



**MASINDE MULIRO UNIVERSITY OF
SCIENCE AND TECHNOLOGY
(MMUST)**

MAIN, WEBUYE, BUNGOMA AND NAIROBI CAMPUS

**UNIVERSITY EXAMINATIONS
2016/2017 ACADEMIC YEAR**

FOURTH YEAR SEMESTER ONE EXAMINATIONS

**FOR THE DEGREE
OF
BACHELOR OF BUSINESS MANAGEMENT**

COURSE CODE: BCF 407

COURSE TITLE: SECURITY ANALYSIS AND SECURITIZATION

DATE: Wednesday 14th December, 2016

TIME: 9:00AM-11:00AM

INSTRUCTIONS TO CANDIDATES

Answer **QUESTION ONE** and **ANY OTHER TWO** questions

TIME: 2 Hours

MMUST observes **ZERO** tolerance to examination cheating

This Paper Consists of 4 Printed Pages. Please Turn Over.



QUESTION ONE: COMPULSORY

- A. Suppose Starbucks has an inventory of about 950,000 pounds of coffee, valued at \$0.57 per pound. Starbucks fears that the price of coffee will fall in the short run, and wants to protect the value of its inventory. How best do they do this? You know the following:
- i. There is a coffee futures contract at the New York Board of Trade and each contract is for 37,500 pounds of coffee. Coffee futures price with three month expiration is \$0.58 per pound.
 - ii. Selling futures contracts provides current inventory price protection. 25 futures contracts cover 937,500pounds. 26 futures contracts cover 975,000pounds.

Starbucks decides to sell 25 near-term futures contracts. Over the next month, the price of coffee falls. Starbucks sells its inventory for \$0.51 per pound. The futures price also falls, to \$0.52. (There are two months left in the futures contract)

Required:

- a) How did this short hedge perform? i.e., how much protection did selling futures contracts provide to Starbucks? **(8 Marks)**
- b) What would have happened if prices had increased by \$0.06 instead? **(8 Marks)**

B. Anna is considering investing in a bond currently selling in the market for ksh. 875. The bond has four years to maturity, a ksh.1000 face value and a 7% coupon rate. The next annual interest payment is due one year from today. The appropriate discount rate for the securities of similar risk is 10%

- a) Estimate the intrinsic value of the bond. Based on the result of this estimation, should Ann purchase the bond? Explain. **(7 Marks)**
- b) Estimate the yield-to-maturity of the bond. Based on the result of this estimation, should Ann purchase the bond? Explain. **(7 Marks)**

QUESTION TWO

- A. Three 100 par value, zero coupon bonds have maturities of one, two, and three years from the present. The pieces have prices of Ksh.95, Kh.88, and Ksh.80. What are the spot one, two, and three-year interest rates? Draw the yield curve. **(8 Marks)**
- B. An investor decides to purchase on margin company shares, which have current market price of Ksh.60 per share. Annual dividend is Ksh.3 per share. The investor pays Ksh.30 per share in cash and borrows the remaining amount from a broker at 10% interest p.a. After a year the share is sold in the market at Ksh.90 per share. Determine the rate of return. Suppose the price declines to Ksh.40. What would be the rate of return? Comment on the results. **(8 Marks)**
- C. Distinguish between a short sale position and a long position. Explain the risks of short selling to either a broker or an investor. **(4 Marks)**

QUESTION THREE

- A. Procter & Gamble (P&G) manufactures and markets consumer products all over the world. Some of its best known brand names include Pampers' diapers, Tide detergent, Crest toothpaste and Vicks cough/cold medicines. The following are its EPS for the next 5 years with a growth rate of 13.58%.

Year	EPS
1	\$3.41
2	\$3.87
3	\$4.40
4	\$4.99
5	\$5.67

The expected dividend payout ratio is 45.67%, the cost of equity is 8.8% for the high growth period. Thereafter the dividends are expected to grow at a rate of 5% indefinitely. The share is trading at 63.99. Is this share a good buy? **(10 Marks)**

- B. Distinguish between an upward sloping, downward sloping and inverted yield curves. How would you explain these yield curves using liquidity premium theory? **(10 Marks)**

QUESTION FOUR

- A. A company wants to issue a bond that is redeemable in four years for its par value or face value of \$100, and wants to pay an annual coupon of 5% on the par value. Estimate the price at which the bond should be issued. **(10 Marks)**

The annual spot yield curve for a bond of this risk class is as follows:

One-year 3.5%

Two-year 4.0%

Three-year 4.7%

Four-year 5.5%

- B. Security analysis is all about determining the prices of mispriced securities. How would you use fundamental and technical analysis to achieve this? **(10 Marks)**