

CHUKA



UNIVERSITY

**UNIVERSITY EXAMINATION  
RESIT/SUPPLEMENTARY / SPECIAL EXAMINATIONS  
EXAMINATION FOR THE AWARD OF BACHELOR OF COMMERCE**

**BCOM 431: FINANCIAL MANAGEMENT II****STREAMS:****TIME: 2 HOURS****DAY/DATE: MONDAY 01/11/2021****2.30 P.M - 4.30 P.M.****INSTRUCTIONS:**

- **Answer question one and any other two questions**

**QUESTION ONE**

- a) Airtel owns a share that has a current price of sh 150. Its price at the end of one year has two possibilities either sh 180 or sh 350. Assume that Airtel buys a call option on the share with an exercise price of sh 200 at the end of one year.
- i) Calculate the value of the call option using binomial model if the risk free rate is 15% (5 marks)
  - ii) State any three assumptions of binomial pricing model (3 marks)
- b) Explain the following stock market anomalies
- i) Equity premium puzzle (2 marks)
  - ii) Weekend effect (2 marks)
  - iii) January effect (2 marks)
- c) Mr. William enters into two year 12 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 1200. At the end of the next three quarters the index level is 1260, 1170 and 1280. Required; calculate the net payment for each of the next 3 quarters and identify the direction of payment. (5 marks)

- d) If spot price at  $t_0 = 100$  and risk free rate is 10% p.a and forward contract is 8 years. What is the forward price after 5 years and what will be the value of the contract after 3 years if the spot price after 3 years will be sh150 (5 marks)
- e) A share of a company is selling at sh 115. Peter buys a month call option at a premium of sh 10. The exercise is sh 110. Required determine the net payoff of both the call buyer and seller if the share is sh 100, 110, 115, 120, 130, 135 and 140 at the time the option is exercised (6 marks)

### QUESTION TWO

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

Exercise Price	Shs.80	
Return on the treasury bills	10%	
Variance of stock returns	6.25%	
Time remaining to expiration	270 days	
Current market price	Shs.100	(7 marks)

- b) A company is considering relaxing its credit standards, the firm currently credit terms is net 30 but the average collection period is 60 days. Current annual sales amount to sh 5 million, the firm wants to extend the period to net 105, with that sales will increase by 30%, and bad debts will increase from 2% to 3% of annual credit sales. Collection cost will increase by 100000. The return on investment in debtors is 11%. Selling price per unit is sh 100 and the variable cost per unit is sh 65. Assume a year has 360 days. Required should the firm change the credit policy (7 marks)
- c) Discuss the various types of capital market efficiency and their implication in financial decision (6 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 managing its cash (3 marks)
- b) Distinguish between equity forwards and commodity forward (4 marks)
- c) On 1<sup>ST</sup> 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 100 ounces. Required: Determine the date when there is 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 (5 marks)
- b) Differentiate between future and forward contract (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) Highlight the uses of interest rate swaps

(4 marks)

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