CHUKA  **UNIVERSITY**

UNIVERSITY EXAMINATIONS

RESIT/SPECIAL EXAMINATION

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

BPLM 421: INVESTMENT MANAGEMENT

STREAMS: BPLM **TIME: 2 HOURS**

DAY/DATE: TUESDAY 02/11/2021 **2.30 P.M – 4.30 P.M.**

INSTRUCTIONS:

- **Answer Question One and any other Two**

Question One

a) Differentiate between systematic risk and unsystematic risk (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	0.2	15	18
Normal	0.3	12	10
Bad	0.5	14	13

Calculate the beta of the security and interpret your results (10 marks)

c) Explain the process of investment to an investor wishing to undertake an investment (10 marks)

d)The current share price of XYZ company is sh 125, the exercise price is sh 100 and the standard deviation is 1.5. The time to expiration is 3 years and the risk free rate is 8%.. Determine the value of a call and put option using Black and Scholes model (7 marks)

Question Two

a) Describe the factors to consider when making a decision on whether to invest (6 marks)

b) Two portfolios were constructed, one consisting of equity shares and the other consisting of debenture. The market capitalisation of equity shares at the time of constructing the portfolio

was sh.100,000 and that of bonds (defensive portfolio) was sh.50, 000 which represents the investment made. The investor opts to uses a revision point of 10%.

The share prices show fluctuations at periodical intervals as under:

Period	Share Price Sh.
1	100 (at the time of portfolio construction)
2	90
3	85
4	90

Determine the total portfolio value after revision at the end of period 4. (10 marks)

c)A company is considering to invest in a 10 year 12% sh 8000 bond. The current market price of the bond is sh 12000. The bond is redeemable in 8 years with a call price of sh 5000. 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
X	16%	3	2
Y	20%	2.25	0.8
Z	18%	4	1.5

The market average return is 12%, the standard deviation of the market is 18%, the Treasury bill rate is 8% and the beta of the market is 1 (9 marks)

b) Discuss the different types of efficiency in the capital market (8 marks)

c) Consider a 10 year, 12% bond whose face value is sh.3000 that is redeemable at par in 5 years. The investors required rate of return is 18%. Calculate the bond's duration (3 marks)

Question Four

a) Derrick has invested in 3 securities, security X, Y and Z. He has sh 0.4 in X, sh 0.5 in Y and sh 0.1 in Z. The following are the expected returns

Returns (%)			
R_A	R_B	R_C	Probability
15	20	8	0.3
16	22	12	0.3
18	25	10	0.4

Calculate the portfolio expected return (4 marks)

The portfolio Risk (6 marks)

b) Write short notes on

Convertible bond (2 marks)

Callable bond (2 marks)

c) Consider the following four portfolios

Security	Expected return (%)	Beta of Security (%)
1	18	1.4
2	12	2.5
3	15	0.8
4	13	0.6

If the required rate of return of the market is 14% with a Betaof the market is 1 and the Treasury bill rate is 8%. Required determine which portfolios are efficient and which ones are inefficient (6 marks)
