UNIVERSITY EXAMINATIONS

2022/2023 ACADEMIC YEAR

THIRD YEAR SECOND SEMESTER

SPECIAL/SUPPLEMENTARY EXAMINATION

FOR THE DEGREE OF BACHELOR OF COMMERCE

COURSE CODE : BCF 323

COURSE TITLE : **FINANCIAL RISK MANAGEMENT**

DATE: 15TH AUGUST, 2023 **TIME: 8.00AM – 10.00AM**

INSTRUCTIONS TO CANDIDATES

Answer Question One in Section A and Any other TWO (2) Questions in Section B

TIME: 2 HOURS

SECTION A

QUESTION ONE (Compulsory).

(a) XYZ is a company incorporated and trading in Kenya with its main interest being in manufacturing. It sources its major raw material, Sugar cane from local farmers where the crop is available on seasonal basis and prices fluctuate from time to time. Five years ago it borrowed a loan in foreign currency from a lending institution in the United States of America for which it is repaying principal as well as interest in foreign currency (Us Dollars)..
Its products are sold in both local and international market.

Required.

Identify the various risks the business is exposed to in the course of its operations and suggest way to minimize the same. **(10 Marks).**

(b) (i) Distinguish between Capital Market Line and the Security Market Line. **(2 Marks).**

(ii) Jack and Jill Ltd. has a risk free rate of interest of 12 percent. The Market Portfolio is expected to yield a return of 22 percent with a standard deviation of 14 percent. If an investor desires to earn an expected rate of return of 20 percent, in what combination should he hold the Market portfolio and that of the risk free security? **(4 Marks).**

(c) (i) Distinguish between Locational and Triangular arbitrage. **(2 Marks).**

(ii).Consider the following actual exchange rates spotted in KCB in Nairobi.

1 Kshs	=	0.014 dollars.
1 Tshs	=	0.0008 dollars.
1 Kshs	=	Tshs 20.

Required.

Compute the gain/loss from triangular arbitrage to an investor with 240,000 dollars to invest. **(6 Marks).**

(d) With specific reference to Liquidity risk, identify its major sources and suggest ways and techniques of mitigating the same. **(6 Marks).**

SECTION B.

QUESTION TWO

Consider the following information regarding two assets: 1 and 2.

State of Nature	Probability	Return on asset 1	Return on asset 2
1	0.15	-3%	15%
2	0.25	21%	16%
3	0.30	18%	19%
4	0.30	27%	22%

Required: -

(a) What is the standard deviation of the return on asset 1 and on asset 2? **(8 Marks).**
(b) What is the covariance between the returns on assets 1 and 2? **(8 Marks).**
(c) What is the co-efficient of correlation between the returns on assets 1 and 2.

(4 Marks)

QUESTION THREE

(a) (i) You are an Investment and Portfolio Manager in Mutual Fund. Based on the following details, determine the securities that are overpriced and underpriced in terms of the Security Market Line (SML).

Security	Actual Return	Beta(β)	Standard Deviation(σ)
A	0.80	1.10	0.80
B	0.45	1.20	0.40
C	0.60	0.95	0.70
D	0.24	1.40	0.40
E	0.40	0.90	0.20
F	0.25	1.15	0.15
Market Index	0.20	1.00	0.30
Treasury Bills	0.14	0	0.00

(12 Marks).

(ii) Arising from your findings in (a) above, what would be your next course of action for

both overpriced and underpriced securities. **(2 Marks).**

(b) The Capital Asset Pricing Model is anchored on certain assumptions. Highlight and briefly explain the same. **(8 Marks).**

QUESTION FOUR.

Write short notes on the following:

(a) Methods of Currency Risk Management. - (5 Marks).

(b) Imitations of the CAPM. - (5 Marks).

(c) Implications of financial risk on corporate performance **. (5 Marks).**

(d) Pros and Cons of Forward Contracts. **. (5 Marks).**

QUESTION FIVE.

(a) Consider the value of a call option with the following characteristics.

- Exercise price Kshs 98.
- Premium per put option Shs 10.
- Time to expiry for the option – 6 Months.

Required.

Calculate the value of put option and the Profit or loss based on the spot prices of the underlying security after six months.
Shs 85, Shs 90, Shs 115, Shs 125, Shs 158. **(6 Marks).**

(b) Consider a Bond with semi-annual coupons. The bond has a current maturity of 589 days and pays four coupons each six months apart. The next Coupon is paid in 42 days followed by coupons in 225 days,407 days and 589 days at which the principal is also returned. Suppose that this 5% coupon (Shs 30 semi-annual payments) bonds cash price is Shs 990 and the risk free interest rate is 8%.Assume that the forward contract expires in 315 days and that the bond therefore has 274 days remaining once the forward contract expires.

Required.

Calculate the forward price. **(4 Marks).**

(c) Consider a forward contract on a stock index. The Index level is on 6500, the dividend yield is 2% and risk free rate is 8%.The contract life 2 years. Calculate the forward contract price. **(4 Marks).**

(d) Highlight and briefly explain some the benefits to business entities that come with a good financial risk management programme. **(6 Marks).**