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(University of Choice)

MASINDE MULIRO UNIVERSITY OF SCIENCE AND TECHNOLOGY (MMUST)

MAIN CAMPUS, NAIROBI, BUNGOMA, WEBUYE

UNIVERSITY EXAMINATIONS
2021/2022 ACADEMIC YEAR

SPECIAL/SUPPLEMENTARY EXAMINATIONS

FOR THE DEGREE
OF
BACHALELOR OF COMMERCE

COURSE CODE: **BCF 429**

COURSE TITLE: **PORTFOLIO THEORY AND MANAGEMENT**

DATE: **TEUSDAY, 2ND AUGUST 2022** **TIME:** 2-4PM

INSTRUCTIONS TO CANDIDATES

Answer Question ONE and any OTHER TWO

TIME: 2 Hours

MMUST observes ZERO tolerance to examination cheating

This Paper Consists of 3 Printed Pages. Please Turn Over.

QUESTION ONE (30 MARKS)

1a) a) Describe the following option strategies:

i) A protective put **(1mark)**
ii) A covered call **(1mark).**
iii) A stradlle **(1mark)**

b) Discuss the general concept of industry analysis and indicate how it can help an investor make a decision about a stock **(5marks)**

c) Describe logical steps an investor would take to execute an investment plan **(5 marks)**

d) Briefly describe each of the following portfolio performance measures and explain how an investor would use them

i) Sharpe ratio **(2marks**
ii) Treynor ratio **(2marks)**
iii) Jensens'Alpha **(2marks)**

e) You have been appointed as an investment and portfolio analyst by a client in Rwanda. The client has identified two stocks on the Nairobi stock Exchange. Company X and Company Y. The client has provided the following data on returns or the two companies for 10 years.

% returns

Comp	Yrs	1	2	3	4	5	6	7	8	9	10
X		37	24	-7	6	18	32	-5	21	18	6
Y		32	29	-12	1	15	30	0	15	27	10

Required

i) Calculate the standard deviation of each company return **(5 marks)**
ii) How do the two stocks relate? Would you invest in them? **(2marks)**
iii) Explain the two methods an analyst would use to interpret the behavior on stocks on a market **(4marks)**

QUESTION TWO (20 MARKS)

a) Amina is considering investing in two bonds with the following characteristics (par value of both bonds is Sh. 1,000)
Bond A 10% coupon (annual), 5 years to maturity
Bond B Zero coupon bond, 10 years to maturity

Required:
i. Assuming the market yield on both bonds is currently 8%, calculate the prices of these two bonds. (6 marks)
ii. Assuming the market yield of 8% calculate the durations of each of these bonds. (6 marks)
b) Select any four money market investment vehicles and briefly explain the main features of the selected vehicles. (8 marks)

QUESTION THREE (20 MARKS)

a) Highlight the Four limitation of portfolio Theory. [4marks]

b) You are provided with the following information for investment M, RF, X,Y,Z. Portfolio M represents the market portfolio and RF is the risk-free security. X,Y and Z are individual securities.

Investment	Expected Return	Standard Deviation	Beta
M	10%	20%	?
RF	4%	0%	?
X	6%	30%	?
Y	8%	40%	?
Z	14%	40%	?

Required:

i. Determine the betas of the five investments (Assume CAPM holds). (3 marks)

ii. Draw the Capital Market Line (CML) and the Security Market Line (SML) for the data described above. Be sure to place values and labels on the axes and indicate the location of M, RF, X, Y and Z. (3 marks)

c) What major factors must be considered when constructing a market index? **(5 marks)**

d) What is the benefit of analyzing the market and alternative industries before investing in individual securities? **(5 marks)**

QUESTION FIVE (20 MARKS)

a) Explain the main features that characterize a bond (6 marks)

b) Modern portfolio theory is one of the earliest attempts to quantify risk in an investment. On what assumptions is this theory based upon? (5 marks)

c) Using a well labelled diagram to show the relationship between risk and return, explain the benefit of diversification in the context of risk (4 marks)

d) Differentiate between American and European options (2 marks)

e) What steps are involved in portfolio selection as prescribed by the separation theorem (3 marks)