



**MASINDE MULIRO UNIVERSITY OF
SCIENCE AND TECHNOLOGY
(MMUST)**

MAIN/BUNGOMA/WEBUYE/ CAMPUS

**UNIVERSITY MAIN EXAMINATIONS
2022/2023 ACADEMIC YEAR**

MAIN EXAMINATION FOR

COURSE CODE: BCF 429

COURSE TITLE: INVESTMENT ANALYSIS AND PORTFOLIO

DATE: Friday 14th April 2023 TIME: 12.00–2.00pm

INSTRUCTIONS TO CANDIDATES

Attempt QUESTION ONE and any other two questions

TIME: 3 Hours

MMUST observes ZERO tolerance to examination cheating

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

QUESTION ONE (30MKS)

- a) Generally stocks are considered to be risky but bonds are not but this is not true, explain four types of risks which bonds are exposed to. (8mks)
- b) ABC issues a 5 year pure discount bond with face value of Kshs. 500,000 for Kshs. 300,000. Determine the bonds yield to maturity (4mks)
- c) Explain two Investment strategies which are available to bond managers (5mks)
- d) Portfolio Z consisting of two assets has a correlation coefficient of 0.7 another Portfolio Y consisting of two assets has a correlation coefficient of - 0.7 in absence of any other information which portfolio should you invests in. Justify your reasoning (4marks)
- e) Two fund managers P and S were employed to manage two portfolios with identical objectives with the following details.

Fund manager	Return	Beta of portfolio	Total risk
S	12%	1.24	12%
P	16%	1.63	19%

Using the above data determine which fund manager S and P outperform the other using the following approaches. (Assume risk free rate is 8% and market risk is 10%)

- i. Jensen (2mks)
- ii. Treynor (2mks)
- f) Differentiate systematic risk and unsystematic risk as used in finance (5mks)

QUESTION TWO (20 MARKS)

- (a) Explain the term derivative securities. (2 marks)
- (b) Explain the terms put option, and call option as used in trading of securities (6 marks)
- (c) Bahati ltd issues a pure discount bond with a face value sh. 500,000 for 300,000 determine the bond yield to maturity .(6 marks)
- (d) You have been provided with a bond whose face value is 60,000 to be redeemed after 5 years .interest on bond is payable annually at 12%. The required rate of return by the holder is10% compute the bonds value.(6 marks)

QUESTION THREE (20MRKS)

- a) Highlight any five assumption of CAPM (5mks)
- b) The following three portfolios with the corresponding information are available in the market

Portfolio	standard deviation	Expected return
X	4.2	14.2
Y	5.0	17.0
Z	3.5	14.0

The risk free rate is 9% and the expected return on the market is 14%. The standard deviation on the market is 3.5. Evaluate whether each of the portfolio is correctly priced (6 mks)

c) The data below shows returns of security S and market returns M

Year	1	2	3	4	5
Returns of M	30	10	5	-5	-15
Returns of S	15	20	10	-10	-5

Compute the value of beta β using the market model. (6 mks)

d) Give any three limitation of CAPM (3mks)

QUESTION FOUR (20MKS)

a) The expected return for securities X and Y are as shown

Economy	Probability	X	Y
1	0.2	-10	12
2	0.1	8	-6
3	0.4	6	-8
4	0.1	3	13
5	0.2	-6	18

- i) Determine the return for each security (6mks)
- ii) Determine the covariance of X and Y when they are combined (4mks)
- iii) Calculate the risk of efficient portfolio between X and Y (7mks)
- iv) Give any three limitation of portfolio theory. (3mks)