

CHUKA



UNIVERSITY

UNIVERSITY EXAMINATIONS

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

BCOM 431: FINANCIAL MANAGEMENT II**STREAMS: BCOM (Y4S1)****TIME: 2 HOURS****DAY/DATE: THURSDAY 25/03/2021****8.30 A.M. – 10.30 A.M.****INSTRUCTIONS:**

- Answer question one and any other two questions
- Do not write anything on the question paper

QUESTION ONE

- a) Suppose that a stock is currently priced at sh. 50 and a two year period American option is available with a strike price of sh. 45. It goes up by 1.25 and down by 0.8. Risk free rate is 7%.
- (i) Calculate the price of the American call option on the stock (5 marks)
- (ii) State any three assumptions of binomial pricing model (3 marks)
- b) Explain the following stock market anomalies
- (i) Equity premium (2 marks)
- (ii) Weekend effect (2 marks)
- (iii) January effect (2 marks)
- c) Mr. William enters into two year 15 million USD quarterly swap as a fixed payer and will receive the index return on the Nairobi stock exchange (NSE 20 share index). The fixed rate is 10% and index is currently at 1500. At the end of the next three quarters the

index level is 1560, 1450 and 1600. Required; calculate the net payment for each of the next 3 quarters and identify the direction of payment. (6 marks)

- d) If spot price at $t_0 = 100$ and risk free rate is 10% p.a and forward contract 5 years. what is the forward price after 3 years and what will be the value of the contract after 5 years if the spot price after 3 years will be sh. 180 (4 marks)
- e) A share of a company is selling at sh.125. Peter buys a month call option at a premium of sh. 10. The exercise is sh. 100. Required determine the net payoff of both the call buyer and seller if the share is sh. 80,90, 100, 115, 120, 130, 135 and 140 at the time the option is exercised (6 marks)

QUESTION TWO

- a) Compute call and put option price by applying Black-Scholes option pricing model on the following values (8 marks)

Exercise price	shs. 80
Return on the treasury bills	12%
Variance of stock returns	6.25%
Time remaining to expiration	270 days
Current market price	Shs. 100

- b) A company is considering relaxing its credit standards, the firm currently credit terms is net 30 but the average collection period is 45 days. Current annual sales amount to sh. 8 million, the firm wants to extend the period to net 75, with the sales will increase by 30%, and bad debts will increase from 2% to 3% of annual credit sales. Collection cost will increase by 100,000. The return on investment in debtors is 12%. Selling price per unit is sh. 100 and the variable cost per unit is sh. 75. Assume a year has 360 days. Requires should the firm change the credit policy (7 marks)
- c) Discuss the limitations of efficient market hypothesis (5 marks)

QUESTION THREE

a) A company has set the minimum cash balance to be equal to sh. 15,000. The variance of the daily cash flow is 4,000,000 and the interest rate on marketable securities is 25% per annum. The transaction cost is sh. 50.

(i) Required the target cash balance, spread and the average cash balance (6 marks)

(ii) Highlight the strategies employed by the firm in the managing its cash (3 marks)

b) Distinguish between equity forwards and commodity forward (4 marks)

c) On 1st January 2013 a trader buys gold futures contract. The current future price is USD 500 per ounce. Assume initial margin is USD 2,500 and maintenance margin is USD 1,500. The standard quantity is 150 ounces. Required: Determine the date when there is a margin call and margin balance of last day of trading if the prices of the asset vary as follows; (7 marks)

Date	Price
1	500
2	495
3	493
4	495
5	497
6	490
7	492
8	490

QUESTION FOUR

a) Discuss the operations of

future contracts

(4 marks)

b) Differentiate between contract

future and forward

(5 marks)

c) Bank H enters into a 1.5 Million dollar quarterly pay plain vanilla interest rate swap as the fixed rate payer at a fixed rate of 8% based on a 360 days year. The floating rate payer agrees to pay 90 day Libor plus 1% margin, Libor is currently 6%.

90 day Libor are;

6%, 90 days from now

7%, 180 days from now

8%, 270 days from now

9%, 360 days from now

Required; calculate the amount that bank A pays or receives 90 days, 270 days and 360 days

from now

(6 marks)

d) Explain how swaps can be terminated

(5 marks)

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