CHUKA   **UNIVERSITY**

UNIVERSITY EXAMINATIONS

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

BPLM 421: INVESTMENT MANAGEMENT

STREAMS:BPLM Y4S1   **TIME: 2 HOURS**

DAY/DATE: TUESDAY 23/03/2021   **8.30 A.M – 10.30 A.M**

INSTRUCTIONS:

Answer question one and any other two questions

QUESTION ONE

(a) Clearly describe how liquidity is an important factors to consider when determining the riskiness of an investment.   [6 marks]

(b) Explain the main reasons why an investor would perform a security analysis before investing.   [8 marks]

(c) Consider the following cash flow from a security A and B for 3 years. Calculate the standard deviation.   [6 marks]

	Cash flow	
Year	Security A	Security B
1	4000	10,000
2	3000	6,000
3	8000	7,000

(d) Elizabeth bought a 6 month call option on a share currently selling at ksh 140 and an exercise price of ksh 120. The premium paid on the call option is ksh 10. It is expected the share prices to changes as follows : 100,110,120,130,140,150.

Show the net pay off of the buyer and seller   [5 marks]

(e) Consider the following 3 portfolios

	Expected return	**standard deviation**
X	14	4
Y	12	6
Z	10	8

If the market return is 12% and standard deviation of the market is 4% and risk free rate is 5%. Using the capital market line (CML) specify which portfolios are efficient.
[5 marks]

QUESTION TWO

(a) Two mutual funds Omega and Alpha have the following information: Omega has an expected return of 15% and Alpha 12%. Omega's beta is 2 and twice that of Alpha the variance of Alpha is 16% and Omega is 25%. The mean return of the market index is 18% variance of the market is 38% while risk free rate is 6%. Required ;

Compute

(a) Jensen index   [3 marks]
(b) Treynor index   [2 marks]
(c) Shape index and comment on the results   [3 marks]

(b) Polly has invested in three securities, security A,B and C. Polly has ksh 200,000 and decides to invest 30% in A, 50% in B and the rest in C. The following are the expected returns.

Returns		Probabilities	
A	B	C	
16%	8%	12%	0.4
18%	14%	15%	0.25
-10%	6%	13%	0.35

Required;

    (i)   Calculate the portfolio expected return.   [2 marks]

    (ii)   Portfolio risk   [6 marks]

  (c) Outline the assumption of capital asset pricing model.   [4 marks]

QUESTION THREE

  (a) A company's information consists of the following characteristics.

Company	No.of shares	Beta	Market price	Expected return (%)
A	30,000	1.4	50	26
B	50,000	1	35	18
C	80,000	0.6	20	20
D	100,000	1.2	30	22

The current market return is 21% and treasury bill rate is 8%.

Required ;

    (i)   Determine the required rate of return on each share on the companies and advice on the worth of each portfolio.   [5 marks]

    (ii)   Determine the expected return and required return on the overall portfolio of the market hence comment on the worth of the company portfolio.   [5 marks]

(b) Consider a 6 year 10% ksh 200 bond and the risk premium is 8% and risk free rate is 2% the bond is redeemable at 4 years and at ksh 250. The bond is currently priced at ksh 150. Calculate the duration of the bond.   [6 marks]

(c) Using an illustration discuss the efficient frontier curve and how it is achieved.

    [4 marks]

QUESTION FOUR

(a) Use the binomial model to find out the price of the following call option; The share is currently selling at ksh 50 and there is a possibility that at the end of the year the share prices may rise to ksh 55 or fall to ksh 45. Assume that the required rate of return is 12% and risk premium is 4% and the exercise price is ksh 52. Determine the value of the call option.   [5 marks]

(b) Describe the functions of a mutual fund.   [5 marks]

(c) Two portfolios were constructed one consisting of equity shares and the other one consisting of debentures. The share value of equity at the time of constituting the portfolio was ksh 120,000 and debentures ksh 80,000. The investor opts to use a constant shilling plan and fixes the revision point at 10%. The share price shows fluctuations at interval as follows;

Period	share prices
1	100
2	90
3	80
4	85

Required :

Explain the portfolio revision pattern to the investors.   [10 marks]