THE CATHOLIC UNIVERSITY OF EASTERN AFRICA

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MAIN EXAMINATION

JANUARY – APRIL 2019 TRIMESTER

FACULTY OF COMMERCE

MBA REGULAR / EVENING / ODEL PROGRAMME

CFI 611: ADVANCED SECURITY AND PORTFOLIO MANAGEMENT

Date: APRIL 2019	**Duration: 3 Hours**
INSTRUCTIONS: Answer Question ONE and any other THREE Questions. Clearly Show ALL Your Working	

Q1. a) Draw the differences between the Security Market Line (SML) and the Capital Market Line (CML) **[6marks]**

b) The following information is available on stocks A to E.

Stock	Beta	Current Price (Ksh)	Expected Price(Ksh)	Expected Dividend (Ksh)
A	0.67	25	27	0.50
B	1.00	18	20	1.20
C	1.25	33	36	0.80
D	1.40	54	57	1.10
E	0.30	50	53	0.90

Take RFR = 6%, R_M = 12%

<u>Required</u>

Using the Capital Asset Pricing Model (CAPM), identify the overvalued and undervalued stocks and accordingly advise an investor who is keen benefiting from what s/he considers to be a market mispricing **[13marks]**

c) Assets A and B have a mean return of 13.6% and 16.4% and standard deviations of 3.5% and 6.2% respectively. Assess the riskiness of the two assets using value at risk (VAR) measure at 98% confidence level (Take $Z_{4\%} = -1.75$) **[6marks]**

Q2. a) Briefly discuss any two strategies for

i) Active equity portfolio management **[4marks]**

ii) Passive bond portfolio management **[4marks]**

b) Asset A and the market (M) have the following probability distribution

Probability	Returns (%)	
	Asset A	M
0.42	12.50	14.30
0.28	11.90	9.80
0.30	14.20	15.40

Required

i) The beta coefficient for asset A **[10marks]**

ii) The required return on asset A if the risk-free rate is 6% **[4marks]**

c) Distinguish between systematic and unsystematic risk **[3marks]**

Q3. a) Write short explanatory notes on the following types of securities

i) Bonds **[2marks]**

ii) Ordinary stocks **[2marks]**

iii) Derivative securities **[2marks]**

iv) Hedge funds **[2marks]**

b) Discuss the importance of portfolio measurement and evaluation **[3marks]**

c) In a market where the risk free rate of return is 6%, three assets and the market have the following distribution of returns.

Probability	Return (%)			
	Asset 1	**Asset 2**	**Asset 3**	**Market**
0.24	14.20	16.60	15.90	14.00
0.32	16.30	15.30	14.60	16.20
0.44	11.70	18.20	13.60	15.00

Required

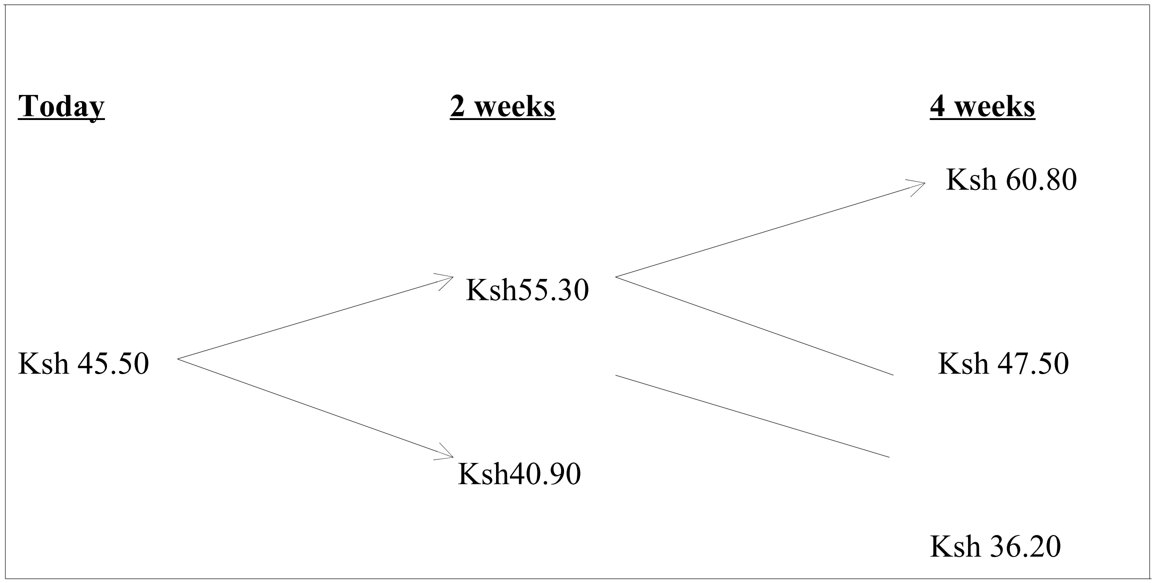
i) Sharpe measure **[4marks]**

ii) Treynor measure **[4marks]**

iii) Jensen's alpha **[4marks]**

iv) Ranking (starting with the best performing) based on each of the measures **[2marks]**

Q4. a) A stock's price changes according to the following price tree



A put option with an exercise price of Ksh 53.50 expiring at the end of four weeks exists on the stock.

Required

The price of the call option today if risk-free rate of return = 5% per annum and the calendar year is 52 weeks **[17marks]**

b) Briefly discuss any three Asset allocation strategies for an equity portfolio

[8marks]

Q5. a) Compare bond and common stock valuation **[5marks]**

b) A semi-annual coupon bond with a coupon of 12% has face value Ksh 1000 and 20 years remaining till maturity. The current price of the bond is Ksh 1210. Estimate the yield to maturity of the bond **[10marks]**

c) The current dividend on a stock is Ksh 2.80 per share and investors require a rate of return of 12.8% p.a. Dividends are expected to grow at a rate of 20% for the first year, 18% for year two and three and then at a rate of 8% per year from that point on. Find the price of the stock

[10marks]