CHUKA **UNIVERSITY**

UNIVERSITY EXAMINATIONS

FOURTH YEAR EXAMINATION FOR THE AWARD OF DEGREE OF BACHELOR OF COMMERCE

BCOM 431: FINANCIAL MANAGEMENT

STREAMS: BCOM Y4S1 **TIME: 2 HOURS**

DAY/DATE: TUESDAY 04/12/2018 **2.30 P.M. – 4.30 P.M.**

INSTRUCTIONS:
- **Answer question ONE and any other TWO questions.**
- **Do not write on the question paper.**

QUESTION ONE

1 (a) Explain the various levels of market efficiency and their implications in financial decision making. (6 marks)

(b) Differentiate between futures contract and forward contacts. (6 marks)

(c) Huruma ltd sells merchandize on credit terms of Net 50 while the industrial average is net 30.

The company makes average sales of Ksh. 3,000,000 per annum. The average number of days sales in accounts receivable is 60 days.

The company is considering changing its credit terms to net 30 on all sales. The change of credit terms is expected to result in the following:

- Sales would reduce to Sh. 2.6 million p.m.
- Accounts receivable would drop to 35 days of sales

Additional information

- The variable cost ratio is 70%
- The corporation tax is 30%
- Interest on funds invested in accounts receivable is at a rate of 11% per annum
- Assume a year has 360 days.

Required

Assess whether the company should change its credit terms to net 30. (10 marks)

(d) Explain the four basic options trading strategies clearly showing the circumstances under which each strategy is used. (8 marks)

QUESTION TWO

(a) The following information was extracted from the books of XYZ ltd as at 31st December 2008.

Trade debtors balance	Ksh. 10 million
Trade creditors balance	Ksh. 3 million
Sales for the year	Ksh. 80 million
Purchases for the year	Ksh. 60 million
Gross profit margin	25%
Inventory turnover	4.8 times

All sales and purchases were on credit. Assume a year has 360 days

Required:

Calculate the net operating cycle of the company. (6 marks)

(b) A plain vanilla interest rate swap was recently advertised in an international journal. The advertisement contained the following.

Period	LIBOUR (%)
Current	4.0
90 days	4. 5
180 days	5.0
270 days	5.5
360 days	6.0

An investor A intends to enter into a USD 1,000,000 quarterly pay plain vanilla interest rate SWAP as a fixed rate payer. Fixed rate is 6% based on a 360 days year.

Another Investor B, who is a floating rate payer is willing to pay 90 day LIBOR plus 1 percent margin.

Assume a year has 360 days.

Required:

Assuming investor A enters into a SWAP contract with investor B, determine the amount that investor A will pay or receive if any, in USD:

(i) 90 days from today (2 marks)

(ii) 180 days from today (2 marks)

(iii) 270 days from today (2 marks)

(iv) 360 days from today (2marks)

(c) Explain the process of marking to market in futures contract. (3 marks)

(d) Consider a 3 month forward contract on a zero coupon bond with a face value of Sh. 1,000 that is currently quoted at Ksh. 500. The annual risk free rate is 6%.

Required:

Determine the value of the forward contract. (3 marks)

QUESTION THREE

(a) Consider a two year put option with a strike price of Sh. 54 on a stock whose current price is Sh. 50. Suppose there are two time steps of one year each and in each time step, the stock price moves up or down by 25%. Suppose the risk free rate is 5%.

Required:

Calculate the value of the put option using binomial model if it is a European option. (10 marks)

(b) Differentiate between allocative efficiency and operational efficiency. (4 marks)

(c) Explain three foundations of market efficiency. (6 marks)

QUESTION FOUR

(a) ABC exporters ltd.'s shares are currently trading on the local stock exchange at Ksh. 300 each. In exactly 15 days time, the company expects a dividend of Ksh. 4 per share. The company directors have also approved another Ksh 4 dividend per share to be paid in 105 days time. Forecast data indicate that the yield curve is flat and the risk free rate is 5%

Required:

Determine the no-arbitrage price for a 120 days futures contract on ABC exporters ltd's share. (6 marks)

(b) A put option is written on the same asset with a call option having the same exercise price and expiration date. The following information is provided for the option contract

Stock price	Sh. 60
Exercise price	Sh. 50
Risk free rate	8%
Time to expiration	3 months

Standard deviation of annual returns on the stock is 0.4

Required:

Determine the value of the put option (9 marks)

(c) A share of XYZ ltd is selling for Ksh. 104. James buys a 3 months call option at a premium of Ksh. 5. The exercise price is Ksh 105

Required:

Determine the pay-offs to both the call option buyer and call option writer if the share price is Ksh. 100, Ksh 110, Ksh 115 or Ksh 120 at the time the option is exercised. (5 marks)
