.20	37	40	1.25

Additional information:

1. The expected risk free rate in 10%.
2. The expected market return is 14%.

Required:

i. Determine the required rate of return for security Unix, Nice and Dent using the Security Market Line (SML). (4 marks)

ii. Determine the expected return using the holding period return for security Unix, Nice and Dent (3 marks)

iii. Using appropriate justification, advise James Kirnani on the appropriate action to take on security Unix, Nice and Dent. (4 marks)

QUESTION TWO (20 MARKS)

Stephen Kirumba, a private wealth manager is meeting with a client,Peter Kalibo, in order to create an Investment Policy Statement (IPS) for Kalibo's upcoming retirement. Kalibo estimates that he will require Sh.2 million per year, with annual increases for inflation, during retirement. Kalibo's primary spending goals during retirement are to provide for his family's needs and maintain his retirement style. His secondary goals are to fund his philanthropic activities and leave a significant inheritance to his children. During his retirement, Kalibo will receive union pension payments of Sh.500,000 per year with annual increases for inflation. In his spare time, he runs a small business that provides him with an annual income of Sh. 1.2 million and is valued at Sh. 10 million. He will continue running his business during retirement. Kalibo holds a portfolio of securities valued at Sh.40 million. The portfolio primarily contains dividend paying securities and interest-bearing bonds. Kalibo has reinvested all these distributions back into his portfolio but anticipates that after retirement he may need to use some of the distributions to fund his expenses. Kalibo plans to buy a vacation home in three years. His budget for the vacation home is Sh. 14 million. Kalibo has not decided yet how he will fund this purchase.

Required:

a) Prepare the investment objectives section of Kalibo's Investment Policy Statement (IPS). (4 marks)

b) Outline SIX principles underlying the ethical responsibilities relating to providers of portfolio management services and clients. (6 marks)

c) An investor has decided to invest Sh. 1 million in two securities, namely; security KLM and security AQR. The projections of returns from the two securities along with their probabilities are as follows:

Probabilities	Projected Returns	
	Security KLM	Security AQR ($^0/0$)
0.20	12	16
0.25	14	10
0.25	07	28
0.30	28	02

Required:

i) Expected return of security KLM and security AQR (2 marks)

ii) Standard deviation of security KLM and security AQR (4 marks)

iii) Covariance of security KLM and security AQR (2 marks)

iv) The proportion of security AQR to formulate a minimum risk portfolio (2 marks)

QUESTION THREE (20 MARKS)

a) An investment consultant firm has been appointed to advise Kedog Asset Managers on document management.

Required:

Discuss THREE areas of document management that the investment consultant should cover. (6 marks)

b) Peter Karnau has an investment capital of sh.2,00,000 He wishes to invest in two securities; A and B in the following proportion; Sh.600,000 in security A and Sh. 1,400,000 in security B.

The returns on these two securities depend on the state of the economy as shown below:

State of economy	Probability	Security A (^{0}/0) Returns	Security B (^{0}/0)
Recession	0.40	9	12
Normal	0.50	7	11
Boom	0.10	6	10

Required: Compute:

(i) The portfolio expected return. (3 marks)

(ii) The actual portfolio risk. (2 marks)

(iii) The weighted portfolio risk. (1 mark)

QUESTION FOUR (20 MARKS)

a) Discuss FOUR practical limitations of the Capital Asset Pricing Model (CAPM). (4 marks)

b) In relation to program trading in portfolio management:

Explain the term "fintech". (2 marks)

c) Discuss the importance if Fintech in financial markets (6 marks)

QUESTION FIVE (20 MARKS)

a) Describe THREE ethical responsibilities that are expected of a portfolio manager (3 marks)

b) Explain how the following changes could affect the relationship between risk and required rate of return for either an individual investment or group of investments:

i. A movement along the security market line (SML). (2 marks)

ii. A change in the slope of the security market line (SML). (2 marks)

iii. A shift in the SML. (2 marks)