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

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)