CHUKA **UNIVERSITY**

UNIVERSITY EXAMINATIONS

FOURTH YEAR EXAMINATION FOR THE AWARD OF
DEGREE OF BACHELOR OF PROCUREMENT AND LOGISTICS MANAGEMENT

BPLM 421: INVESTMENT MANAGEMENT

STREAMS: Y4S1

TIME: 2 HOURS

DAY/DATE : WEDNESDAY 22 /09/ 2021 **1130 AM – 1.30 PM**

INSTRUCTIONS TO CANDIDATES:

- Answer Question One (Compulsory) and any other Two Questions.
- DO NOT WRITE ANYTHING on the question paper.

QUESTION ONE

a) Differentiate between investment, speculation and gambling. [3 Marks]

b) The following information relates to returns of stock of Company X and market returns

Economic State	Probability	Return of Stock X	Market Return
Good	0.25	18	15
Normal	0.15	-15	12
Bad	0.2	16	10
Poor	0.4	12	13

Calculate the beta of the security and interpret your results [6 Marks]

c) Explain the importance of carrying out security analysis by an investor before investing. [6 Marks]

d) The current share price of XYZ company is sh125, the exercise price is sh.100 and the volatility is 0.075. The time to expiration is 120 days and the required rate of return is

0.15 and risk premium is 0.03. Determine the value of a call and put option using Black and Scholes model. [7 Marks]

e) Discuss the variable ratio plan used in portfolio revision and its importance.[8 Marks]

QUESTION TWO

a) Describe the factors that determine the amount of risk involved in an investment.

[6 Marks]

b) Two portfolios were constructed, one consisting of equity shares and the other consisting of bonds. The market capitalization of equity shares at the time of constructing the portfolio was sh.75, 000 and that of bonds (defensive portfolio) was sh.50,000 which represents the investment made. The investor opts to uses a constant ratio plan of 1.5: 1 as the ratio of aggressive to defensive investment. The revision point is 10%.

The share prices show fluctuations at periodical intervals as under:

Period	Share Price Sh.
1	100 (at the time of portfolio construction)
2	95
3	80
4	75

Determine the total portfolio value after revision at the end of period 4. [10 Marks]

c) A company is considering to invest in a 15 year 8% sh 6000 bond. The current market price of the bond is sh 8000. The bond is redeemable in 10 years with a call price of sh.7000. Calculate its yield to call. [4 Marks]

QUESTION THREE

a) Compare the following three portfolios and calculate their performance on the basis of Treynor, Sharpe and Jensen and comment on the results

Portfolio	Expected return	Standard deviation	Beta
A	22%	1.2	1.25
B	15%	4	0.75
C	15%	2.5	1.1

The market average return is 12%, the standard deviation of he market is 18%, the treasury bill rate is 8% and the beta of the market is 1 [9 Marks]

b) Discuss the allocative efficiency and its importance in financial markets. [8 Marks]

c) Consider a 7 year, 11.25% bond whose face value is sh.2000 that is redeemable at par in 4 years. The investors required rate of return is 15 %. Calculate the bond's duration.

[3 Marks]

QUESTION FOUR

a) Mugambi has invested in 3 securities, security X, Y and Z. He has sh 30,000 in X, sh.80,000 in Y and sh.10,000 in Z. The following are the expected returns

Returns (%)			
Rx	Ry	Rz	Probability
12	16	5	0.25
15	18	8	0.3
10	13	7	0.45

Calculate the portfolio expected return [4 Marks]

The portfolio Risk [6 Marks]

b) Write short notes on

(i) Strike price [2 Marks]

(ii) Out of the money [4 Marks]

c) Consider the following four portfolios

Portfolio	Expected return (%)	Variance of portfolio (%)
1	15	36
2	12	30.25
3	10	49
4	16	110.25

If the market risk premium is 5% with a standard deviation of the market is 6% and the treasury bill rate is 8%. Required determine which portfolios are efficient and which ones are inefficient.

[6 Marks]

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