(18)

(Knowledge for Development)

KIBABII UNIVERSITY

UNIVERSITY EXAMINATIONS

2021/2022 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: 18TH NOVEMBER,2022 TIME: 11.00AM – 1.00PM

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) Most Financial Institutions in Kenya are potentially exposed to a variety of financial risks on account of their nature of operations.
Describe five of these risks that Financial Institutions are exposed to. **(10 Marks).**

(b) Assume you are a portfolio manager. Based on the following details, determine the securities that are overpriced and underpriced in terms of the **Security Market Line.**

Security	Actual Return	β (Beta)	σ (S.deviation)
A	0.35	1.6	0.60
B	0.14	1.3	0.45
C	0.30	1.2	0.50
D	0.14	0.90	0.30
E	0.20	1.10	0.30
F	0.16	0.80	0.20
Market Index	0.12	1.00	0.25
Treasury Bills	0.08	0	0.0

(10 Marks).

(Please show your workings).

(c) Consider two Banks: Kenya Commercial Bank and Cooperative Bank in Nairobi with the following information:

	KCB		COOPERATIVE	
	Bid	Ask	Bid	Ask
Tanzania Shilling Quote	0.08	0.09	0.09	0.10

Required.
Compute the gain (if any) from Locational arbitrage for a Kenyan Investor with Kshs 4.2 Million to invest.

(4 Marks).

(d) Consider a call option with the following characteristics:

1. Exercise Price shs 125
2. Premium per put option Shs. 12
3. Time to expiry for the option – 6 months.

Required.
Calculate the value of the call option and profit or loss assuming the following spot prices of the underlying security after six months.

Shs. 90, Shs 100, Shs 135, Shs 150 and Shs 160. **(6 Marks).**

QUESTION TWO.

The returns of two assets, A and B under four possible states of nature are given below:

State of Nature	Probability	Return on Asset A	Return on Asset B
1	0.25	14%	18%
2	0.05	22%	16%
3	0.30	25%	24%
4	0.25	-12%	8%
5	0.15	16%	20%

Required.

(a) Calculate the following:

(i) Standard deviation of both assets. - **(6 Marks).**

(ii) The covariance between the returns of asset A and B. - **(6 Marks).**

(iii) The coefficient of Correlation between the returns of A and B. **(6 Marks).**

(b) Which of the two assets above would you find safe to invest in? **(2 Marks).**

QUESTION THREE.

(a) Foreign currency risk is real in most multi-national companies.

Describe the various risks that that these companies face on account of Currency fluctuations and possible measures adopted by them to cushion against the effects of these risks. **(12 Marks).**

(b) Suppose ABC Ltd trades in the domestic currency the Kenya Shilling as well as foreign currency, the US Dollar ($).

It enters into a forward currency contract for a six month period.
The Spot exchange rate is Kshs 103 per 1 US dollar ($) and the interest rate in Kenya is 9% while that of United States is 5%.These rates are continuously compounded and assumed to be fixed over the life of the forward contract.

Required.

(i) Calculate the forward price of a six month contract for ABC Ltd. **(3 Marks).**

(ii)Assuming that the interest rate in the United States rises to 12%, what would be the forward price of this six month for ABC Ltd. - **(3 Marks)**.
(iii) Which of the two (i) and (ii) presents some arbitrage opportunity? **(2 Marks).**

QUESTION FOUR.

(a) With specific reference to the Currency risk exposure, distinguish between Translation and Economic Currency exposures. **(6 Marks).**

(b) Consider a forward contract on a non-dividend paying share with the following characteristics:

Maturity	-	9 Months.
Share Price	-	Kshs 40.
Risk free rate of interest	-	12 percent (Continuously compounded).

Required.

(i) Calculate the forward rate. **(4 Marks).**
(ii) Calculate the forward rate if the Maturity period is 12 Months. **(4 Marks).**

(c) Consider a one year contract on gold. It costs Shs 8 per gram to store gold and the payment towards the same is done at the end of the year. Assume that the spot price is Kshs 580 and the risk free rate is 12 percent per annum for all maturities.

Required.

Calculate the present value of the storage costs and future price of the gold. **(6 Marks).**

QUESTION FIVE.

(a) Distinguish between purchasing power parity and interest rate parity. **(5 Marks).**

(b) Consider a call option with the following characteristics:

- Exercise Price - Kshs 120.
- The Premium per call option is Kshs 15.
- The time remaining to expiry of the option - 3 Months.

Required.

Determine the value of the call option and the profit or loss assuming the following spot prices after 3 months.

Kshs 95, Kshs 110, Kshs 130, Kshs 145, Kshs 100. **(5 Marks).**

(c) Briefly highlight and discuss the implications of CAPM in any investment setting.

(5 Marks).

(d) Discuss the implications of financial risk in any corporate setting. **(5 Marks).**